Hydropower Sustainability Assessment Protocol

Official Assessment

Statkraft

Devoll Hydropower Project

Albania

Project Stage: Implementation

Assessment Date: 21/11/2016 to 25/11/2016

Devoll Hydropower

Final

Report Date: 01/06/2017

Client: Statkraft AS

Lead Assessor: Doug Smith, independent consultant (DSmith Environment Ltd)

Co-assessors: Joerg Hartmann, independent consultant, and Elisa Xiao, independent consultant

Project size: 256 MW

Cover page photo: Banjë reservoir, looking upstream towards the town of Gramsh and the reservoir tail

Acronyms

Acronym	Full Text
ADCP	Acoustic Doppler Current Profiler
AIP	Annual Implementation Plan
ARA	Albanian Roads Authority
ASA	Archaeological Service Agency
BOOT	Build, Own, Operate, Transfer
CA	Concession Agreement
CDM	Clean Development Mechanism
CER	Certified Emissions Reductions
Devoll HPP	Devoll Hydropower Project, i.e. the entire project including Banjë and Moglicë projects and associated infrastructure
DHP	Devoll Hydropower Sh.A
EMAP	Environmental Management and Action Plan
ESIA	Environmental and Social Impact Assessment
ESM	Environmental and Social Management
ESMP	Environmental and Social Management Plan
ESMP-O	Environmental and Social Management Plan for the Operation Stage
EVN AG	An Austrian utility group
EU	European Union
FIDIC	International Federation of Consulting Engineers
GIS	Geographical Information System
GHG	Greenhouse Gas
GoA	Government of Albania
GRI	Global Reporting Initiative
GRM	Grievance Redress Mechanism
GWh	Gigawatt-hours
HSE	Health, Safety and Environment
IFC	International Finance Corporation
IH	International Hydropower
IHA	International Hydropower Association
InSAR	Synthetic Aperture Radar Interferometry
IRR	Internal Rate of Return
ISO	International Standards Organisation
IUCN	World Conservation Union

LAJV	Limak-AGE Joint Venture
LSD	Livelihood Support and Development
MoEFWA	Ministry of Environment, Forests and Water Administration
MW	Mega-watts
MoEI	Ministry of Energy and Industry
NCLD	National Committee on Large Dams
NCR	Non-conformance Report
NINA	Norwegian Institute for Nature Research
NTNU	Norwegian University of Science and Technology, Trondheim
NOK	Norwegian Krone
OECD	Organisation for Economic Co- operation and Development
OHS	Occupational Health and Safety
RAP	Resettlement Action Plan
R&D	Research and Development
PCQ	Project Control and Quality
PAH	Project-affected Household
PAP	Project-affected People
PIU	Project Implementation Unit
PPA	Power Purchase Agreement
PS	Performance Standard (i.e. a Performance Standard of the International Finance Corporation)
QRA	Quantitative Risk Assessment
STDs	Sexually-transmitted Diseases
SWECO	Sweco AB, a Swedish engineering company
TWh	Terawatt-hours
UNESCO	United Nations Educational, Scientific and Cultural Organisation
WACC	Weighted Average Cost of Capital
WWF	Worldwide Fund for Nature
WWTP	Wastewater Treatment Plant

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Executive Summary

This report presents the findings of an assessment of the Devoll Hydropower Project (Devoll HPP) using the Implementation Stage tool of the Hydropower Sustainability Assessment Protocol. Devoll HPP consists of two hydropower plants, Banjë (72 MW) and Moglicë (184 MW), both of which are located on the Devoll River in Albania. Devoll Hydropower Sh.A (DHP), now 100%-owned by Statkraft AS, is developing the project on the basis of a Build, Own, Operate and Transfer Concession, agreed in 2009.

Statkraft and DHP defined objectives for this assessment concerning understanding the sustainability profile of the project and its risks, documenting and communicating achievements, and lesson learning. The assessment was carried out over the period November 2016 to March 2017, with an on-site assessment encompassing a visit to the project sites and interviews with stakeholders conducted mainly over 21st to 25th November 2016. This assessment meets the requirements of an Official assessment, as set out in the Protocol Terms and Conditions. The scope of this assessment is the entire Devoll HPP, which encompasses responsibilities of all partners engaged in Devoll HPP, not only DHP.

Devoll HPP is the largest hydropower concession in Albania, and Statkraft is one of the largest foreign investors. Statkraft and DHP have established standards hitherto unseen in Albania – in governance, project management, infrastructure, and environmental and social responsibility, for example. Devoll HPP is delivering profound change in the Devoll valley and has the potential to generate significant benefits for economic development, and Statkraft and DHP have been prepared to take risks to deliver associated infrastructure. Devoll HPP has removed any public danger of an unsafe and unsightly coffer dam at Banjë that was abandoned in the 1980s

Devoll HPP meets or exceeds all basic good practice criteria on 16 out of 19 topics evaluated through this assessment. Reasons why the project does not meet all basic good practice criteria on other topics tend to relate either to contractor management and contractors' performance (on waste management for example), or to the difficulties of physical and economic displacement. On the three topics that do not meet basic good practice (I-10 Resettlement, I-18 Waste, Noise and Air Quality, and I-20 Downstream Flow Regimes) there is one significant gap against basic good practice, resulting in a score of 2.

Devoll HPP meets all proven best practice criteria on four topics (I-4 Integrated Project Management, I-5 Infrastructure Safety, I-13 Cultural Heritage, and I-14 Public Health)**.** Reasons why the project does not meet proven best practice criteria on other topics tend to relate to: contractors' performance in labour issues; the need to more proactively anticipate risks, and the monitoring of specific risks in areas such as livelihood restoration of some households, biodiversity, sedimentation and water quality; the absence of plans to respond to opportunities to deliver positive benefits unrelated to project impacts, or to leverage the profound infrastructural and landscape changes in the valley for regional development; and a need for higher sensitivity in communications and consultation. On three topics (I-9 Project-affected Communities and Livelihoods, I-12 Labour and Working Conditions, and I-15 Biodiversity and Invasive Species), Devoll HPP has two or more significant gaps against proven best practice, resulting in a score of 3. On nine topics there is one significant gap against proven best practice, resulting in a score of 4 (I-1 Communications and Consultation, I-2 Governance, I-3 Environmental and Social Issues Management, I-6 Financial Viability, I-7 Project Benefits, I-8 Procurement, I-13 Cultural Heritage, I-16 Erosion and Sedimentation, I-17 Water Quality, and I-19 Reservoir Preparation and Filling).

The findings are summarised in the sustainability profile and table of significant gaps shown on the following pages.

Sustainability Profile

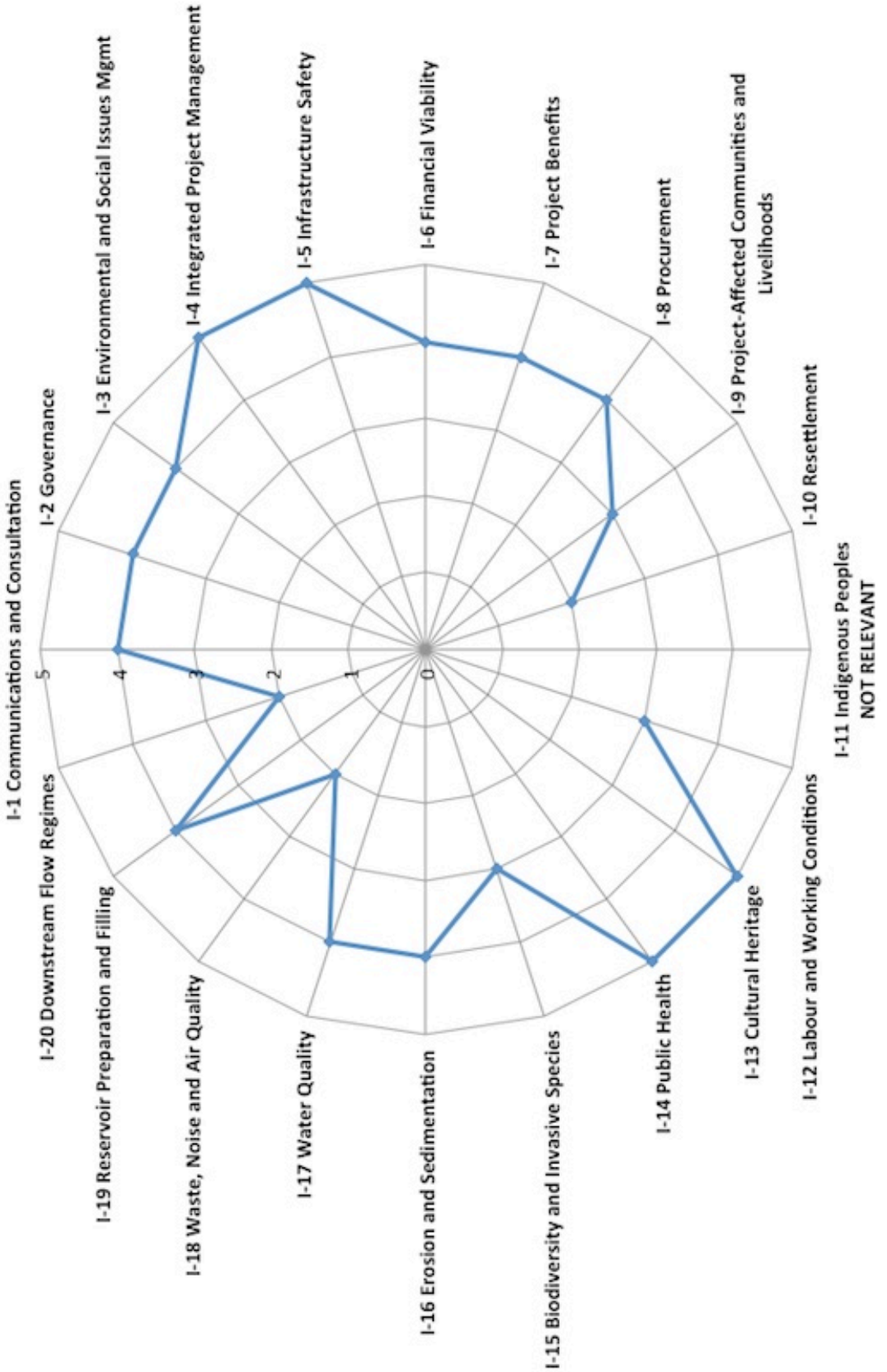

Table of Significant Gaps

	Level 3: Significant Gaps against Basic Good Practice	Level 5: Significant Gaps against Proven Best Practice
Assessment	I-20 There has not been a complete assessment of the social and environmental impacts of altered flows.	I-15 The absence of clear plans for the monitoring of biodiversity risks, and inter-linkages with project operations and impacts. I-15 No processes to identify and respond to emerging opportunities to have a positive contribution for biodiversity. I-16 The absence of plans to monitor and respond to risks of reservoir tail sedimentation and downstream impacts including on Seman delta.*
Management	I-10 Plans for resettlement and engagement failed in Drizë village and with households within the buffer zone in Cingar village, resulting in their opposition, a decline in living standards amongst seven evicted, temporarily-housed households, and the possibility of a permanent decline in livelihoods and living standards amongst a wider group.* I-18 Limited implementation of plans for the management of waste, noise and air quality during implementation, with probable impacts on the local environment.	I-1 The project does not show a high level of sensitivity to communications needs for some stakeholder groups and topics. I-3 Limited environmental management systems for the construction sites, and no third-party verification of environmental management systems. I-7 There is no process to facilitate significant and sustained ongoing project benefits and to promote regional development.* I-9 The absence of a process to identify and respond to the risk that some affected households do not receive compensation for which they are eligible.* I-16 The absence of plans to monitor and respond to risks of reservoir tail sedimentation and downstream impacts including on Seman delta.* I-17 Limited range of monitoring downstream of Banjë dam, Moglicë power house, and Moglicë dam, to identify emerging risks of cumulative impacts. I-19 There is no promotion of recreational opportunities on the Banjë reservoir, as a contribution to regional development.
Stakeholder Engagement	No significant gaps	I-2 Since November 2014, DHP has not made significant project reports publicly available, and has not publicly reported on project performance in sustainability. I-12 Communication between LAJV and workers, and LAJV and contractors, has not been thorough and timely enough to prevent

	Level 3: Significant Gaps against Basic Good Practice	Level 5: Significant Gaps against Proven Best Practice
		labour conflicts, and resolve them without intervention by third parties.
Stakeholder Support	I-10 Plans for resettlement and engagement failed in one village and with households within the buffer zone in another village, resulting in their opposition, a decline in living standards amongst seven evicted, temporarily-housed households, and the possibility of a permanent decline in livelihoods and living standards amongst a wider group.*	No significant gaps
Conformance/ Compliance	No significant gaps	I-8 The requirements of the Supplier Code of Conduct are not effectively extended to sub-contractors and suppliers, through the procurement process of the largest contractor LAJV. I-9 A number of minor non-conformances with project processes and objectives, and IFC Performance Standards. I-12 Non-reporting of accidents by LAJV at the beginning of the Banjë project.
Outcomes	I-10 Plans for resettlement and engagement failed in one village and with households within the buffer zone in another village, resulting in their opposition, a decline in living standards amongst seven evicted, temporarily-housed households, and the possibility of a permanent decline in livelihoods and living standards amongst a wider group.*	I-6 There are plausible scenarios in which Devoll HPP will not deliver an acceptable rate of return for Statkraft. I-7 There is no process to facilitate significant and sustained ongoing project benefits and to promote regional development.* I-9 The absence of a process to identify and respond to the risk that some affected households do not receive compensation for which they are eligible.* I-16 The absence of plans to monitor and respond to risks of reservoir tail sedimentation and downstream impacts including on Seman delta.*

* Gaps that correspond to 2 or more criteria (Assessment, Management etc) but are considered to be one gap.

Introduction

This report presents the findings of an assessment of the Devoll Hydropower Project in Albania, using the Hydropower Sustainability Assessment Protocol. The Devoll Hydropower Project consists of two projects on the Devoll River, Banjë (72 MW) which has recently begun operation, and Moglicë (184 MW) which is under construction. The Devoll Hydropower Project is 100% owned by Statkraft AS.

The Hydropower Sustainability Assessment Protocol

The Hydropower Sustainability Assessment Protocol ('the Protocol') is a framework to assess the performance of hydropower projects according to a defined set of sustainability topics, encompassing environmental, social, technical, and financial issues.

Developed by the International Hydropower Association (IHA) in partnership with a range of government, civil society and private sector stakeholders, the Protocol is a product of intensive and transparent dialogue concerning the selection of sustainability topics and the definition of good and best practice in each of these topics. Important reference documents that informed the development of the Protocol include the World Bank safeguards policies, the Performance Standards of the International Finance Corporation, and the report of the World Commission on Dams. To reflect the different stages of hydropower development, the Protocol includes four assessment tools that are designed to be used separately, corresponding to the Early Stage, and Preparation, Implementation and Operation stages of a project.

Applying the Protocol delivers an evidence-based assessment of performance in each topic, with a set of scores providing an indication of performance in relation to basic good practice and proven best practice. The scoring system is as follows:

5 Meets basic good practice and proven best practice;

4 Meets basic good practice with one significant gap against proven best practice;

3 Meets basic good practice with more than one significant gap against proven best practice;

2 One significant gap against basic good practice;

1 More than one significant gap against basic good practice.

Assessments rely on objective evidence to support a score for each topic that is factual, reproducible, objective and verifiable. Key attributes of the Protocol are: (i) global applicability, i.e. it can be used on all types and sizes of hydropower projects, anywhere in the world; and (ii) consistency, i.e. the consistency of its application is carefully governed by a system of quality control encompassing accredited assessors, terms and conditions for use, and the Protocol Council.[1]

Scoring is an essential feature of the Protocol, providing an easily communicated and replicable assessment of the project's strengths, weaknesses and opportunities. The scoring system has been devised to ensure that a Protocol Assessment cannot provide an overall 'pass' or 'fail' mark for a project, nor can it be used to 'certify' a project as sustainable. The Protocol provides an effective mechanism to continuously improve sustainability performance because results identify gaps that can be addressed, and the findings provide a consistent basis for dialogue with stakeholders.

Assessment Objectives

Statkraft AS identified a range of objectives for the assessment, as follows:

[1] Full details of the Protocol and its governance, are available on www.hydrosustainability.org.

We want to "know "

- Know – the sustainability profile of Devoll;
- Know – and understand the identified risks / gaps compared with requirements and criteria that represent international good practice (benchmark);

We want to "show"

- Show – to document sustainability achievements and performance;
- Show – to use the results of the assessment to communicate Statkraft's sustainability performance with internal and external stakeholders, including Statkraft's owner;

We want to learn and improve

- To identify areas that may improve the sustainability performance of Devoll;
- To learn from Devoll experiences;
- To transfer knowledge and lessons learned from Devoll to other Statkraft projects; and
- To identify and implement improvements of Statkraft Management System (The Statkraft Way).

Statkraft has also stated that it wants to promote multistakeholder dialogue on the challenges and opportunities for development of sustainable hydropower as a valuable future source of energy, and the results of the assessment might be a useful input to such dialogue.

Project Description

The Devoll Hydropower Project (hereafter 'Devoll HPP') consists of two hydropower plants, Banjë (72 MW) and Moglicë (184 MW), both of which are located on the Devoll River. The Banjë dam is situated around 70 km southeast of Albania's capital Tirana, and Moglicë a further 50 km southeast along the valley. The project will provide a 15-17% increase in generation capacity within Albania, and help to balance the electricity grid, reducing north-south transmission losses.

Devoll Hydropower Sh.A (hereafter 'DHP') is developing the project and is 100%-owned by Statkraft AS. Originally, Devoll Hydropower Sh.A was a 50%/50% joint venture between Statkraft AS and EVN AG, an Austrian utility company. Statkraft purchased EVN's share to become the sole owner in 2013.

In December 2008, Devoll Hydropower Sh.A. was awarded the right to develop hydropower projects on the Devoll River in Albania, by signing a Concession Agreement (CA) with the Ministry of Energy and Industry of the Government of Albania (GoA). The CA, in force since April 2009, gives Devoll Hydropower Sh.A. a Build, Own, Operate and Transfer (BOOT) Concession for developing and utilising the hydropower potential in Devoll River. The CA was ratified by Parliament by Law no. 10083 dated 23.02.2009, and has been amended on three occasions since. The CA is the largest hydropower concession in Albania, and is based on power generated or internal rate of return achieved, whichever target is reached earlier.

The Concession Agreement defines the concession area as the area of the Devoll River between 95 and 810 m above sea level, which is located between Banjë Village in Elbasan District and Maliq Municipality in Korçë District. Topographically, the Devoll catchment covers the Korçë plateau, the mountainous middle reaches of Devoll and Tomorricë rivers downstream to Gramsh and the undulated hilly countryside from Gramsh to the Banjë site, and downstream to Kozare. At Kozare in Kuçovë District the Devoll River joins with Osum River and takes the name of Seman River, which flows westwards to the Albanian coast at the Seman Delta. Figures 1 and 2 below show the location of the projects within Albania and the Devoll catchment, and Table 1 provides details of both plants.

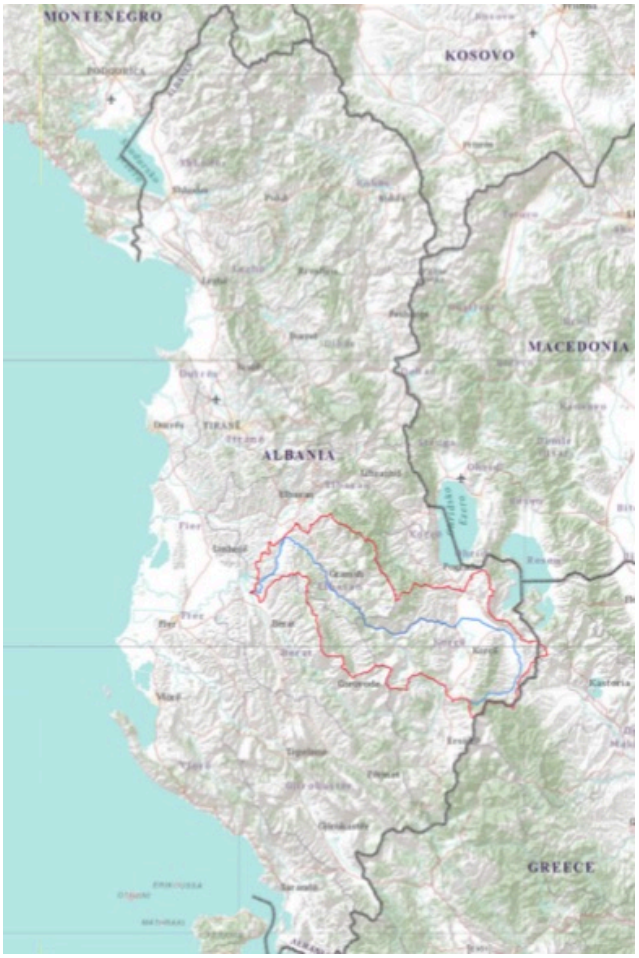

Figure 1. Location of the Devoll catchment within Albania (red outline)

Figure 2. Devoll River catchment, showing names of main places and tributaries (as shown the project ESIA report)

Table 1. Details of Banjë and Moglicë plants

	Banjë	Moglicë
Status	Impounding completed, with trial operations over September to October, and handover to operations in November 2016	Under construction, planned to be ready for impoundment in June 2018, and handover to operations in September 2018
Installed capacity	71.9 MW	184.3 MW
Turbines	2 X 32.9 MW Francis turbines 1 X 7.2 MW minimum flow turbine	2 Francis turbines and 1 minimum flow turbine
Average annual generation	255 GWh	448 GWh
Head	Between 175 and 95 m above sea level	Head of 300 m between 650 and 350 m above sea level.
Average flows at dam site	47 m^3/sec at Kozare	13 m^3/sec at and Gjinikas
Dam	Embankment rockfill dam with an impervious clay core with an approximate height of 80 m.	150 m high dam, asphalt-core, rock-filled
Reservoir	Surface area of 14 km^2, storage capacity 392 million m^3	Surface area of about 7.2 km^2, storage capacity of approx. 360 million m^3
Transmission lines	12 km 110 kV line, Banjë plant to Cërrik substation (in Gostimë and Gjergjan Communes and Cërrik Municipality in Elbasan District)	48 km 220 kV line, Moglicë plant to Elbasan (passing through Kodovjat and Pishaj communes in Gramsh District and Tregan and Shirgjan Communes and Elbasan Municipality in Elbasan District): construction completed, Moglicë switchyard energised
Replacement roads	All completed: Banja – Drizë (section 3A) 9.4 km including 11 bridges Drizë – Gramsh (section 3B) 6.1 km including 2 bridges South shore road (Trashovice – Dushk) 11.4 km including 2 bridges	Preparatory roads completed: Kodovjat-Grabove 13.2 km, Grabove-Moglicë 12.1 km Planned for completion in 2017: North shore road (National Road M03, section 4), 14.9 km with no bridges Village connection roads will be developed as needed

The development of Banjë has used an existing cofferdam structure, which was built and abandoned in the 1980s. The coffer dam was 50 m high, and flows passed through a bottom outlet in the coffer dam, resulting in the formation of a limited reservoir whenever flows exceeded the capacity of the bottom outlet. The new Banjë reservoir reaches from the dam site up to the town of Gramsh. Water is delivered from the reservoir to the Banjë power plant via a 650 m penstock. In contrast, the Moglicë Power Plant will receive its water through a 10.7 km long tunnel from the Moglicë reservoir. Both Banjë and Moglicë projects encompass considerable associated facilities, i.e. transmission lines and replacement roads totalling 100 km in length.

Preparatory works began at Banjë in April 2013, and construction of the Banjë dam began in late 2013. Full details of each plant are provided in the table below. A third plant, Kokël (40 MW), is included in the CA, but a decision on its construction will be considered 10 years after the Banjë and Moglicë. Kokël would generate 100 GWh per year, using head between 350 and 295 m above sea level, a 50 m high dam, and a small reservoir 0.85 km2 in area. Kokël is not included in this assessment.

Statkraft's business area with ownership of the Develop Hydropower Project is International Hydropower (IH), and the project is managed through an Albanian Country Office, so Banjë and Moglicë team structures combine IH and Albania Country Office staff. Construction has involved a number of construction contractors and consulting engineers:

- A joint venture between the Turkish construction contractors, Limak and AGE, is appointed for dam site civil works (i.e. LAJV, the Limak-AGE Joint Venture)
- Albstar, Euroteorema, Trema, and EnBi Power for the construction of replacement roads;
- Doko for transmission line construction;
- SWECO, is the permanent rock support designer; and
- Mott MacDonald and Coyne and Bellier, as the Owner's Engineer for Banjë, and ÅF Consult as Owner's Designer.

The development of the Devoll Hydropower Project has involved a range of other organisations, especially governmental organisations. Throughout this report, 'the project' is used to refer to the project in its entirety, which may encompass the actions of organisations other than Devoll Hydropower Sh.A or its contractors. 'DHP' is used to refer to Devoll Hydropower Sh.A specifically.

Further details are presented in Figures 3 and 4.

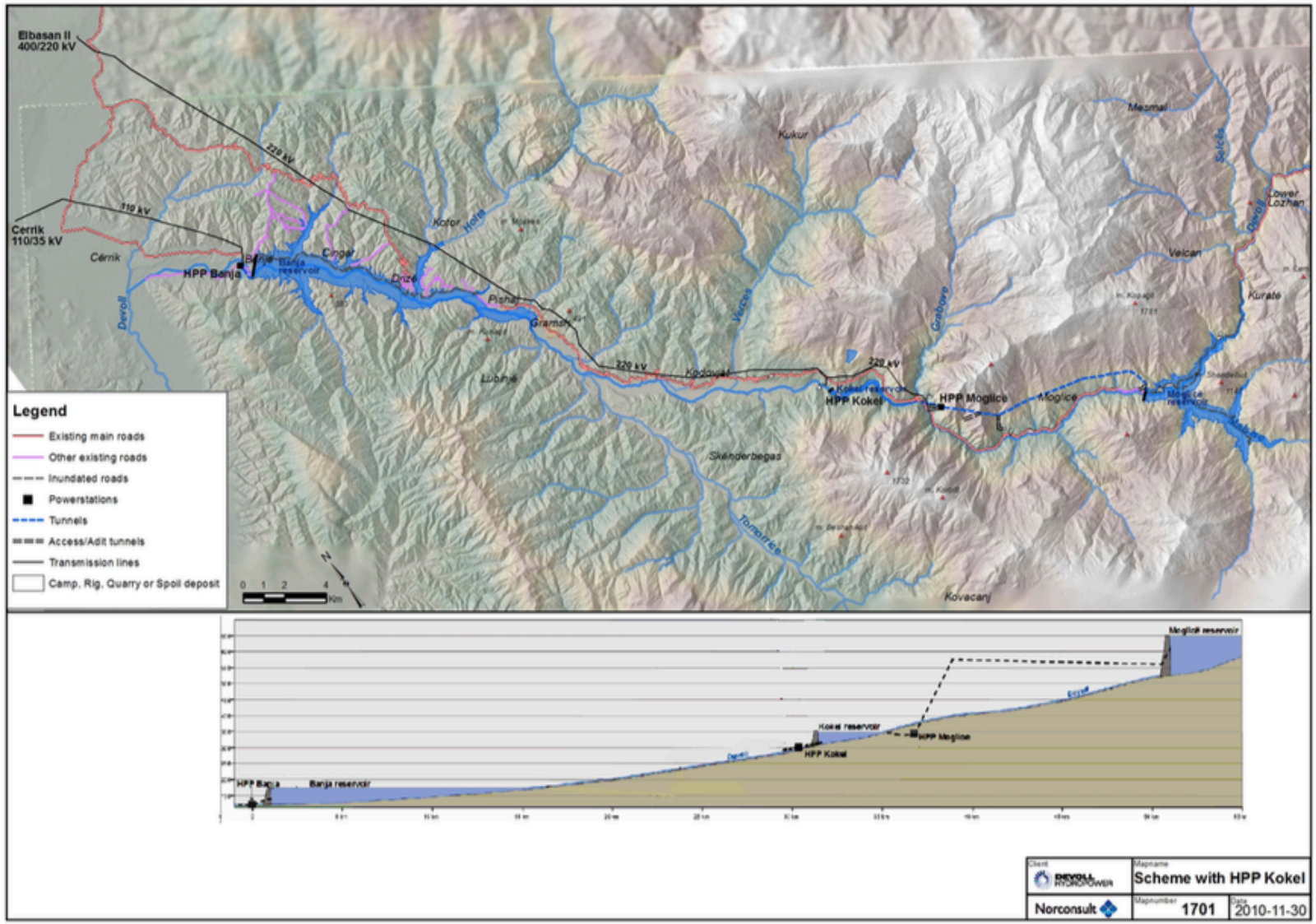

Figure 3. Devoll Scheme, including Kokël HPP as envisaged in the Environmental and Social Impact Assessment

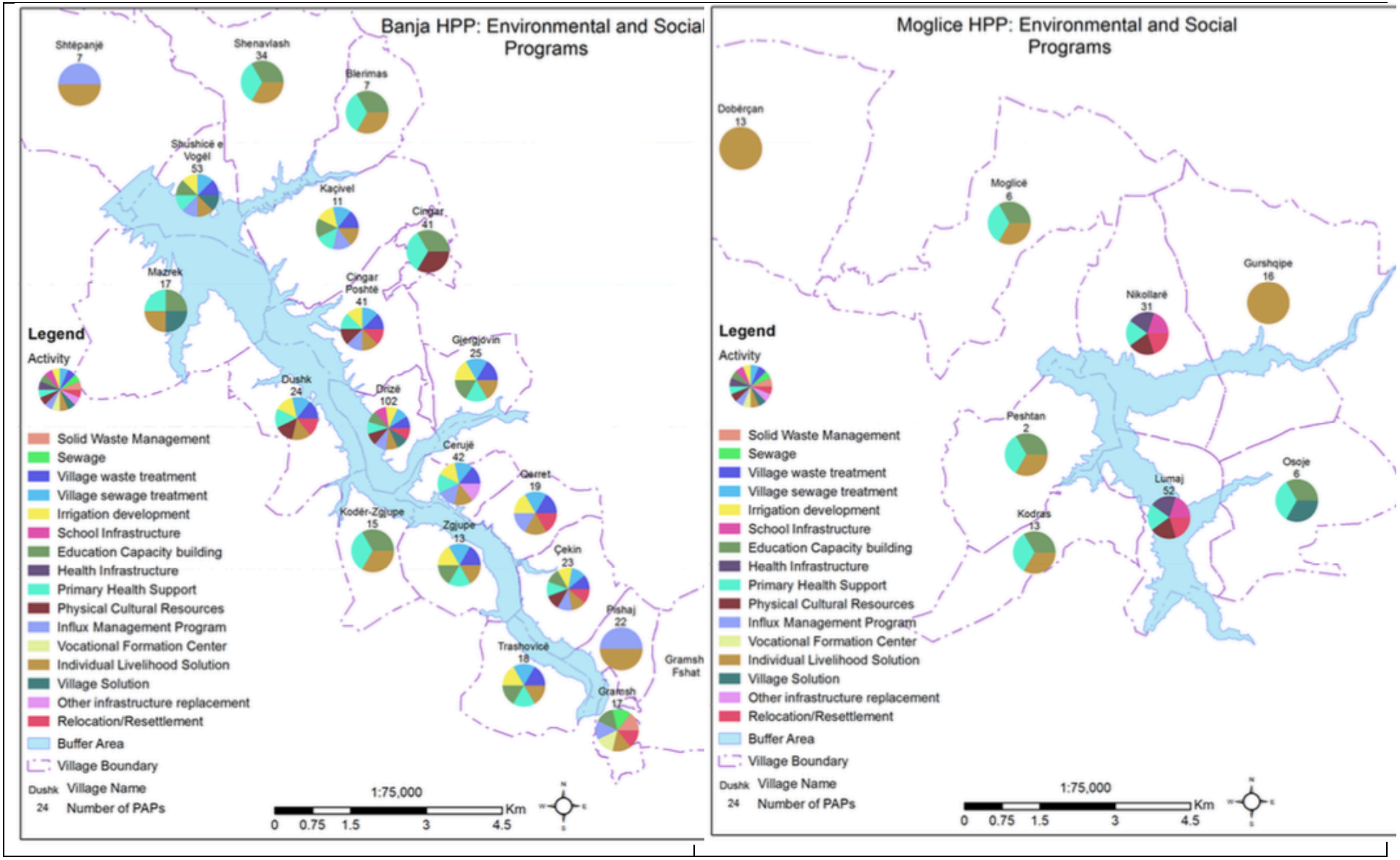

Figure 4. Banjë and Moglicë Environmental and Social Programmes as envisaged in the Environmental and Social Management Plan (useful for place names)

Assessment Process

The assessment was conducted using the Protocol's Implementation tool, which consists of 20 individual topics, addressing governance, technical, financial, social and environmental issues.

The assessment team was led by Doug Smith, who had previously led an initial scoping of issues for the Devoll Hydropower Project in 2013. Mr Smith assembled a team of three accredited assessors, which was conducted over the dates of 21st to 25th November 2016. Interviews with external stakeholders and DHP staff, and site inspections were carried out mainly during that week, with some further interviews with Statkraft Lilleaker-based staff in January 2017. Sixty-eight interviews were conducted and over 240 documents reviewed. A draft report was delivered to Statkraft and DHP by 20th January 2017 and amended in response to comments received.

This is an official assessment. All members of the assessment team are accredited by IHA, and the assessment was conducted with the full support of Statkraft, as demonstrated by their written support, provided in Appendix A.

Please note that while the Implementation tool is focused on the implementation stage, the intent of some of the topics and many scoring statements also encompass plans for the operation stage. In addition, analysis and plans made during project preparation may be relevant to the assessment and management criteria.

Åse Roen, Senior Advisor, Corporate Responsibility, was Statkraft's single point of contact for the assessment. Coordination and planning was provided by Marissa Duran, ESM (Environmental and Social Management) Manager and Simon Sottsas, ESM Monitoring Coordinator. Siri Stokseth, Deputy Project Owner, represented the asset owner.

Two observers from WWF joined the assessment as observers for part of the on-site assessment: Irma Popović Dujmović (Project Officer for freshwater, WWF Adriatic) and Ingrid Lomelde (Head of Climate and Energy, WWF Norway).

Assessment Experience

The assessment was organised in a short timeframe, at a busy time for the DHP team. The assessment team would like to thank all involved for their dedication and commitment in coordinating the assessment effectively, and thank all interviewees including external interviewees for providing their time to respond to the assessors' enquiries. Particular thanks are due to the DHP ESM Manager in Tirana, Marissa Duran, and Statkraft's Senior Advisor - Corporate Responsibility, Åse Roen.

Interviews were held in Tirana, at the project sites, in Gramsh and local communities, through an intense 5-day assessment week. A number of additional interviews were held with Norway-based Statkraft staff by video or phone in January 2017.

There were few language barriers, as the vast majority of documentary evidence that was provided is in English, and most interviewees could speak English. DHP provided translations of some key Albanian documents, it was possible to use online translation for selected words. Interpreters were used in community-level interviews.

Initially for some topics, the documentation that was available in advance of the on-site assessment was limited and more documentation and information was not available until late in the report drafting stage, but Statkraft and DHP responded to requests with a significant amount of documentary evidence. As with most assessments, for reasons of confidentiality, the assessors were able to view some documents only in hard copy for a limited time during the assessment.

Arrangements for the site inspections and interviews were managed effectively. Some interviewees proposed by the assessment team did not respond to a request for interview (Ministry of Environment, Forests and

Water Administration for example, and the World Bank) or DHP were not able to arrange them (for example external biodiversity experts), but this has not affected the breadth of interviewees reached, especially at a local level.

Layout of this Report

This report consists of twenty sections numbered in direct correspondence with the twenty topics of the Protocol's Implementation tool. Four appendices are provided, including the written letter of support of the project developer (required for an official Protocol assessment), and detailing the items of visual, verbal and documentary evidence referred to under each topic.

For each topic, findings are provided according to the criteria used in the Protocol's methodology: Assessment, Management, Stakeholder Engagement, Stakeholder Support, Conformance / Compliance, and Outcomes. Findings are presented against a statement of 'basic good practice' and a statement of 'proven best practice' for each, with a 'Yes/No' indication of whether the scoring statement is met. A summary of the significant gaps against the scoring statement, the topic score and a brief summary are presented at the close of each topic section.

Please note that 'DHP' is used throughout the report to refer to Devoll Hydropower Sh.A., the company. 'Devoll HPP' is used to refer to the entire project. The scope of a Protocol assessment is the entire project, which may encompass responsibilities of parties other than the developer, particularly government entities.

1 Communications and Consultation (I-1)

This topic addresses ongoing engagement with project stakeholders, both within the company as well as between the company and external stakeholders (e.g. affected communities, governments, key institutions, partners, contractors, catchment residents, etc). The intent is that stakeholders are identified and engaged in the issues of interest to them, and communication and consultation processes maintain good stakeholder relations throughout the project life.

1.1 Background Information

This topic addresses the overall programme of stakeholder engagement, and ongoing communications with all project-related stakeholders. As a Statkraft project, Devoll Hydropower Sh.A. (DHP) has followed a sustainability policy since 2009 and is committed to compliance with principles of the United Nations Global Compact, and the International Finance Corporation's (IFC) Performance Standards on Social and Environmental Sustainability. Other topics assess stakeholder engagement in relation to specific issues, for example issues of communication during resettlement process are addressed under Topic I-10, Resettlement.

The following groups are stakeholders that are directly-affected (with substantial rights, risks or responsibilities): households within affected villages that are physically displaced; households within affected villages that are economically displaced due to loss of land, economic assets or natural resources; households that are affected by replacement of public infrastructure (roads, irrigation, water supply etc); other households in the project area that are affected by project activities including dam site villages, users (e.g. gravel mining, irrigation) of the river downstream of the Banjë power station, Moglicë power station, and Moglicë dam; village and commune leaders, local municipal and prefectural government with jurisdiction over the areas affected, and their agencies with responsibilities for specific functions (for example forestry management); central government authorities; DHP employees, contractors and suppliers; and Statkraft headquarters.

Other stakeholders (i.e. with an interest but without substantial rights, risks or responsibilities) include: consultants involved in the design, preparation and implementation of the project; research institutes and academics; civil society, media and press; Non-governmental Organisations (NGOs); industry and business; and international financial institutes (IFIs).

1.2 Detailed Topic Evaluation

1.2.1 Assessment

Analysis against basic good practice

Scoring statement: *Communications and consultation requirements and approaches have been identified through an assessment process involving stakeholder mapping, supported by ongoing monitoring.*

Communication and consultation requirements and approaches were initially identified through a Stakeholder Engagement Protocol in the early preparation phase of the project. Establishment of a stakeholder database and further assessment of stakeholders were undertaken through the processes of the Environmental and Social Impact Assessment (ESIA), the Environmental and Social Management Plan (ESMP), the replacement roads ESIAs, the Environmental and Social Management Annual Implementation Plans (AIPs) and ESMP for Operations (ESMP-O). DHP has set out a Communication and Stakeholder Management Plan (CSMP) including key principles of a communications strategy and includes a broad mapping of stakeholders in Albania.

A robust stakeholder baseline has been established for the project, down to the individual household level

through the ESIA/ESMP socio-economic survey, and continuously updated with the progress of DHP programmes in the project area. The ESIA includes an analysis of the institutional framework for environmental protection which maps out central government, regional and local government representatives, local administrations, and NGOs. It further includes contractors and sub-contractors, and independent experts into key project issues for ESMP implementations. During implementation, DHP's Environmental and Social (ESM) team conducted detailed socioeconomic household surveys and established a comprehensive database for project-affected households, for 80% of the total directly affected households.

DHP's stakeholder database currently has approximately 250 entries. An excerpt provided to this assessment showed 50 entries at the national level and 100 entries at the local level, including communities. The status of stakeholder engagement is monitored as part of the reporting on DHP's ESM activities, including grievances, stakeholder communication and information disclosure.

Criteria met: Yes

Analysis against proven best practice

Scoring statement: *In addition, the stakeholder mapping takes broad considerations into account.*

The identification of community-level stakeholders through the above processes focuses on project directly-affected households and is highly detailed, in the form of household-level concerns and requests, and in the differentiation of impacts on different economic groups (e.g. livelihood patterns). The stakeholder database includes the use of a Geographical Information System (GIS) to map each parcel of affected land, assets and resources, which assists in the assessment of rights, risks and responsibilities of affected households. All directly affected households that participated in the project Socio-Economic Inventory (SEI) (as described on I-9 Project-affected Communities and Livelihoods) are included in the project WebGis and Excel documentation system. Those significantly affected are also included in an MSAccess database.

Stakeholder mapping in the CSMP includes a strengths, weaknesses, opportunities and threats (SWOT) analysis of DHP's stakeholder engagement for both construction and operation phases. For example, it recognises a threat of local leaders asking for financial support through sponsoring in return for their support.

Criteria met: Yes

1.2.2 Management

Analysis against basic good practice

Scoring statement: *Communications and consultation plans and processes, including an appropriate grievance mechanism, are in place to manage communications and engagement with stakeholders; these outline communication and consultation needs and approaches for various stakeholder groups and topics.*

Project consultations have been and will continue to be conducted based on the concepts of free, prior and informed stakeholder engagement. During the project preparation stage, communications and consultations were conducted according to DHP's Stakeholder Engagement Protocol and legal requirements. Subsequent consultations and communications in more detail about the project and its social and environmental mitigation measures have been ongoing, through various media and processes, including:

- Formal consultation events (e.g. the ESIA public hearing);
- Monthly Institutional Working Group (IWG) meetings with central government authorities;
- Quarterly informative roundtable meetings, monthly information meetings and *ad hoc* meetings with local and regional government authorities;
- Frequent information and consultation meetings, special event meetings and focus group discussion meetings with communities in the project area;
- Workshops to reach agreements on management measures with responsible stakeholders;

- Household individual consultations and direct agreements with affected households by DHP's Environmental and Social Management team (24 staff at the peak, and 18 staff at the time of this assessment, among which 11 are from the directly affected communities);
- Information disclosure through print and audio-visual media (newspaper, radio, time-lapse Movie on Banjë HPP presented on company website, Grievance Redress Mechanism Leaflet, Employment leaflet, Project Introduction Leaflet, Impoundment Leaflet, Compensation Policy and Entitlement Brochure, ESMP Brochure, newsletters, information letters);
- Three Project Information Offices, at Banjë project site, downtown Gramsh, and Nikollarë in the Moglicë area;
- Resolution of concerns, complaints and requests of communities through a Grievance Redress Mechanism (GRM), administered by four full-time community liaison staff on daily basis;
- a dedicated Community Liaison team within the ESM team to liaise with local communities and government organisations;
- Communication specifications for contractors in the commercial contracts, including Stakeholder Engagement Protocol, Communication Instruction for Contractors and Suppliers, Company Policy for Internal Communication, and Instruction for Media Communication;
- Company-wide communications through staff meetings, bi-weekly meetings, and team building meetings for internal stakeholders;
- Cooperation with national and international media (mainly from Germany and Norway), including arrangement of bi-annual media visits to the project site; and
- A Devoll Hydropower web-site (www.devollhydropower.al).

A draft Environmental and Social Management Plan for Operations (ESMP-O) outlines stakeholder consultation strategies during the operation phase.

All consultation activities are documented, integrated into the stakeholder database, and regularly reported via ESM progress reports. At the corporate level, stakeholder communications and engagement are supported and overseen by Statkraft policies, structures and processes. Strategic external advice is sought to ensure that the socio-political dynamics in the project area are well understood and addressed.

Project plans outline needs and approaches for various stakeholder groups and topics. For example: the CSMP details goals, objectives, communication channels and methods for central and local government authorities, highlighting the needs for leveraging support and participation from this group; the Communication with Media Instruction recognises the importance of communications with media and develops media engagement activities for project information disclosure; the Livelihood Support and Development Implementation Manual outlines step-by-step consultation processes to engage economically-displaced households in the processes of livelihood support implementation.

Criteria met: Yes

Analysis against proven best practice

Scoring statement: *In addition, communication and consultation plans and processes show a high level of sensitivity to communication and consultation needs and approaches for various stakeholder groups and topics; and processes are in place to anticipate and respond to emerging risks and opportunities.*

Stakeholders have appropriate access to information and opportunities to express their concerns through various communication channels provided by the project. Consultation processes take into account different social and educational backgrounds as well as the specific rights and risks of directly-affected households that are registered under the ESM programmes. Different livelihood restoration support programmes are discussed with the affected households to best fit their needs, interests, capacities and available resources (for details please refer to topic I-9 Project-affected Communities). Special considerations are provided for vulnerable

households, e.g. by the staff availability at the public information offices, and more frequent discussions and longer meeting durations for this group to ensure their better understanding of DHP processes. Further, DHP takes specific measures to promote an open and transparent consultation process, including female representatives during village consultations as well as one-on-one consultations, a four-eye-principle (i.e. presence of two people) during all household meetings, and integration of further household members and/or relatives for vulnerable households to discuss livelihood support details. In addition, the project has four dedicated community liaison staff that are available daily in the information offices to receive and address issues and concerns raised from the community on a one-on-one basis, and 10-15 ESM staff working in the villages to directly engage with local households, being open to questions from bystanders. DHP has conducted village information dissemination meetings prior to rolling out any major activities, covering reservoir inundation, project health campaigns, and school activities.

Processes in place to anticipate and respond to emerging risks and opportunities include the ESM team's monitoring and reporting, the GRM, and the annual update of CSMP and the ESM annual implementation plan. For example, the first and second ESM quarterly progress reports of 2016 identified there was a risk that dissatisfied households might file an increased number of grievances during reservoir impoundment. Mitigation measures subsequently proposed a clear and transparent ESM policy and avoidance of individual solutions.

However, the project does not show a high level of sensitivity to communications needs for some stakeholder groups and topics. Consultations are mainly focused on communities that are directly affected by loss of land, relocation and replacement infrastructures, or more specifically, on those who signed up to the ESM programmes (for details please refer to topic I-9 Project-affected Communities). Within the directly-affected villages, consultations have focused on households that are enrolled under the ESM programmes, omitting approximately 25% households that have not participated. Groups of other affected households that are not enlisted in the ESM programmes have been consulted mainly through public information dissemination meetings. Aside from special occasions such as the ESIA public consultation, replacement road construction, or Banjë reservoir inundation, specific consultation plans and processes have not yet been devised for other communities and groups (e.g. households losing less than 10% of their assets, absentee property owners that have legitimate claims on affected land and assets, villages within the affected area but which are not directly affected by physical or economic displacement, and civil society including those located in Elbasan, Korçë, and Tirana; though limited post-ESIA interactions with local civil society partially result from a low level of interest from those groups). Consultation topics are focused on project impacts, with limited consideration of needs of the above-mentioned groups (e.g. payment of government compensation, challenges of livelihood restoration, regional development, slow government approval process for the replacement school etc). Responses to grievances raised are frequently inflexible. The range of printed, easily accessible materials directed at community-level stakeholders could be broader, and some documents do not take account of the literacy level of elderly residents. The Albanian version of the project website was not accessible during this assessment. The absence of a high level of sensitivity to communication and consultation needs and approaches for some stakeholder groups and topics is a **significant gap** against proven best practice.

Criteria met: No

1.2.3 Stakeholder Engagement

Analysis against basic good practice

Scoring statement: *The project implementation stage involves appropriately timed and scoped, and often two-way, engagement with directly affected stakeholders; engagement is undertaken in good faith; ongoing processes are in place for stakeholders to raise issues and get feedback.*

Stakeholder engagement during implementation has been appropriately scoped through the processes of the ESMP, the CSMP and ESM Annual Implementation Plans. For example, the ESM Annual Implementation Plan 2016 scoped engagement activities for the year, focusing on local directly-affected stakeholders, including: meetings and consultations (under this topic, there are a list of ten actions, covering information disclosure, awareness campaign, and consultation activities for both Banjë and Moglicë); production and disclosure of DHP information materials (for example leaflet and posters on reservoir impoundment); ongoing stakeholder mapping and documentation; and formal correspondence exchange with local stakeholders.

Engagement to date has been generally appropriately timed, two-way and in good faith. For example consultations on mitigation of economic displacement include a participatory two-way process, affected households have multiple choices of project support package and make their own decisions based on full understanding of the programme. They have enough time (one week) to consider their options at each consultation step, and are free to discuss all viable options before final decisions are made. Please refer to topic I-9 Project-affected Communities and Livelihoods for full detail. The timing of consultation in Drizë village is discussed on I-9 and I-10 Resettlement.

Engagement with government authorities is on the basis of both regular (quarterly for central government and monthly for municipal/commune government) and *ad hoc* meetings for special events, allowing timely participation of government stakeholders in the design and implementation of DHP programmes. DHP's relationship with the Ministry of Energy and Industry, their principal regulator, is excellent. In particular, the head of the DHP Legal team has regular communications with these government organisations. DHP experienced difficulties engaging with local government in 2015, as a consequence of the re-organisation of local government structures and newly-elected local administrations. That was overcome through more intensive engagement activities in 2016.

DHP maintains regular cooperation with media, including the arrangement of bi-annual media visits to the project site. The opening ceremony for Banjë project, for example, gave DHP great visibility to civil society through social media.

The intensity of stakeholder engagement at a local level is reflected in the ESM annual implementation report, for example, the 2016 report summarised consultations conducted in 2015:

- 1 public consultation meeting for the north shore of Moglicë Reservoir;
- 12 community information meetings and discussions in 20 villages, mostly for issues of replacement infrastructure, transmission line, and access roads;
- 2 information roundtable meetings with commune leaders and municipal representatives;
- 12 local authority meetings in Gramsh, Cerrik, Elbasan and Moglicë;
- 9 major information campaigns in the affected area for issues of transmission line, roads, socio-economic inventory, resettlement, replacement infrastructures, and impoundment communication;
- 2 888 recorded visits to Gramsh (2 552), Banjë (204) and Nikollarë (132) information offices made by affected communities;
- 1,451 household individual consultations with 274 households in the project area; and
- 235 grievances, with 206 closed, 28 in progress, and 1 under appeal.

Except for representatives from Drizë villages (as discussed under I-9 and I-10), interviewed community and government representatives confirmed during this assessment that DHP engaged with stakeholders at the right times, with reliable and relevant information, and was responsive to issues raised.

Measures for affected communities to raise issues include the project information meetings and campaigns, household socio-economic surveys, ESM team household visits, and the GRM. Feedback is normally provided directly to affected communities during public meetings, with participation from relevant responsible DHP representatives. For complaints registered in project information offices, the GRM process is followed, and official feedback is provided within 15 days in written form; for community requests for project information, DHP's policy is to provide relevant documents, news and plans within 7 working days. For other stakeholders,

processes for raising issues and receiving feedback from the project include public information campaigns and company website.

Criteria met: Yes

Analysis against proven best practice

Scoring statement: *In addition, engagement is inclusive and participatory; negotiations are undertaken in good faith; and feedback on how issues raised have been taken into consideration has been thorough and timely.*

Engagement has not been sufficiently inclusive of all stakeholder groups during implementation, but this is same gap as discussed under Management.

Negotiations are undertaken in good faith and widely perceived to be based on goodwill and stakeholders are involved in decision-making. Examples include the Livelihood Support and Development (LSD) package consultations with affected households, and the project permission for Mazrek Village to use a road on the crest of Banjë Dam as access to the other bank of the Devoll River. .

Grievances received to date are mainly related to physical and economic displacement (58%), and contractors (41%). The number of grievances received by the end of September 2016 totalled 319, out of which 268 were closed, 50 were in process, and 1 under appeal, a rate of 84% closure. Among those closed grievances, 186 (69%) were invalid, contributing to 58% of the total grievances. These grievances are disqualified according to the validation criteria, for example because: the affected households submitting their interest to participate in DHP social programmes after the cut-off date (for details please refer to I-10 Resettlement); no documented evidence to back up their claims related to contractors' activities (wages, property damages etc); their land or assets were not affected, or not cultivated at the time of the socioeconomic inventory. In addition, the affected households have the right to appeal under the GRM arrangement. Feedback is provided in a timely manner. All grievances are responded to by the DHP community liaison team with written feedback within designated days (e.g. 15 days for acceptance notice), presenting each step of the GRM: acceptance, validation, resolution (proposal) and closure.

Criteria met: Yes

1.2.4 Conformance / Compliance

Analysis against basic good practice

Scoring statement: *Processes and objectives relating to communications and consultation have been and are on track to be met with no major non-compliances or non-conformances, and communications related commitments have been or are on track to be met.*

There are major non-conformances with processes and objectives concerning communications and consultation with Drizë village, and concerning contractors' community engagement, but these are addressed under topics I-9, 1-10 and I-18 Waste, Noise and Air Quality, and will not be double-counted here. There are no other major non-conformances with the processes and objectives set out in the ESMP, the CSMP and other supporting documents. The assessors did not find any evidence of non-compliances with applicable legal requirements. Current relationships with ministries, regional and local government authorities and affected communities are good. Routine monitoring shows communication-related commitments have been and are on track to be met. Internal communications are on track, for example regarding monthly progress reports on the project.

Criteria met: Yes

Analysis against proven best practice

Scoring statement: *In addition, there are no non-compliances or non-conformances*

The ESMP requires the promotion of women's participation during consultation and specific consideration of marginalized groups. These commitments have not been addressed except with project-affected households included in the LSD programme. This non-compliance reflects the same gap identified under Management, i.e. the absence of plans that show a high level of sensitivity to communication and consultation needs and approaches for various stakeholder groups and topics.

No legal non-compliances were evident during the assessment.

Criteria met: Yes

1.2.5 Evaluation of Significant Gaps

Analysis of significant gaps against basic good practice

There are no gaps against the level of basic good practice scored under this topic.

Number of significant gaps

Analysis of significant gaps against proven best practice

The project does not show a high level of sensitivity to communications needs for some stakeholder groups and topics.

1 significant gap

1.3 Scoring Summary

Overall communications and consultation have been carried out to a high standard and meet the Protocol's requirements for basic good practice. Based on the ESIA, DHP has developed a series of management plans including the ESMP and CSMP, which identified communications and consultation requirements. Stakeholder analysis and engagement has been extremely detailed at household level in affected communities that participate in livelihood support programmes. Specific communications plans and processes are in place, and effectiveness is monitored.

Engagement to date has focused on the villages affected directly by loss of land, relocation and replacement infrastructures, but this has meant that engagement with less affected households, other villages in the project area, and civil society has been limited. Engagement topics focus on direct project impacts, with limited consideration of specific needs of some groups, and there is not a high level of sensitivity to communications needs for some stakeholder groups and topics. This is a significant gap against the level of proven best practice, resulting in a score of 4.

Topic Score: 4

1.4 Relevant Evidence

Interview:	4, 7, 14, 18, 28, 30, 31, 42, 43, 45, 46, 47, 48, 49, 50, 61
Document:	27-28, 42-54, 73, 87, 89-94, 121, 129, 151-152, 176, 211, 214-216, 242-251
Photo:	1-5

2 Governance (I-2)

This topic addresses corporate and external governance considerations for the operating hydropower facility. The intent is that the owner/operator has sound corporate business structures, policies and practices; addresses transparency, integrity and accountability issues; can manage external governance issues (e.g. institutional capacity shortfalls, political risks including transboundary issues, public sector corruption risks); and can ensure compliance.

2.1 Background Information

Albania is one of the smaller countries in south-eastern Europe and only emerged from an isolated communist system in 1990. Since then, it has experienced intensive structural change and high growth rates. It built a modern democratic government, joined, or is on its way to joining, international organisations such as NATO and the European Union (EU), and has improved relations with neighbouring countries. Its power sector was thoroughly reformed after 2005, when government unbundled the transmission and distribution systems, introduced a new power market model, granted concessions for the development of new hydropower plants to private investors under the 2006 Concession Law, and privatized a number of existing medium-sized hydropower plants. Currently the focus is on creating a domestic and cross-border power market, in line with the EU Energy Package, also with support from the International Finance Corporation (IFC) and Nord Pool.

According to the World Bank's Doing Business index, Albania has made significant progress in regulatory reforms, moving up 32 places from 90 in 2016 to 58 in 2017. Since 2013, Albania is a member of the Extractive Industries Transparency Initiative (EITI), and has included hydropower in the sectors covered by the initiative. However, significant governance challenges remain including a high degree of political instability, a high incidence of corruption (with a rank of 88 in Transparency International's Corruption Perceptions Index 2015, the 4th lowest in Europe), and uncertain conditions for private investors and concessionaires.

Statkraft is one of Europe's largest utilities. It is 100% owned by the government of Norway, one of the highest regarded countries in terms of public and corporate governance. Devoll HPP is implemented and owned by a 100% Statkraft subsidiary, Devoll Hydropower Sh.A. (DHP), which was originally formed as a 50%/50% joint venture with EVN AG, Austria's largest generating company. In 2008 DHP signed a Concession Agreement (CA) with the government, giving it a Build, Own, Operate and Transfer (BOOT) concession for developing and utilising the hydropower potential in Devoll River. In 2013, Statkraft bought EVN AG's share in DHP.

Relevant governance issues in the Devoll HPP include: the capacity and performance of Albanian government agencies; the division of rights and responsibilities regarding the project between the Albanian government and Statkraft under the CA and other applicable laws, regulations, permits, licenses and contracts; and the internal organisation of Statkraft to manage the project.

2.2 Detailed Topic Evaluation

2.2.1 Assessment

Analysis against basic good practice

Scoring statement: *Processes are in place to identify any ongoing or emerging political and public sector governance issues, and corporate governance requirements and issues, and to monitor if corporate governance measures are effective.*

Statkraft's 'Capital Allocation, Investments and Projects Policy' determines that investments should be based on adequate information, assumptions and analysis, in accordance with the Group's investment criteria,

including host country governance issues. The purpose of the policy is to ensure that investment decisions are based on consistent and systematic quality assessments. The processes are described further in Statkraft's 'Stage Gate Model' requirements document. Topic I-7 Financial Viability specifically addresses the financial dimension of the investment decision.

During the negotiation of the CA, political and public governance issues were assessed by the joint venture partners. The Environmental and Social Impact Assessment (ESIA) and ESMP also included some analyses of institutional and governance issues. When Statkraft bought-out EVN AG from the DHP joint venture, Statkraft undertook a broad integration assessment to ensure that DHP is aligned with Statkraft policies, group requirements and relevant supporting documents. No major gaps – for which a deviation needed to be requested – were identified.

Where necessary, further specific assessments are undertaken. For example, in 2015 and 2016 Statkraft undertook Albania Corruption Risk Assessments, including prevention plans. The 2016 assessment identified four area of high risk and proposed a series of additional anti-corruption measures. It is a good example of an effective anti-corruption plan with a broad understanding of vulnerabilities and response measures, grounded in local experience.

DHP's legal team tracks compliance with the CA and all permits, licenses (such as operation and market licenses), and contracts, through a compliance register. It helps other teams with checklists, trainings, and reminders, and is involved in contracting and the development of charters and handbooks. Legal expertise from Statkraft is brought in on special issues such as Fédération Internationale Des Ingénieurs-Conseils (FIDIC) contracts and English law. There is also a corporate audit program from Statkraft headquarters, which covers corporate governance issues.

In addition, DHP's legal team monitors political and legal developments, and such developments are identified through engagement with business associations (for example, the American Chamber of Commerce in Albania) and government (for example, in the design of the power market, or through organising a seminar in Tirana on business ethics).

Criteria met: Yes

Analysis against proven best practice

Scoring statement: *In addition, there are no significant opportunities for improvement in the assessment of political and public sector governance issues and corporate governance requirements and issues.*

The original CA was negotiated as one of the first large concessions under the new law, and contained a number of areas which were unclear or which exposed the concessionaire to substantial risks. However, these were later identified and most were rectified through supplements to the CA. Governance standards in government and business practices in Albania have generally improved over the ten years since the Devoll HPP was first conceived, although challenges remain. The ongoing monitoring of external and internal governance issues is sufficient, and there is no need to go beyond current efforts.

Criteria met: Yes

2.2.2 Management

Analysis against basic good practice

Scoring statement: *Processes are in place to manage corporate, political and public sector risks, compliance, social and environmental responsibility, procurement of goods and services, grievance mechanisms, ethical business practices, and transparency; policies and processes are communicated internally and externally as appropriate; and independent review mechanisms are utilised to address sustainability issues in cases of project capacity shortfalls, high sensitivity of particular issues, or the need for enhanced credibility.*

The key document governing the Devoll HPP is the 2008 CA with its three supplements (2010, 2013, 2014). Both the original agreement and supplements were approved by the Albanian parliament. It gives DHP the exclusive right to build, own, and operate several hydropower facilities in the Devoll River Valley between 810 and 95 m above sea level. The CA is valid for an initial term of 35 years, to be extended until financial or production targets are met. The only monetary compensation to the government is a concession fee. The project is exempt from VAT and import duties during construction, and is indemnified against future adverse changes in taxes and other arrangements.

The concessionaire and the Contracting Authority (Ministry of Energy and Industry) maintain a joint committee (the Project Implementation Unit or PIU) with monthly meetings, for mutual information and resolution of issues (for example, outstanding authorizations from different government agencies). One of the reasons for the Ministry to resolve such issues is that delays can be interpreted as a 'material adverse government action' under the CA. DHP is represented on the PIU by the country director and the head of the legal team.

On occasion, additional agreements are concluded with other government entities, for example a Shared Responsibility Agreement with the municipality of Gramsh regarding the wastewater treatment plant provided by the Devoll HPP. This example clarifies both parties' roles, for example with respect to permits, grievances, taxes, and future operations to ensure that the plant will effectively protect the Devoll River and Banjë reservoir from untreated effluents, including DHP's right to monitor operations and receive reports over 5 years.

Corporate governance processes have undergone substantial changes over the course of the Devoll HPP, because of changes in ownership of DHP and project management arrangements within DHP, and also because of several reorganisations within Statkraft and its subsidiaries. Statkraft is currently organised in four Business Areas, which own assets, and two corporate Staff Areas. The business areas are Power Generation (P), International Hydropower (IH), Wind Power Technologies and Strategy (WTS) and Market Operations and IT (M), while the staff areas are Corporate Staff and Chief Financial Officer (CFO). The group operating model is clearly described in an internal policy document. Responsibilities for a project under construction are divided between several Statkraft units, with a project director coordinated by a steering committee. When a project is commissioned and starts generating revenue, it is handed over from a construction-oriented structure to an asset management and operations-oriented structure. While the country office is run by the IH business area, which both develops the Devoll HPP and owns the assets, recently teams have been formed reporting to the P and M business areas, to begin operations of the Banjë project. There is a matrix showing decision-making authority and responsibilities for the Devoll HPP of senior managers in Statkraft headquarters, the country organization, and the project organization.

All Statkraft projects are subject to group policies and requirements, which are jointly known as 'The Statkraft Way'. The overarching 'Corporate Responsibility and Health Safety and Environment Policy' commits Statkraft to comply with or be guided by a number of international standards and processes, including the: United Nations Global Compact; OECD Guidelines for Multinational Enterprises; IFC Performance Standards; IPCC/UNFCCC; ISO 14001; OHSAS 18001; and the Global Reporting Initiative reporting guidelines. Additionally, it is Statkraft's target to comply with the UN Guiding Principles on Business and Human Rights by 2020.

Statkraft's Code of Conduct commits every individual employee and manager to a broad set of ethical and sustainable business practices. The Supplier Code of Conduct extends this commitment to suppliers, and puts additional emphasis on labour rights.

As a joint venture, DHP initially had its own policies such as a Sustainability Policy, Code of Conduct and Supplier Code of Conduct. These have been superseded since Statkraft took full control in 2013, but were largely equivalent in content to today's documents.

Additional corporate governance documents are Project Charters, Handbooks and DHP-level requirements. There is a range of more than 40 such requirements grouped under project management, legal, health safety

and environment, human resources, and environmental and social management. This body of requirements has grown over time. It includes some requirements on procurement processes, which are discussed in detail under topic I-8 Procurement.

The document management system and archive is governed by a specific requirement document, and is exceptionally comprehensive. For example, it is easily possible to track every interaction with affected households including the original socio-economic inventory, household consultations and agreement, delivery of compensation and livelihood support, and follow-up monitoring planned for each of the coming years. The data from the household inventories were also used to promote local employment.

The Project Charter for Moglicë lists among the agreed Key Performance Indicators (KPI's) that there should be no fatal accidents, major environmental breaches, or business principle breaches, in addition to standard KPI's such as meeting budget and schedule targets.

Some Statkraft and DHP policy and process documents are for external communication, others for internal use only, with a clear logic regarding which ones are made externally available (however, there are limits to availability in the Albanian language, see below under Stakeholder Engagement).

DHP maintains a grievance mechanism with processes, including an appeals process, communicated internally and externally, and a Community Liaison Unit under the Environmental and Social Management (ESM) team acting as the interface with the public. Most grievances have to do with compensation for construction damages, and with inclusion in resettlement and livelihood support programs. In addition, Statkraft has a whistle-blower mechanism, through which complaints are evaluated for their risk, and automatically escalated to Corporate Audit if medium or high risk. This mechanism has been used in relation to the Devoll HPP.

Independent review mechanisms have been used occasionally, for example to obtain an independent perspective on the financial model (see also topic I-7 Financial Viability) and to resolve a dam-safety issue at Banjë dam (see also topic I-5 Infrastructure Safety).

Criteria met: Yes

Analysis against proven best practice

Scoring statement: *In addition, contractors are required to meet or have consistent policies as the developer; procurement processes include anti-corruption measures as well as sustainability and anti-corruption criteria specified in pre-qualification screening; and processes are in place to anticipate and respond to emerging risks and opportunities.*

Statkraft's Supplier Code of Conduct is quite detailed and mirrors the same requirements expected of Statkraft's own personnel. As per Statkraft's Procurement Process, the Supplier Code of Conduct is referred to in the pre-qualification process and tender process, and has to be included in all contracts. The prequalification self-assessment questionnaire and the compliance assessments of potential suppliers include sustainability and anti-corruption criteria. Further information on the procurement process is provided in topic I-8.

DHP has well-functioning processes to anticipate and respond to governance risks and opportunities. Governance issues receive ongoing attention internally (for example, regarding the management of corruption risks) and through dialogue with government (for example, some emerging risks were renegotiated with government through supplements to the CA). A few of the 290 risks in the project risk register are related to governance issues, and all have clearly identified risk owners, causes, effects, and treatment strategies, although several of them with a low degree of manageability.

Criteria met: Yes

2.2.3 Stakeholder Engagement

Analysis against basic good practice

Scoring statement: *The business interacts with a range of directly affected stakeholders to understand issues of interest to them; and the business makes significant project reports publicly available, and publicly reports on project performance, in some sustainability areas.*

DHP's communications and consultation mechanisms, which are described under topic I-1 Communications and Consultation, allow DHP to understand the issues of most concern to directly-affected stakeholders. For example, DHP has developed brochures regarding entitlements of affected people, grievance mechanism, and employment. These brochures clearly explain the company's commitments, processes, and opportunities for stakeholders. On important occasions (for example, filling of the Banjë reservoir) additional information is provided through a campaign.

Although corporate-level stakeholders can obtain general information through Statkraft's Annual Reports, which follow GRI G4 reporting guidelines and are independently verified, and other documents and information on its website, these cover the entire group's activities and contain little detailed information on the Devoll HPP. There is no specific periodic public reporting by DHP, but DHP's website does include a few downloadable documents posted between 2010 and 2014, including a summary of the ESIA. The Ministry of Energy and Industry's website contains a number of news releases and speeches on the Devoll HPP, and decisions made in joint committee meetings with DHP are reportedly uploaded as well.

Criteria met: Yes

Analysis against proven best practice

Scoring statement: *In addition, the business makes significant project reports publicly available and publicly reports on project performance in sustainability areas of high interest to its stakeholders.*

As a 100% Statkraft subsidiary with no lending from a development bank, DHP has no formal external reporting requirements, except for some reporting requirements to government under the CA. Currently, DHP does not see information of the general public as a priority, as the organization is focused on implementing the project and communicating with their most important stakeholders (government and directly affected people). This may change as the project enters fully into the operations stage.

Because Statkraft and DHP have not established a systematic materiality process in Albania, it is difficult to know whether stakeholders are interested in additional information on the Devoll HPP, and which sustainability areas are of high interest. There are reports and news items from 2010 to 2014 on the DHP website in English and Albanian. There are also brief sections on the Devoll HPP in the Statkraft annual reports. However, since the environmental and social impact assessments of replacement roads in November 2014, DHP has not made significant project reports publicly available, and has not publicly reported on project performance in sustainability. This is a **significant gap** against proven best practice.

Criteria met: No

2.2.4 Conformance / Compliance

Analysis against basic good practice

Scoring statement: *The project has no significant non-compliances.*

The Statkraft 'Legal and Compliance Policy' emphasizes the importance of each unit implementing a compliance program covering inter alia, competition law, corruption, fraud, economic sanctions, export control, money-laundering and personal data protection. Line managers are responsible for compliance, with some mandatory or optional support from internal legal and compliance units, depending on the issues. This

has been implemented by Statkraft in Albania. Each Monthly Project Report also contains an attachment on ongoing discussions with government entities regarding compliance with the CA. This includes compliance of government with agreements such as the VAT exemption. The compliance unit within Statkraft is mostly involved in procurement support (see topic I-8 Procurement). The role of the compliance unit is largely prevention, while the role of Corporate Audit is largely investigation.

No current non-compliances against governance-related laws, regulations or the CA have been reported either by DHP or by government entities in this assessment. DHP has all necessary permits and licenses. Permits from local authorities are sometimes delayed, and DHP has been taking a pragmatic approach to avoid delays, by accepting stepwise permits (permit to mobilize, permit to excavate etc.). Such delays have not held up the overall schedule.

Criteria met: Yes

Analysis against proven best practice

Scoring statement: *The project has no non-compliances.*

While no non-compliances have been reported for DHP, one local administration official reported during this assessment that some smaller contractors or sub-contractors did not comply with tax obligations. It is unclear whether this issue has been resolved. It is not seen as a significant gap because it is an isolated report, and does not appear to be a systemic issue. It would be impossible to know whether all other parties involved in Devoll HPP, including subcontractors and suppliers, are in compliance with all their obligations including registration, tax, labour, and environmental. However, DHP is making a major effort to check its business partners' documentation, and has supported local authorities in bringing contractors into compliance, for example by cooperating with the Labour Inspectorate and by alerting authorities on dust emissions from worksite traffic.

Criteria met: Yes

2.2.5 Outcomes

Analysis against basic good practice

Scoring statement: *There are no significant unresolved corporate and external governance issues identified.*

There are currently no significant unresolved governance issues. DHP has a clear corporate structure, with Banjë now handed over to a new responsible unit. Devoll HPP is based on a working relationship between DHP and the contracting authority, with support from government throughout changing administrations.

Criteria met: Yes

Analysis against proven best practice

Scoring statement: *In addition, there are no unresolved corporate and external governance issues identified.*

From a corporate governance perspective, there are multiple responsibilities for the Devoll HPP and there have been multiple structural changes over time, which have at times proven challenging for staff. Also, remote support from Statkraft headquarters has at times been difficult to manage (for example, availability of competence on both sides, language, culture of collaboration vs. oversight, corporate targets vs. local priorities). However, these are normal issues for a multinational corporation, and Statkraft is aware of them and communicating with staff accordingly.

A number of foreign investors have exited from Albania, reportedly sometimes under pressure. According to some observers, greenfield investments under foreign management appear to work best, especially if oriented towards exports. As one of the largest foreign investors in Albania, Statkraft is supporting efforts at improving the investment climate. The corporate processes described above have been effective in protecting the Devoll

HPP from corruption and other governance challenges. Statkraft is widely seen – by government as well as by business partners – as a leading investor in terms of good corporate governance, and is contributing to raising standards by setting a good example.

Criteria met: Yes

2.2.6 Evaluation of Significant Gaps

Analysis of significant gaps against basic good practice

There are no significant gaps against basic good practice.

0 significant gaps

Analysis of significant gaps against proven best practice

Since November 2014, DHP has not made significant project reports publicly available, and has not publicly reported on project performance in sustainability.

1 significant gap

2.3 Scoring Summary

Statkraft is implementing the Devoll HPP through its subsidiary DHP, which holds a BOOT concession, and is applying its high standards of corporate governance to the project. Under the complex public governance context in Albania, this requires significant efforts, and the project's approach contributes to improving that context. DHP maintains good relations with government agencies, governed by the CA, and these agencies are also complying with their obligations under the CA.

DHP could do more to keep the general public, beyond stakeholders such as government and directly-affected households, informed. This would also make it more effective as an example for a sustainable, well-governed hydropower project. The lack of easily accessible, up-to-date information on the project is seen as a significant gap, resulting in a score of 4.

Topic Score: 4

2.4 Relevant Evidence

Interview:	9, 10, 32, 53, 56, 62, 66, 67, 68
Document:	17, 26, 29-35, 37, 38, 74, 88, 95, 98, 153, 167, 192-195, 217, 230
Photo:	-

3 Environmental and Social Issues Management (I-3)

This topic addresses the plans and processes for environmental and social issues management. The intent is that negative environmental and social impacts associated with the hydropower facility are managed; avoidance, minimisation, mitigation, compensation and enhancement measures are implemented; and environmental and social commitments are fulfilled.

3.1 Background Information

This topic concerns processes for the management of environmental and social issues. Specific environmental or social issues may be referred to in this topic, but are addressed in full detail in the corresponding topics, for example I-10 Resettlement for issues of physical displacement, I-15 for biodiversity, and I-17 for water quality, etc.

Statkraft and Devoll Hydropower Sh.A's (DHP) processes for environmental and social management (ESM), the environmental aspects of HSE (health, safety and environment), and project control and quality (PCQ) are all relevant to this topic.

Statkraft's overarching policy for corporate responsibility and HSE, 'the Statkraft Way', makes reference to the United Nations Global Compact, Organisation for Economic Co- operation and Development (OECD) Guidelines for Multinational Enterprises, International Finance Corporation's (IFC) Performance Standards on Social and Environmental Sustainability, Global Reporting Initiative (GRI) reporting guidelines, and the ISO 14001 standard for environmental management systems. DHP has set out a Sustainability Policy in 2009, which includes key principles that refer to the Global Compact, IFC Performance Standards, environmental and social management systems, and the Hydropower Sustainability Assessment, Protocol.

The Statkraft Way commits Statkraft to act in a sustainable, ethical and socially responsible manner, and to carry out activities that support a global transition towards a low-carbon climate- resilient economy. It states that Statkraft's goal is to have safe operations where people, communities, the environment and Statkraft assets are protected, and that no activity is important enough to be conducted with hazard to life and health.

In preparation for negotiations on accession to the European Union (EU), the government of Albania (GoA) is harmonising Albanian law with the EU *aquis* which includes a chapter on the environment. The Ministry of Environment, Forestry and Water Administration is the environmental regulator, and capacity for environmental at provincial and municipal levels is very limited or non-existent. Relevant laws include:

- Law 8990 (2003) on environmental impact assessment, which introduces two levels of assessment, profound and summary;
- Law 8934 on environmental protection (1993, amended in 1998, 2002, and 2008);
- The law on water resources (8093/1996);
- A range of laws on land tenure and ownership, in particular law 8651 (1999) on expropriation and temporary use of private property for public interest.

DHP has agreed a concession agreement (CA) with the Government of Albania (GoA), and the concession agreement includes duties to obtain required environmental permits, and permits for construction and building which incorporate environmental requirements. It includes a provision to prevent and control any environmental pollution caused by any works. DHP has a joint environmental permit for Banjë and Moglicë, issued by the Ministry of Environment and Water Administration on 20 October 2011, and separate permits for other infrastructure such as a replacement roads, Gramsh wastewater treatment plant etc.

3.2 Detailed Topic Evaluation

3.2.1 Assessment

Analysis against basic good practice

Scoring statement: *Environmental and social issues relevant to project implementation and operation have been identified through an assessment process, including evaluation of associated facilities, scoping of cumulative impacts, role and capacity of third parties, and impacts associated with primary suppliers, using appropriate expertise; and monitoring is being undertaken during the project implementation stage appropriate to the identified issues.*

Environmental and social issues were initially identified through an Environmental and Social Impact Assessment (ESIA) process for the Banjë, Kokël and Moglicë projects, and ESIAs of replacement roads. The main ESIA was led by the consulting company Norconsult, and consisted of four phases: initial planning; project formulation (scoping); an ESIA Feasibility Study as an input to the project's feasibility study; and ESIA reporting. The process culminated in a draft report for DHP's review in June 2011 and a final report in September 2011. The ESIA was carried out to meet Law 8990 and aimed to meet international standards, and it identified a number of issues relevant to both implementation and operation, indicating whether each impact will occur in construction or operation phases. Prior to the ESIA, in February 2010, a Strategic Environmental Assessment, also prepared by Norconsult, presented a preliminary scoping of potential impacts. DHP will continue to identify issues through the update and verification of ESIA findings in certain areas – terrestrial biodiversity and downstream flows – in 2017.

Associated facilities include the transmission line, replacement roads, and a range of associated social infrastructure. Issues relevant to transmission lines were assessed in a Transmission Line Study, which was summarised in the main ESIA (but which has not been made available to this study). Separate ESIAs were prepared for the Banjë to Gramsh and south shore replacement roads by an ITALCONSULT and SGAI joint venture that was appointed as the roads designer. Cumulative impacts on downstream flows, erosion and sedimentation, water quality and biodiversity were assessed in the main ESIA, and a summary analysis of cumulative impacts is presented in its Executive Summary.

Regarding the role and capacity of third parties, the ESIA Executive Summary includes a short section on key parties, referring to central government, regional and local government representatives, local administrations, contractors and sub-contractors, and independent experts and NGOs. However, it is a basic description of third parties, and is not an assessment of their roles or capacity. The DHP-developed Environmental and Social Management Plan (ESMP) provides more information on the roles of third parties, and includes a legal framework, with details on the roles of government in land expropriation, and reference to, for example, GoA responsibilities in road construction, GoA roles in service provision such as education, contractors' responsibilities, and the need for laboratory services, but it is not an analysis of the capacity of these third parties. An assessment of capacities in key areas may have been useful to the project, for example in determining the presence of hazardous waste management services, but it is not a significant gap. DHP has take care to base its approach in a range of areas on a practical understanding of capacities, for example with Gramsh municipality, the University of Tirana laboratory, and re-afforestation contractors, and sought to develop capacity in some cases.

There was no assessment of impacts associated with primary suppliers, but there is no evidence that this is a significant gap. Larger contractors have to report the origin of primary supplies.

Appropriate expertise was used through the impact identification process, including through the use of Norconsult (Norway's largest and one of the leading multidisciplinary consultancy firms in the Nordic region), independent social scientists for the social impact assessment, the Norwegian Institute of Nature Research and

Albanian experts for ecological impacts, and Albanian experts for water quality, cultural heritage and social impacts.

DHP has undertaken monitoring through the implementation stage to-date, and will continue to monitor through the implementation of Moglicë, as follows:

- DHP monthly reports that report on the main events and next steps in HSE and ESM separately;
- Quarterly progress reports on the activities of the ESM team, reporting against Annual Implementation Plan commitments and Key Indicators of Success, and similar monthly reports. These are activity reports, describing the status of activities and performance analysis in stakeholder engagement, environmental management, resettlement and livelihood support, social development, and activities to establish baseline information. The reports use four colour-coded categories to rank progress, from 'overall satisfactory' (green) to 'immediate actions necessary' (red); and
- Monitoring to establish baseline data, in the areas of water quality, fish biodiversity and livelihood restoration (please refer to the relevant topics for details).

DHP's has established an ESM Monitoring Framework (dated September 2015), addressing ESM activities, not including HSE. This sets out a monitoring policy, and a range of items to be monitored, for which the monitoring objective, methodology, indicators, frequency and reporting are defined. This is a highly systematic approach, presenting monitoring plans for each programme (community liaison, environment, resettlement and livelihood support, replacement infrastructure), outcomes (water quality, biodiversity, livelihood restoration, vulnerability, socio-economics, influx management), and compliance with GoA, Statkraft and IFC standards, as well as key indicators of success.

Criteria met: Yes

Analysis against proven best practice

Scoring statement: *In addition, monitoring of environmental and social issues during project implementation takes into account inter-relationships amongst issues, and both risks and opportunities that become evident during implementation.*

During implementation specifically, inter-relationships amongst issues might include: the influence of site environmental management on water quality downstream of the sites; impacts of the disposal of site wastes; the influence of lower flows during filling on water quality downstream; environmental risks of social infrastructure projects; and opportunities to employ affected people through ESM activities and on-site. Whilst DHP has not systematically identified such inter-relationships, it has addressed some, and DHP's monthly and quarterly reporting, and grievance mechanism has identified risks as they emerge. Processes to identify, anticipate and respond to impacts arising from emerging risks is discussed under Management below. Processes to identify opportunities are discussed under Management.

Criteria met: Yes

3.2.2 Management

Analysis against basic good practice

Scoring statement: *Processes are in place to ensure management of identified environmental and social issues utilising appropriate expertise (internal and external), and to meet any environmental and social commitments, relevant to the project implementation stage; plans are in place for the operation stage for ongoing environmental and social issues management; and the environmental and social impact assessment and key associated management plans are publicly disclosed.*

Processes are in place to ensure management of identified environmental and social issues utilising appropriate expertise (internal and external), and to meet any environmental and social commitments, relevant to the project implementation stage.

The Environmental and Social Management Plan, made public in October 2013, consisted of a number of plans addressing social issues and environmental issues. The social plans consisted of: resettlement and livelihood support; infrastructure development; physical cultural resources, including a chance finds procedure; health plan; education plan; and an influx management plan. Environmental plans concern monitoring of hydrology, meteorology and sedimentology, water quality and aquatic ecology, and terrestrial ecology observation, and plans for sewage and wastewater management, waste management, a forestry programme, a downstream programme, and 'environmental conditions for the general construction activities'.

Since that time, DHP has established significant capacity and responsibilities for social and environmental management, and developed a range of policies, plans and procedures for the implementation stage, which implement most of the commitments in the ESMP. The initial structure for ESM was described in the DHP Handbook (DHP-PC-S-001) / DHP-PCQ-R-01-01), with teams for resettlement and social development, community liaison, and environmental management, reporting to a Senior ESM Manager, directly reporting to the Project Director. The team numbered 24 staff during Banjë construction, and is now 18 strong. DHP also has GIS capability (Geographical Information Systems). In addition, a Senior HSE Manager also had responsibility for construction site environment management (with occupational health and safety), and the Owner's Engineer (Mott MacDonald / Coyne et Bellier) were initially given responsibilities for the management of social and environmental conditions at the site. A new project handbook for Moglicë (DHP-PCQ-R-02, December 2015) also includes commitments to HSE and social and environmental management, and an HSE Site Manager and team of HSE officers is employed at the Moglicë site.

Policies, plans and procedures are embedded in DHP's quality assurance system, concerning project control and quality (PCQ), HSE, and ESM, and categorised as requirements (R), or supporting documents (S). For example, these include:

- DHP-HSE-P-001, the HSE policy;
- DHP-ESM-P-001, the DHP Sustainability Policy;
- DHP-HSE-R-01, September 2014, describing the HSE programme, with a purpose to ensure the Statkraft Way and HSE policy and goals met, and including responsibilities of HSE inspectors, though it is mainly focused on occupational health and safety;
- DHP-HSE-S-13, a template for reporting on incidents; and
- DHP-PCQ-R-03, the Risk Management Process; and
- A DHP Hazard Identification document including a section on environmental protection (referring to avoiding pollution of water courses, avoiding ground pollution, avoiding air pollution, controlling landscape damage, purchasing policy, and controlling wastes).

For site environmental management, DHP HSE inspectors oversee contractors, including LAJV (Limak-AGE Joint Venture, the main civil contractor, for Banjë, and now also for Moglicë), Doko (transmission lines), and Euroteorema, Trema, and EnBi Power (replacement roads). An appendix on administrative requirements is included in all major contracts, including the Owner's Designer and Owner's Engineer. This consists of an overview of administrative requirements that refers to HSE requirements, and a range of further sub-appendices, including:

- Specification for contractor's HSE programme, consisting of seven sections, including purpose, objective, normative and informative references, definitions, general requirements, responsibilities, and requirements;
- The project's Environmental Management and Action Plan (EMAP), consisting of 12 framework sub-plans, applicable to the construction phase, which are: Erosion and Sediment Control; Spoil Disposal; Quarry and

Construction Layout; Water Quality Monitoring; Chemical Management; Emergency Response and Hazardous Materials; Emissions and Dust Control; Noise Control; Landscape and Re-vegetation; Vegetation Clearing; Waste Management; Construction Camp;

- Risk Assessment procedures; and
- The DHP Supplier Code of Conduct.

The DHP HSE team conduct daily HSE inspections, and occasional environmental audits, focusing on known deficiencies, now with a team of 11 HSE inspectors at Moglicë. LAJV at Moglicë have adopted the EMAP and a waste management plan, and specific measures on the construction site include waste separation, wastewater treatment, sediment capture, and an oil skimmer for effluent from the tunnelling site. The HSE Site Manager compiles a sheet of non-compliances for following-up with the contractor. Limited implementation of these plans, with probable impacts on the local environment, is a significant gap, but is addressed on topic I-18 Waste, Noise and Air Quality.

Plans for the operation stage for ongoing environmental and social issues management for both Banjë and Moglicë are drafted, but yet to be adopted. The plans are set out in a transitional Environmental and Social Management Plan for operations (ESMP-O), which is intended to be revised every 3 to 5 years. It is transitional, as the ESMP will continue to apply to Moglicë for 2 years, whilst the ESMP-O is put in place. The ESMP-O concerns ESM activities only (not HSE), and sets out a range of external risks and key performance indicators, and monitoring and risk mitigation plans for water quality and biodiversity, for downstream flows, communications, reservoir management, erosion and slope protection, and livelihoods restoration.

A number of plans for social and environmental management were publicly disclosed, and remain available on-line. In chronological order, these are: the Strategic Environmental Assessment; the Executive Summary of the ESIA; Guiding Principles and Entitlement Matrix for Resettlement; and Non-technical Summaries of the replacement road ESIAs.

Criteria met: Yes

Analysis against proven best practice

Scoring statement: *In addition, processes are in place to anticipate and respond to emerging risks and opportunities; and plans and processes are embedded within an internationally recognised environmental management system which is third party verified, such as ISO 14001.*

DHP holds risk review meetings on a monthly, quarterly, and *ad hoc* basis, following a risk management process set out in DHP-PCQ-R-03, the Risk Management Process. The process categorises risks into 3 categories (critical, significant, acceptable) based on likelihood and severity, and the Risk Management Process includes reference to the external environment in its objectives. DHP uses an 'Easy Risk' tool, and is certified to meet the ISO 31000:2009 standard of risk management. DHP has conducted Quantitative Risk Assessment for Banjë and Moglicë, which assesses the costs of the project, and the cost and timing implications of a range of risks (more details are provided in I-4 Integrated Project Management and I-06 Financial Viability). These risk management processes do not place much emphasis on environmental or social issues, and where they do, they tend to be focused on risks for project implementation from external environmental and social issues, such as delayed relocation of affected people, and local protests. The risk matrix, consisting of over 290 risks, includes just a handful that concern project impacts on the environment (construction waste disposal fails, environmental pollution during construction, preparatory works HSE, fugitive dust during construction). But these are not considered significant gaps because ESM processes address a broader range of risks.

ESM quarterly reports include a summary of challenges and risks for each programme (and adaptations made in response) and the latest report includes a section on unforeseen project impacts. The ESM Monitoring Framework describes adaptive management as one of two targets of monitoring (the other being accountability), and sets out plans for programme-oriented monitoring and outcome monitoring. Programme-

oriented monitoring is focused on programme activities, and grievances, whilst outcome monitoring is focused on the outcomes of water quality, biodiversity (aquatic and terrestrial), the restoration of livelihoods and vulnerability of resettled people, economic development, and influx management. As an example of the identification of risks and their avoidance, DHP's slope stability monitoring around Banjë reservoir has recently identified increased movement around the settlement of Zgjupë, and in response, DHP has restricted its operational rules, reducing flow by using the ecological unit only, maintaining the reservoir level at 165 masl, and limiting drawdown to no more than 0.15 m/day between 165 and 170 masl. The grievance redress mechanism is a further mechanism to respond to emerging impacts with compensation. In addition, the Statkraft – WWF partnership is intended to explore issues of ecological flows, sedimentation and downstream impacts. In several areas (downstream flows assessments, biodiversity monitoring, for example) there have been delays, but they will be addressed in due course.

ESM team activities and reporting provide a means to anticipate and respond to opportunities to have a positive impact. For example, such opportunities have been followed in relation to additional benefits, health care, and water supplies. In some specific areas, there may be opportunities for a positive impact that are not taken, but these are identified where appropriate under specific topics in this assessment such as I-15 Biodiversity and Invasive Species and I-19 Reservoir Preparation and Filling. The ESMP has a total budget of € 30 070 000, or 5.6% of the total project cost. Expenditure to date is € 10 810 000, or 3% of total expenditure to date. The total expenditure on completion of ESM programmes is expected to be € 23 627 000, 3.8% of the total due to lower-than-expected costs of replacement housing, so ESM activities are underspent. There is a gap concerning the opportunity to build on the project's investments in infrastructure for broader regional development, but this is discussed on topic I7 Project Benefits.

The above plans and procedures are embedded in DHP's quality management system, certified to ISO-31000:2009. The plans and processes used by DHP broadly meet the requirements of an ESMS (Environmental and Social Management System) set out in IFC Performance Standard 1 and ISO-14001: for example, policy (the Statkraft Way, including group requirements on environmental management and human rights); identification of risks and impacts (ESIA and the processes described above); management programmes (ESMP and a range of ESM programmes); organisational capacity (the ESM team and HSE staff); emergency preparedness and response (see I-5 Infrastructure safety); stakeholder engagement (see I-1); and monitoring and review (Statkraft ESM/HSE reviews). However, the systems applied to the construction sites concerning environment are relatively limited, contractors have not fulfilled a requirement in the specification for contractor's HSE programme (attached to all contracts, stating 'the contractors shall have developed an environmental management system at a level corresponding to a recognised international standard such as ISO 14001: 2000 or EMAS.'). Corporate Audits are independent, reporting directly to the board, but they range across all group requirements and could not be said to be a third party audit of environmental management systems. Limited environmental management systems for the construction sites, and the absence of third-party verification of both ESM and HSE systems is a **significant gap** against proven best practice.

Criteria met: No

3.2.3 Stakeholder Engagement

Analysis against basic good practice

Scoring statement: *Ongoing processes are in place for stakeholders to raise issues and get feedback.*

This topic addresses stakeholder engagement in relation to the management of environmental and social issues. The management of communication and engagement with all stakeholders is covered under topic I-1 (Communications and Consultation).

ESIA processes included engagement with the public, through public hearings for the main ESIA, separately for Banjë and Moglicë, replacement roads ESIAs, and the ESIA for the transmission line. For example, the Draft ESIA Report Executive Summary was disclosed publicly, and public hearings were conducted in September 2011 in Gramsh and Moglicë. During these hearings, the findings of the assessments were presented and discussed with the general public. More than 1 300 persons attended these hearings.

Ongoing processes, through which stakeholders may raise issues and get feedback, on social or environmental concerns, are: at a central government level, through the Project Implementation Unit, and associated roundtables (please refer to I-2 Governance for details); at a local level, public information centres; the Grievance Redress Mechanism (GRM); roundtable meetings with local stakeholders; and ongoing discussions with municipalities and village heads on specific issues (such as reservoir safety signage, downstream irrigation issues etc). These processes are more fully described in topic I-1 (Communications and Consultation). Most of the issues raised concern social issues, including drainage and damages to property arising from construction, and they are more fully described in I-9 (Project-affected Communities and Livelihoods) and I-10 (Resettlement). Engagement with certain groups seems to be limited – for example MoEFWA (and it was not possible to obtain an interview with MoEFWA during this assessment), or downstream stakeholders, or civil society. However, this is more likely to be due to the limited interest amongst these stakeholders, rather than a gap on the part of DHP. There are limited environmental non-governmental organisations or civil society organisations in Albania. Statkraft has engaged with WWF on an international level.

Criteria met: Yes

Analysis against proven best practice

Scoring statement: *In addition, feedback on how issues raised have been taken into consideration has been thorough and timely.*

The vast majority of issues have been raised by affected local communities, concerning physical displacement, livelihood support, and damages arising due to construction activities especially the replacement roads. Feedback has been provided immediately in many cases through the pubic information centres. The ESM team report on the numbers, validity and closure of grievances, with a target of 90% resolution of all grievances raised. The number of grievances received by the close of Q3 2016 totalled 319, out of which 268 were closed, 50 were in process, and 1 under appeal, a rate of 84% closure. The oldest out of 51 grievances in process or under appeal at the end of September 2016 dated to 2014. The vast majority are resolved on a timely basis, and feedback is provided. There are some gaps concerning Stakeholder Engagement, but these are addressed on topic I-1 Communications and Consultation.

Criteria met: Yes

3.2.4 Conformance / Compliance

Analysis against basic good practice

Scoring statement: *Processes and objectives in the environmental and social management plans have been and are on track to be met with no major non-compliances or non-conformances, and environmental and social commitments have been or are on track to be met.*

Processes and objectives have been met and are likely to continue to be met for the remainder of implementation, with the notable exception of continuing non-compliances of the main contractor, LAJV. Contractors' construction management is addressed under topic I-18 (Waste, Noise and Air Quality).

The latest Annual Implementation Plan (AIP 2016) of ESM activities provides a comprehensive review of activities in 2015, with a description of the status of planned activities and performance analysis in each of the programme areas (community liaison, environment, etc). The summary section reports against commitments,

including AIP 2015 targets, the key indicators of success, and a selection of IFC Performance Standards. Four programmes are highlighted orange to indicate that there are delays with significant risks for the ESM programme:

- Sewage treatment in Gramsh, i.e. the development of the wastewater treatment plant in Gramsh;
- Banjë downstream programme, i.e. the assessment of risk of downstream impacts, delayed because the operational regime had not been developed;
- Banjë social development, delays to the entire programme;
- Banjë replacement infrastructure, delays to handover to local government and establishing commitments, due to local elections.

By the end of Q3, 2016, these issues had been resolved, with the exception of delays to the social development programme, for both Banjë and Moglicë.

AIP 2016 includes comments on conformance with the requirements of four IFC Performance Standards (PS 1 Assessment and Management of Environmental and Social Risks and Impacts, PS5 Land Acquisition and Involuntary Resettlement, PS6 Biodiversity Conservation and Sustainable Management of Living Natural Resources).

It was not possible to interview the Ministry of Environment, Forests and Water Administration during this assessment for an opinion on environmental compliance, but an interview with the Ministry of Energy and Industry confirmed no non-compliances, and there is no evidence of ongoing major non-compliances.

Criteria met: Yes

Analysis against proven best practice

Scoring statement: *In addition, there are no non-compliances or non-conformances.*

DHP systematically identifies non-conformities, recording them in Statkraft's Emendo system. For example, this shows three non-conformities related to unwanted environmental conditions since Banjë operation began, specifically: no downstream flow during maintenance, a landslide at Banjë (on slope above road between powerhouse and dam), and disposal of drainage water to the tailrace. Only the latter remained open in the Emendo system at the time of this assessment.

Ongoing non-compliance of the main contractor, LAJV, is a more major concern however. It may be only a matter of time before there is a major environmental incident. This issue is discussed and scored on topic I-20 Waste, Noise and Air Quality.

There is no definitive evidence demonstrating that DHP is in conformance with the standards set out in the Statkraft Way. The analysis of conformance with IFC Performance Standards presented by DHP's ESM team is brief, based around highly summarised requirements of the performance standards, and does not include PS2 to PS4 (Labour and Working Conditions, Resource Efficiency and Pollution Prevention, and Community Health, Safety, and Security) because they are not the responsibility of the ESM team. It is highly illogical to present analysis of conformance to PS1 without consideration of PS 2 to PS4. There may be non-conformances with IFC Performance Standards, discussed on topics I-9 Project-affected Communities and livelihoods and I-10 Resettlement. This is not identified as a significant gap here, as non-conformances are identified as significant on other topics, but there may be value in a more thorough assessment of conformance to the Performance Standards, addressing all Performance Standards.

Criteria met: Yes

3.2.5 Outcomes

Analysis against basic good practice

Scoring statement: *Negative environmental and social impacts of the project are avoided, minimised and mitigated with no significant gaps.*

Devoll HPP has not resulted in environmental impacts of high significance to date, partly because Banjë has few highly significant direct environmental impacts.

Devoll HPP has resulted in some negative social impacts, but these gaps are discussed on topics I-9 Project-affected Communities and I-10 Resettlement.

Criteria met: Yes

Analysis against proven best practice

Scoring statement: *In addition, negative environmental and social impacts are avoided, minimised, mitigated and compensated with no identified gaps; and enhancements to pre-project environmental or social conditions or contributions to addressing issues beyond those impacts caused by the project are achieved or are on track to be achieved.*

DHP consistently provides compensation for impacts as they arise, especially for social impacts. The need for compensation has arisen frequently – for example, for damages to land from the construction of replacement roads outside of the acquired land, loss of land due to the high-than-expected Banjë reservoir, and downstream impacts on a fish farm during filling. These impacts are relatively minor and are relatively unpredictable, and providing compensation as they arise is fair.

DHP is delivering enhancements to pre-project environmental or social conditions. The approach has been to provide infrastructure, including replacement infrastructure, of a much higher standard than previously existed. This approach has been taken to the replacement roads, Gramsh wastewater treatment plant (WWTP), the bridge across the reservoir at Gramsh, replacement water supply systems, and the Drizë school, for example. This approach was also taken with the reforestation programme. This approach will contribute to addressing issues beyond the impact of the project in some cases, for example, the Gramsh WWTP will avoid the visual impact and odour of unmanaged sewage disposal from Gramsh. There are other enhancements and additional benefits discussed under other topics, specifically I-7 Project Benefits, I-14 Public Health, and I-17 Water Quality.

Statkraft and DHP are contributing to improved knowledge of issues, beyond the impacts caused by the project, in two areas: sedimentation and greenhouse gas (GHG) emissions. Sedimentation research is discussed under topic I-16 Erosion and Sedimentation. Statkraft is supporting a 1.6 million NOK research study on GHG emissions, which has measured post-impoundment emissions from the Banjë reservoir. The project is implemented by SINTEF Energy Research, an independent, non-commercial research organization, and it has measured pre-impoundment emissions in the Banjë and Moglicë reservoir areas, and will measure post-impoundment emissions. It seeks to improve understanding of water quality issues in the future Banjë reservoir and downstream, estimate net GHG emissions from the reservoir, and test the 'G-Res' screening tool to predict emissions, and indicate the risk for future high emissions from Banjë. The project will proceed to conduct further measurement and tests in Norway and Laos, and will inform the International Hydropower Association (IHA) / UNESCO programme on the measurement of reservoir GHG emissions. Preliminary results indicate low post-impoundment emissions and low UAS influence on net emissions. UAS plays major role in CH4 emissions if nothing is done to control these sources (wastewater from Gramsh, and also agricultural and wastewater upstream of Moglicë).

Criteria met: Yes

3.2.6 Evaluation of Significant Gaps

Analysis of significant gaps against basic good practice

There are no gaps against basic good practice.

0 significant gaps

Analysis of significant gaps against proven best practice

Limited environmental management systems for the construction sites, and no third-party verification of environmental management systems.

1 significant gap

3.3 Scoring Summary

Environmental and social issues were initially identified through ESIA processes addressing the main project, the role of third parties, and associated infrastructure, using appropriate expertise and local knowledge. DHP has undertaken monitoring through the implementation stage to-date, and will continue to monitor through the implementation of Moglicë. Stakeholder engagement was conducted through the ESIA process and there is a wide range of ongoing processes through which stakeholders may raise issues and get feedback on social or environmental concerns, at central government and local levels.

The Environmental and Social Management Plan (ESMP), made public in October 2013, consisted of a number of plans addressing social issues and environmental issues, and DHP has established significant capacity and responsibilities for social and environmental management, and a range of policies, plans and procedures for the implementation stage. Plans for the operation stage for ongoing environmental and social issues management are in draft.

Devoll HPP has not resulted in environmental impacts of high significance to date (though there are significant concerns with contractors' management and social impacts, addressed on other topics), and DHP consistently provides compensation for impacts as they arise. DHP is delivering enhancements to pre-project conditions particularly through replacement infrastructure of a much higher standard than previously existed.

However, DHP risk management processes do not place much emphasis on environmental or social issues, and ESM reporting focuses mainly on ESM programme risks, which may be due to incentives to avoid construction delays arising from ESM activities. Plans and processes are not embedded in a third-party-certified ESMS. There are three gaps against proven best practice, resulting in a score of 3.

Topic Score: 4

3.4 Relevant Evidence

Interview:	1, 2, 9, 10, 14, 37, 38, 39, 58, 59, 65, 66
Document:	3, 9, 21, 25, 26, 27, 28, 29, 32-34, 41, 46, 49, 51-53, 56, 66, 67, 70-72, 78, 83, 84, 87, 96-105, 117, 118, 120, 153, 154, 172, 176, 177, 179, 186-188, 190, 204, 205, 263, 269, 270, 271, 272, 273, 280, 281, 282, 283, 284, 285, 286
Photo:	6-12

4 Integrated Project Management (I-4)

This topic addresses the developer's capacity to coordinate and manage all project components, taking into account project construction and future operation activities at all project-affected areas. The intent is that the project meets milestones across all components, delays in any component can be managed, and one component does not progress at the expense of another.

4.1 Background Information

Devoll HPP is owned and implemented by the concessionaire Devoll Hydropower Sh.A (DHP) with contributions from other Statkraft teams in Albania and across Europe, a significant number of international and local consulting firms and other service providers, suppliers and contractors, and for some components such as land acquisition, resettlement and replacement infrastructure, from Albanian government entities. Major contractors, with expected contract values above € 2 million, are, ordered by value:

- Limak and AGE Joint Venture (LAJV; Turkey, civil works);
- Alstom (France, electro-mechanical equipment and hydraulic steel works);
- Albstar (Albania, replacement roads);
- Euroteorema (Albania, replacement roads and preparatory works);
- Mott MacDonald and Coyne et Bellier (UK and France, engineering services and owner's engineer Banjë);;
- ÅF Consultant (Switzerland, owner's designer);
- Doko (Albania, transmission lines);
- Trema (Albania, preparatory works);
- Norconsult (Norway, design engineering services);
- Multiconsult (Norway, design engineering services);
- SWECO (Sweden, underground engineering services);
- Vega (Albania, preparatory works);
- JV Italconsult/SGAI (Italy, road design engineering services).

Devoll HPP project management is relatively complex for a medium-sized project because: Devoll HPP involves two hydropower projects, two transmission lines, and a roads package, with overlapping timelines; responsibilities for different project components change as the components progress; and the implementation model has been modified in several respects during implementation.

4.2 Detailed Topic Evaluation

4.2.1 Assessment

Analysis against basic good practice

Scoring statement: *Monitoring of project progress, milestones, budget and interface issues, and of the effectiveness of management of implementation stage plans including construction management, is being undertaken on a regular basis during project implementation.*

Devoll HPP is closely monitored by the owner, with support from a number of international consulting firms that have been allocated specific tasks. The project uses modern approaches such as Earned Value Analysis and software such as 'Primavera Risk Analysis'. Key monitoring tools are the monthly and quarterly project reports, risk register, and quantitative risk assessments (QRAs).

Monthly Project Reports summarize KPI's, HSE performance, project progress curve, major milestones, cost reconciliation and cash flow, a narrative of key concerns and a project summary, earned value and progress,

contract cost status and forecast, major quantity trends, project manpower, and 'top risks'. Additionally, there are attachments covering the time schedule, compliance with the concession agreement, VAT, contingency early warning, variation orders and claims, non-conformity reports (including root cause analysis), and open corporate audit items. These are highly detailed and informative for management purposes. A quarterly ESM report is used to assess progress in that programme.

The top risks in the monthly reports are taken from the continuously updated and detailed risk register, run on 'EasyRisk Manager' database software. A summary table currently contains a total of 290 risks with their cause, effect, description, manageability, treatment strategy, owner, and related actions. For critical risks, treatment is required; for significant risks, treatment is based on a cost-benefit assessment.

The QRA is also based on the risk register and provides a numerical estimate, based on Monte Carlo simulations, of the effects of these risks on the project objectives (time and cost). It takes multiple considerations into account, for example the effect of first impoundment on the probable time required for reservoir filling. A QRA is done annually or when major changes to the budget have to be approved.

From today's point of view, the original estimates for Banjë – particularly of required quantities – are considered somewhat optimistic. For example, there was an increase of almost € 10 million in concrete and reinforcement costs due to underestimation by the tender design consultant. Also, the experience of LAJV and some of the Albanian contractors with some of the tasks, and with Statkraft's quality expectations, may have been overestimated. A project close-out report for Banjë is under preparation, with lessons learnt for Moglicë and other Statkraft projects. For Moglicë, the key risks are related to the main dam and the tunnels: at the time of this assessment, delays are being experienced with dam foundations (grouting works) on the left bank, and start-up of the tunnel boring machine.

Criteria met: Yes

Analysis against proven best practice

Scoring statement: *In addition, monitoring of the overall project implementation takes into account inter-relationships amongst issues, and both risks and opportunities that become evident during implementation.*

Monitoring of the implementation of Devoll HPP is state-of-the-art, detailed, and continuous. It covers inter-relationships between physical project components, and between physical implementation and other project activities (for example, between expropriation and impoundment). New risks have been added to the monitoring system over time, according to DHP's Risk Management Process, and a number of opportunities have been identified (for example, Statkraft taking on the owner's engineer's role).

Criteria met: Yes

4.2.2 Management

Analysis against basic good practice

Scoring statement: *An integrated project management plan and processes are in place that take into account all project components and activities with no significant gaps; and a construction management plan is in place that describes processes that contractors and others are required to follow to manage construction related activities and risks.*

There are overall plans, charters and handbooks for the Banjë, Moglicë, and roads components, as well as higher-level plans that describe the inter-relationships of the different components. The project schedule and sequencing of activities is described through detailed and frequently updated Gantt charts. Processes that contractors are required to follow are primarily described in their contracts, which are modified standard contracts, based on FIDIC's 'Yellow Book' for equipment supply and installation, including transmission lines,

and the 'Red Book' for civil engineering, as well as consulting services contracts. The contracts are sufficiently detailed: for example, over 80 milestones have been agreed with LAJV for the Moglicë project.

At the level of Statkraft and DHP, there are multiple other documents to describe a range of procedures and plans. These include, for example, a procedure for quality management system audits and a procedure for asset handovers to government agencies. Risks are treated systematically according to a defined Risk Management Process, including monthly and quarterly risk review meetings. Internal coordination between DHP units is supported by weekly management meetings. As DHP is transitioning from construction to operation, SAP is being introduced as a software platform, to help improve integration into Statkraft systems. Frequent regular meetings are also scheduled with the larger contractors, in particular with LAJV (weekly, bi-weekly, commercial, QA/QC, underground structures, dam area, etc.).

The Devoll HPP is implemented through multiple contracts, partly to allow participation by smaller and national contractors. However, it also requires close follow-up with contractors, especially in cases where new techniques are introduced, as for example for the bridges on the replacement road. Several contractors had little experience with modern methods (such as submitting work programs and procedures for approval), or insufficient equipment. A joint venture of Mott MacDonald and Coyne et Bellier was contracted as Owner's Engineer for contractor supervision and quality management.

Criteria met: Yes

Analysis against proven best practice

Scoring statement: *In addition, the plan identifies a range of potential interface issues and sets out measures to manage interface and delay issues without impinging on overall project timetables and budgets; processes are in place to anticipate and respond to emerging risks and opportunities; and construction management plans ensure that land disturbance and waste generation activities will be managed so that later rehabilitation activities can be undertaken efficiently and effectively.*

Interface issues are well understood in project plans, and DHP has been able to handle a number of significant revisions to plans that became necessary or were found suitable over time. These include, for example, a change in the powerhouse schedule at Banjë, and changes to the dam foundations at Moglicë. In Banjë, the wastewater treatment plant had to adapt to unforeseen high reservoir water levels. In Moglicë, plans for spoil deposits and quarries have had to be adjusted during implementation. A particular quarry had unsuitable quality, so a replacement quarry was identified and permitted, though it is more distant and will increase transport costs. The risk register details potential sources of delays and cost overruns, and these are continuously managed. A contract amendment with the principal contractor, LAJV, was agreed in June 2016, including a new programme with milestones. Where major schedule or cost risks arise, project management is taking steps to resolve or mitigate these.

After Statkraft assumed full control of DHP, in line with Statkraft's general approach to project management and because of some performance issues, the owner's engineer role was first reduced (by taking over HSE supervision) and then not extended. Instead, DHP rapidly expanded its own workforce and competences, and took on the role of owner's engineer, on the roads, transmission lines, and Moglicë components, supported by contracted consultants (for example, a small group of SWECO engineers for specific underground work support). DHP senior staff have significant experience working for contractors, which helps with contractor management.

A good example of a response to an emerging risk concerns the replacement roads. When it became apparent that government would find it difficult to construct the replacement roads as originally agreed, and the schedule for impoundment at Banjë was at risk, a solution was found. This required renegotiating the CA, building up DHP's capacity to assume the additional responsibility, procuring design services and several roads contractors, and managing the contractors closely. Despite the time pressure and lack of contractor experience

(particularly for bridges), the replacement roads project for Banjë was concluded within schedule and very close to budget, and without serious accidents and only one near-miss (for which it received an internal Statkraft HSE award), although the level of grievances of adjacent landowners was high (see I-9 Project-affected Communities and Livelihoods).

All contractors have clean-up, waste disposal, landscaping or land rehabilitation tasks contractually agreed and are responsible, during the warranty period, for any outstanding issues related to workmanship. However, LAJV is yet to complete rehabilitation at Banjë, and rehabilitation will require the close attention of DHP if contractors are to be held to this commitment: please refer to I-18 Waste, Noise and Air Quality for details of contractor's commitments to environmental management.

Criteria met: Yes

4.2.3 Conformance / Compliance

Analysis against basic good practice

Scoring statement: *Processes and objectives in the integrated project management plan and the construction management plan have been and are on track to be met with no major non-compliances or non-conformances.*

Multiple non-conformity reports (NCRs) have been issued, and a majority closed. For example, the October 2016 monthly project report lists 500 NCRs, 386 of which have been closed. The most frequent NCRs are related to rock bolts and accessories installation (Moglicë), shotcrete and concrete defects (Moglicë), failed tests and exceeded tolerances, and concrete defects (Banjë). These are signs of a functioning quality management system, and not a gap.

As described above, project management has been able to contain timing, cost and quality issues to a large degree. Claims from contractors have been critically reviewed and significantly reduced (for example, an LAJV claim for 229 days of cumulative delays at Banjë, out of which only 52 days were accepted). Amendments have been concluded. Non-conformances with original plans are not considered major at the basic good practice level.

Criteria met: Yes

Analysis against proven best practice

Scoring statement: *In addition, there are no non-compliances or non-conformances.*

Compared to the original budget of € 535 million, including contingencies of € 96 million, the current best estimate (from the 2016 Quantitative Risk Assessment) is now € 593 million, including contingencies of € 20 million. The largest part of this discrepancy is due to the replacement roads being fully included in the project budget, at € 60 million, instead of the € 11 million originally planned, when it was expected that government would construct the roads under a separate budget. Cost increases in the Banjë project are expected to be 15% and in the Moglicë project 19%, all covered by contingencies. The Banjë project was completed on time, and the Moglicë project has a target to come in on time. The current program agreed with LAJV keeps the original end-dates for Moglicë, but is now internally considered as optimistic. A challenge for the Moglicë schedule is that a minor delay in construction completion time on the dam may cause a substantially longer impoundment time due to large seasonal variations in inflow.

Criteria met: Yes

4.2.4 Outcomes

Analysis against basic good practice

Scoring statement: *The project is meeting overall budget and timing objectives and targets; interface issues are managed effectively; and construction risks are avoided, minimised and mitigated with no significant gaps.*

As described above, the Devoll HPP is close to meeting overall targets. The splitting of the project into multiple contracts has created a large number of interface issues, but these are being effectively managed by DHP. Construction risks are addressed by close interaction with contractors, and at times active DHP support, reflecting Statkraft's approach to treat contractors, as far as possible, as partners with a shared objective. The current problems with grouting at Moglicë, for example, are being addressed by strengthening the responsible sub-contractor, Balkan Drilling. There have been no delays due to community protests, and only minor delays due to strikes by LAJV workers and protests by transportation contractors, related to long working hours.

Analysis against proven best practice

Scoring statement: *In addition, interface issues are anticipated, and avoided or minimised; and construction risks are avoided, minimised, mitigated and compensated with no identified gaps.*

Interface issues are well understood, and the boundaries between work packages (for example, the various engineering consulting contracts) defined to reduce the potential for gaps or overlaps between contractors. The move by DHP to assume direct responsibility for contract management, without an Owner's Engineer, also reduces interface issues.

Construction risks are avoided or minimised as far as possible, for example through the design and alignment of tunnels at Moglicë according to the understanding of the geology. Treatment or mitigation and compensation options are identified and included in the risk register, with no apparent gaps. Please note that environmental risks of construction are considered separately under topic I-18 Waste, Noise and Air Quality.

Non-conformities are addressed through remedial action (repair, rework, reject, or accept; and re-inspect) and corrective action (for re-occurring NCRs, based on root cause analysis), according to DHP's Non-Conformance Management Procedure.

Criteria met: Yes

4.2.5 Evaluation of Significant Gaps

Analysis of significant gaps against basic good practice

There are no significant gaps against basic good practice.

0 significant gaps

Analysis of significant gaps against proven best practice

There are no significant gaps against proven best practice.

0 significant gaps

4.3 Scoring Summary

The Devoll HPP consists of several components and is implemented by multiple contractors, some of which have limited experience. Project management for Banjë was shared between DHP and an Owner's Engineer, but for the other components DHP has assumed full management control. The management approach is to have constant dialogue and close supervision of contractors. Management tools are well-designed, including comprehensive monthly reporting against a wide range of KPIs, a risk register, and annual quantitative risk

assessments to assist with overall cost and time management. Challenges during implementation have been well-managed, and KPIs on budgets and schedules have been met.

Topic Score: 5

4.4 Relevant Evidence

Interview:	10, 15, 32, 62
Document:	9, 27-30, 32, 39, 41, 98, 225-229, 233, 238, 287
Photo:	-

5 Infrastructure Safety (I-5)

This topic addresses management of dam and other infrastructure safety during project implementation and operation. The intent is that life, property and the environment are protected from the consequences of dam failure and other infrastructure safety risks.

5.1 Background Information

Devoll HPP includes the construction of two large dams in the Devoll valley: the Banjë project, with the completion of an unfinished dam from the last years of the communist regime; and the Moglicë project with a high dam in an area with some geotechnical challenges. Albania is one of the most seismically active countries in Europe. Relevant public safety issues during implementation include safety on roads, near worksites, and along waterways, including the safety of cofferdams. During operations, they include dam stability (design and construction quality control), reservoir management (including slope stability), safety on the reservoir, safety downstream of the powerhouses during peaking releases, and downstream of the dams during flood spilling operations. This assessment was not able to cover public safety aspects of the design, implementation, and operation of other project components such as transmission lines and powerhouses, which are considered comparatively minor. Tunnel safety is considered under topic I-12 Labour and Working Conditions.

Before the Devoll project, during major floods, the already cleared reservoir area behind the 50 m high Banjë cofferdam would fill up and in some cases, cut off the road to Gramsh. There are conflicting views whether this dam posed safety risks. Floods are a regular occurrence in the Devoll valley, and have damaged bridges used by the project at Moglicë. The broad riverbed below Banjë can handle approximately 700 m^3/s without overtopping the banks; the 5-year flood is estimated at 900 m^3/s.

The National Committee on Large Dams (NCLD), under the Ministry of Transport and Infrastructure, is the dam safety regulator. The Albanian Roads Authority (ARA) is responsible for road safety, including approvals of road designs. This topic also has some overlap with work safety issues, which are covered under topic I-12 Labour and Working Conditions.

The intent of this topic is very similar to that of Statkraft's 'CR and HSE Policy': "Our goal is to have safe operations where people, communities, the environment and our assets are protected. In Statkraft, no activity is important enough to be conducted with hazard to life and health."

5.2 Detailed Topic Evaluation

5.2.1 Assessment

Analysis against basic good practice

Scoring statement: *Dam and other infrastructure safety risks relevant to project implementation and operation have been identified through an assessment process; and safety monitoring is being undertaken during the project implementation stage appropriate to the identified issues.*

There was an awareness of public safety issues early in the Devoll HPP, as documented in the Concession Agreement (CA), which mentions that the project may contribute to flood protection in the lower Devoll valley, may trigger and be exposed to landslides on the reservoir slopes, and needs to consider seismic risks.

DHP used Norconsult to provide an assessment of flood hydrology, dam break, and inundation risks. The dam break analysis followed Norwegian guidelines. A break of Moglicë dam under flood conditions (both 1,000-year flood and mean annual flood, with similar effects) would cause cascade failure of downstream hydropower dams (at the time, both Kokël and Banjë dams were considered) as well as of agricultural barrages, dikes and

dams downstream in the floodplain, and would flood a number of towns and villages. Water normally travels from Moglicë to the Banjë reservoir in about 5-6 hours, but a dam break wave would move much faster. A break of Banjë dam only would have smaller, but similar consequences (reaching the first village of Shtëpaj after 10 minutes). The original dam break analysis from 2011 had a lower confidence level below Selite, where the floodplain broadens and a two-dimensional model was used with unsatisfactory topographical information. In 2016, digital topographic maps with sufficient resolution were created, that allowed higher-quality inundation maps. However, the analysis was only done for the Banjë dam. NCLD has a role in the assessment of these types of risks, before giving approvals.

Community safety issues were not assessed in detail in the Environmental and Social Impact Assessment (ESIA) and the Environmental and Social Management Plan (ESMP). The ESIA mentions the potential loss of land for safety zones from landslides and around reservoirs (as stipulated in the CA), and the option to provide First Aid courses for drowning and road accidents. The ESMP mentions that landslides are particularly a concern for the village Lower Zgjupë; that the operational regime of the reservoir needs to take flood control into account and that flood forecasting will be improved; and that there is no road safety signage and that traffic will increase, so that a road safety program would be implemented with awareness building, provision of safety packages, speed bumps and traffic control points.

Regarding potential slope instabilities and landslides, which are a potential risk along the Devoll valley, a total of 90 km of slopes have been assessed since the feasibility studies. In November 2016, a landslide occurred at Banjë dam, and several landslides have occurred on the left bank of the Moglicë dam site. The direct risk to the dams and the indirect risk of overtopping by waves generated by landslides are considered low. (Some reservoirs in Albania, such as Fierza in the Drin cascade, are operated significantly below the dam crest to accommodate waves). However, it was recognized that landslides may threaten communities and may be exacerbated by reservoir impoundment. For the villages of Lower and Upper Zgjupë, a more detailed risk assessment was undertaken and documented in a Community Evacuation and Relocation Plan.

Public safety monitoring is currently undertaken with regards to floods, dam stability at the already built Banjë dam, slope stability (with ground movement monitoring markers), and road accidents.

Criteria met: Yes

Analysis against proven best practice

Scoring statement: *In addition, consideration of safety issues takes into account a broad range of scenarios and both risks and opportunities.*

During project preparation and implementation, all relevant public safety issues have been considered. This includes opportunities to increase flood protection downstream of Banjë and of Moglicë, and improve road safety.

The risk register includes three public safety risks, namely (with high risk) slope instabilities around both Banjë and Moglicë dams and reservoirs; (with moderate risk) road safety; and (also with moderate risk for safety, but with high cost risk) Banjë dam break, due to concerns about the filter around the clay core of the dam, built in the 1980's.

Regarding the Banjë dam, after some concerns arose about the width of the filter and other issues, in 2014 a panel of experts was assembled to review all available information and recommend a safe way forward. The panel included specialists from DHP, the Owner's Designer, tender designers, owner's engineer, the Albanian engineer in charge of supervision of works in the 1980's, and a representative of the Norwegian Geotechnical Institute. The panel concluded that the safety of the dam was adequate and construction could continue, with additional instrumentation and a carefully supervised impounding procedure, where the upstream cofferdam is used for initial impoundment and water pumped into the void between cofferdam and main dam to gradually increase water pressure.

5.2.2 Management

Analysis against basic good practice

Scoring statement: *Processes are in place to address identified dam and other infrastructure safety issues, and to meet any safety related commitments, relevant to the project implementation stage, including providing for communication of public safety measures; a formal quality control program is in place for construction; safety management plans for the operation stage have developed in conjunction with relevant regulatory and local authorities; and emergency response plans include awareness and training programs and emergency response simulations.*

The assessments of dam safety risks provide the basis for developing dam designs, filling procedures and standard reservoir management procedures for Banjë and Moglicë, including spilling operations during floods, and emergency response plans.

The design flood for both dams is the 1-in-1 000 years ($Q_{1,000}$) flood, but the Probable Maximum Flood has also been estimated (at $2.4xQ_{1,000}$), and the dams simulated to be safe for that flood level. The cofferdams are dimensioned for a 50-year flood at Moglicë, and a 100-year flood at Banjë.

The CA indemnifies DHP against damages to the Banjë dam and damages to third parties in case of major floods during construction.

Other than the quality of the original dam construction at Banjë, mentioned above, the other main concern regarding dam stability concerns uneven geotechnical conditions at the Moglicë dam foundation. In combination with some issues with the grouting sub-contractor, these have made grouting more difficult than expected. The Moglicë issues are being overcome at this time, accepting some delays and increased costs.

Construction quality control was assigned a high priority, based on an awareness that not all contractors had the same required experience and dedication to quality. For Banjë, a quality plan developed by the owner's engineer describes all quality requirements and processes. For Moglicë, DHP's own quality management system documents apply. Formal quality control programs are in place both in Banjë and in Moglicë, as described in topic I-4 Integrated Project Management. For example, concrete in both spillways is being systematically tested for compressive strength. Tolerances have been exceeded, and non-conformities are followed up and rectified, on both spillways. The quality of the bridges on the Banjë replacement road, where pre-cast concrete was used, is considered good. Equipment from Alstom undergoes factory inspection, on-site welding, and testing before commissioning, and the quality is also considered good.

Regarding road safety, a significant amount of construction traffic affects the main road through the valley, and traffic has also increased as a consequence of increased economic activity. On the improved roads, people generally drive faster than before. However, through better signage and road surfaces, control of rockfalls, safety talks in schools (combined with visits to the project), speed bumps in villages, separation of construction from public traffic in some places, and supervision of driving behaviour by project drivers (see also topic I-12), it appears that road safety has not become a major issue. For example, in Moglicë the project has registered 17 road accidents, but without injuries. The local authorities have knowledge of much lower numbers, but confirm that no injuries have occurred.

An example for safety management is the control of rockfalls on the roads near Moglicë, where slopes are steep and in places unstable. This is also where three project staff fatalities occurred in 2014, during slope stabilisation works (see topic I-12; at the time, the road was closed for public traffic). All rockfalls are now registered in a database, to identify critical stretches, and followed up.

Regarding safety along the waterways, there was a public information campaign before impoundment of Banjë reservoir, emphasizing the risk of drowning and of triggering of landslides. At about 20 places around the reservoir, signs are placed stating that 'Warning - Access to the reservoir at your own risk', and closer to the dam, the area is fenced, about 6 'No entrance' signs are placed, and a boom is placed in front of the spillway gates. Safety signs are also placed along the riverbed.

The standard operating procedure for the Banjë reservoir calls for operations between 160 m.a.s.l. and 175 m.a.s.l., with a buffer up to 176.75 m.a.s.l. The reservoir will be lowered if a flood is anticipated. The spillway gates are regularly tested. Normal downstream flow releases quickly dissipate in the broad riverbed. The operating team has a simulation program to predict flows and reservoir levels, holds daily operational meetings, and uses a simple green-yellow-red warning system (yellow level indicates high inflows, red level means to start releasing). At releases above 400 m^3/s the Regional Directorate Elbasan of the National Civil Emergency Centre is notified. Because of slope stability issues at Zgjupë, for the time being the reservoir is operated within constraints that are adjusted weekly on the basis of monitoring results.

During flood emergency situations, two-way communication with the Emergency Centre is planned, and local authorities etc. will also be notified. There is an overall DHP Emergency Response Plan; there are an Evacuation Plan and an Emergency Response Plan-Bridging Document for Banjë (both developed at the time of impoundment); and a final Emergency Response Plan for Banjë (November 2016). These are internal documents. An Alarm and Evacuation Plan (which is the official title for an emergency response plan in Albania that requires regulatory approval) for the operation stage is being finalized, and a draft has received comments from the authorities, regarding contact details etc.

Communication with NCLD has been ongoing for a number of years, as NCLD has to authorize several steps in the project cycle for a large dam (such as first project idea, dam design and beginning of construction, first impoundment and commissioning) and is also involved in monitoring of operations. On occasion, NCLD has requested changes or additional information (for example, downstream inundation analysis all the way to the sea, instead of just 20 km downstream). The inundation maps have been approved in September 2016. NCLD sometimes requests dam owners to bring in additional expertise, but this was not considered necessary in the case of Devoll HPP.

The emergency plans specify protocols for notification of authorities. An alarm system for the population downstream of Banjë is planned, which is the government's responsibility. There are also meetings with local authorities (as in December 2016) to discuss safety issues, and other awareness-building activities as noted above (signage, safety talks). Two emergency training sessions or simulations have been conducted.

Criteria met: Yes

Analysis against proven best practice

Scoring statement: *In addition, processes are in place to anticipate and respond to emerging risks and opportunities; and public safety measures are widely communicated in a timely and accessible manner.*

DHP is in close communication with local authorities regarding public safety, and has on several occasions carried out tasks and assisted local authorities. For example, the project ambulances and clinics have been used to attend to medical emergencies in local communities and the DHP boat has been used to save a person swimming in the reservoir.

While there are entrance controls to exclude the public from entering active work sites at Moglicë, not all project roads are closed. At Banjë, a small diversion road was built so that traffic to Mazarik village did not have to go through the work site.

Whilst DHP had an Alarm and Evacuation Plan, as part of the Impoundment Plan, from prior to impoundment, it did not include correct contact details until September 2016. But the plans were shared with the authorities

as necessary. DHP has safety-related discussions with local governments, police, emergency services, and the large dams committee, and have shared their Alarm and Evacuation plans with some of these institutions..

Criteria met: Yes

5.2.3 Conformance / Compliance

Analysis against basic good practice

Scoring statement: *Processes and objectives relating to safety have been and are on track to be met with no major non-compliances or non-conformances, and safety related commitments have been or are on track to be met.*

Devoll HPP is on track to receive all required authorizations from the NCLD.

While Statkraft and the Albanian government have generic public safety objectives, policies and regulations, few specific safety-related commitments were made in the original CA and the ESIA/ESMP, and limited additional commitments were made over time. However, the processes used in the Devoll HPP related to safety have been implemented well, and all commitments that were made are on track to be delivered.

Criteria met: Yes

Analysis against proven best practice

Scoring statement: *In addition, there are no non-compliances or non-conformances.*

No non-compliances of non-conformances have been identified.

Criteria met: Yes

5.2.4 Outcomes

Analysis against basic good practice

Scoring statement: *Safety risks have been avoided, minimised and mitigated with no significant gaps.*

All relevant public safety risks have been identified and carefully managed during the implementation stage to date. As described above, it would have been preferable if the emergency response system for Banjë dam had been finalized before commissioning, but as most of the elements are in place and the finalization of that system is ongoing, this is not seen as a significant gap.

The Devoll HPP is seen by the NCLD as an example for well-managed project, compared to the many hundreds of dams in the country whose safety has been neglected.

Criteria met: Yes

Analysis against proven best practice

Scoring statement: *Safety risks have been avoided, minimised and mitigated; and safety issues have been addressed beyond those risks caused by the project itself.*

Devoll HPP addresses safety issues beyond those caused by Banjë and Moglicë projects by significantly improving flood forecasting and management in the Devoll valley. Even without dedicated flood management operations, the two reservoirs would buffer floods to some extent. By drawing down water levels in anticipation of major inflows, which is also prudent to protect DHP infrastructure, they will increase that buffering effect. However, there could only be a limited influence on the largest floods, as the live storage volume is limited in relation to runoff: the average runoff at Banjë is 1 484 million m^3/year, and at Moglicë 689 million m^3/year, while Banjë has 178 million m^3 of live storage, and Moglicë 152 million m^3. The flood management contribution of both reservoirs will be better understood and managed over time, and care

should be taken to avoid increased flood exposure in the downstream floodplain i.e. colonisation in areas that were previously more frequently flooded, but will remain exposed to the largest floods.

Devoll HPP has also reduced traffic accident risks and improved rapid access to medical facilities through the much-improved state of roads in the Devoll valley.

Criteria met: Yes

5.2.5 Evaluation of Significant Gaps

Analysis of significant gaps against basic good practice

There are no significant gaps against basic good practice.

0 significant gaps

Analysis of significant gaps against proven best practice

There are no significant gaps against proven best practice.

0 significant gaps

5.3 Scoring Summary

Generally appropriate methods have been used to understand and manage safety risks for the public emanating from the Devoll HPP during construction and operation, including dam safety, the risks of landslides and rockfalls, road safety, access to worksites, and safety on the reservoirs and along the Devoll River. DHP has received advice from experienced specialists and the required authorizations from the national dam safety regulator. The project will contribute to resolving some pre-existing public safety concerns in the Devoll valley, related to floods and road safety. There are emergency response procedures, including official emergency response plans for the impoundment and operations of the Banjë reservoir.

Topic Score: 5

5.4 Relevant Evidence

Interview:	11, 15, 62
Document:	9, 15-20, 22, 32, 41, 71, 79, 106-110, 275, 276, 277, 278, 288, 289
Photo:	13-23

6 Financial Viability (I-6)

This topic addresses project financial management, including funding of measures aimed at ensuring project sustainability, and the ability of the project to generate the required financial returns to meet project funding requirements. The intent is that the project is proceeding with a sound financial basis that covers all project funding requirements including social and environmental measures and commitments, financing for resettlement and livelihood enhancement, and delivery of project benefits to project-affected communities.

6.1 Background Information

At an approved budget of € 625 million, the Devoll HPP is the largest single foreign direct investment in Albania. At a total installed capacity of 256 MW, that implies a specific cost per installed MW of € 2.4 million, which is in line with recent experiences worldwide. The cost is fully funded by Statkraft equity, with the exception of some contributions from the Government of Albania for replacement roads, and the project does not carry any debt. Costs of the environmental and social management plan are projected at 3.8% of total project costs.

Revenues will be obtained from market operations by Statkraft's centralized European market unit. There are currently no long-term power purchase agreements (PPA's), so there is considerable flexibility to benefit from evolving markets in south-eastern Europe, but also exposure to revenue risks. Albania is implementing significant power sector reforms, passed a new Power Sector Law in 2015, and adopted a new Electricity Market Model in 2016. Albania is importing a significant share of its power and can easily absorb the generation from Devoll HPP. There are also transmission lines into neighbouring countries, and power prices in some of them are considered more attractive. There is no market yet for balancing power or for capacity. The project was registered with the Clean Development Mechanism (CDM), to obtain additional revenue.

A target internal rate of return (IRR) of 15% has been agreed with government, and the concession agreement (CA) will run until that target has been achieved, or alternatively, until a generation target of 59 TWh is achieved.

6.2 Detailed Topic Evaluation

6.2.1 Assessment

Analysis against basic good practice

Scoring statement: *An assessment has been undertaken of project financial viability, including project costs and revenue streams, using recognised models and including risk assessment, scenario testing and sensitivity analyses; and monitoring of the financial situation during project implementation is being undertaken on a regular basis.*

Initial assessments of financial viability were undertaken even before signing of the CA. During 2009-2011, DHP commissioned several European consultancies such as Norconsult, Pöyry, VeVe, Allplan and others for more specific feasibility studies, power market studies, and financial analyses.

One of the financial viability assessments was in support of the CDM registration. These publicly available calculations showed a post-tax project IRR of 8.5%, which was lower than the corresponding post-tax weighted average cost of capital (WACC) of 10.5%, thus showing the need for additional revenues from the sale of certified emissions reductions (CER) to make the project viable. However, these numbers must now be considered out-dated.

Both original joint venture partners, EVN and Statkraft, undertook their in-house assessments before committing to the investment, supported by third-party review of financial models and their assumptions. In the case of Statkraft, financial valuation is a centralized function, and a standardized approach used for all investment projects was applied which always includes a review of different scenarios and a quantitative analysis of sensitivities (see also topic I-2 Governance). The assessors were not able to see the financial model and sensitivity analyses performed, but the main financial risks and opportunities have reportedly remained the same since the project was first analysed.

During project implementation, Statkraft and DHP closely monitor the financial situation. A key tool in this regard is the Quantitative Risk Assessment (QRA), which is used at least annually to estimate financial requirements (see also topic I-4 Integrated Project Management). Different QRAs have used slightly different methodologies; sometimes they have also included the effects of delayed revenues, and the implications for the IRR. The risk register shows financial risks from each of the currently registered 290 risk factors. DHP produces annual financial statements in accordance with International Financial Reporting Standards which are independently audited (for the year 2015, by Deloitte).

The CA originally committed Statkraft to a contribution to the replacement road costs of only € 10.55 million. It did not contain an estimate of the total costs of this component, and it was agreed that government was going to cover the difference. Only when road designs were commissioned and different alternative alignments compared (for example, above the Banjë reservoir with no need for bridges, or closer to the reservoir including bridges over some reservoir arms) could costs be estimated and decisions on design options be taken. The 3rd supplement to the CA included an estimate of total costs of € 49.65 million, based on the preliminary tender designs, and to be updated after approval of the designs by the Albanian Roads Authority (ARA).

On the revenue side, DHP has constantly monitored the development of market arrangements and prices.

Criteria met: Yes

Analysis against proven best practice

Scoring statement: *In addition, project costs and revenue streams are fully detailed; and financial viability of the project has been analysed and optimised including extensive scenario testing, risk assessment and sensitivity analyses.*

The only significant part of the project costs that was not originally estimated in detail was the replacement roads, as described above. This is not considered a gap, as the delay in construction by government, and subsequent change in arrangements, is not due to costs, but rather to issues on the government side (related to implementation capacity in ARA, and to government expenditure and debt limits as agreed with the IMF). Revenue streams are also not detailed, which would be impossible for a merchant power plant, but Statkraft is closely tracking market developments and optimizing sales strategies in Europe. For example, the attractiveness of sales in the domestic Albanian market vs. cross-border markets, is evaluated on the basis of export fees, transmission fees, transmission congestion, and relative attractiveness of power prices.

Statkraft has tested and compared many financial scenarios over the years. PPAs have been considered, weighing the credit risk for the Albanian public sector power companies and other potential offtakers against market risks. Initial conversations have been held with large potential offtakers, such as the distribution company OSHEE, AlbChrome in Elbasan, and cement companies. On the financing side, the original joint venture had considered debt financing, and discussions have been held with lenders. There may be some reluctance of lenders to fund a project on a pure merchant basis, i.e. with no PPAs in place. However, the option to bring in debt or external equity investors is re-evaluated every time an additional tranche of funding for the project has to be approved. On the last such occasion, when another € 120 million was released in 2016, the capital structure of DHP was again assessed by Statkraft's Tax and Treasury unit, and it was again

recommended to provide the funding as an internal equity injection. An internal loan from a Statkraft subsidiary was also considered, but rejected because of complex tax issues.

Criteria met: Yes

6.2.2 Management

Analysis against basic good practice

Scoring statement: *Measures are in place for financial management of project implementation; plans are in place for financial management of the future operating hydropower facility.*

The highest-level document with relevance for financial management is the CA, which defines the period during which the Devoll HPP can be operated and revenues obtained, before it is transferred into government ownership. The initial or minimum term of the CA is 35 years. If an IRR target of 10% (originally) or a production target of 59 TWh are not reached by that time, it will be extended until the first of those is achieved. Current estimates are that the concession will run for 70 to 80 years. The concession fee is the only fee due to government and is 2% of revenues (or power generated) during the initial term and 4% thereafter. In the 3rd supplement to the CA (2014) an exemption to the concession fee for the first 15 years was agreed, and the target IRR was raised to 15%. Other elements of the CA that are relevant for financial viability are that the concessionaire:

- is exempt from VAT and import duties on the Devoll HPP;
- bears the risks of delays in the expropriation process;
- takes over the responsibility for project management and pre-financing of replacement roads, and gets fully reimbursed (except for € 10.55 million which is his original contribution) to reduce risk of delays (from the 3rd supplement);
- can negotiate changes to the CA, or terminate the CA, if project costs increase by 30% or more;
- is indemnified against changes to taxes, public service obligations, and comparable changes that would materially affect the concessions; and
- is not obligated to construct the third project in the cascade (Kokël) but may elect to do so within the first 10 years of the concession.

Internally, Statkraft and DHP have well-designed financial management processes, related to: overall cost estimates, contingencies, and periodic increases in project funding; annual budgeting on the basis of various plans, such as personnel and procurement plans; financial management of contracts, including approximately 400 invoices per month, and claims; managing VAT and customs duties exemptions and reimbursements, as well as other tax issues; and reimbursements for expenditures on replacement roads. There are some benefits from participating in a Statkraft cash pool and an umbrella insurance agreement.

The financial management arrangements for the operations stage are already established, for example SAP has recently been introduced at Banjë, and will further improve financial management and controls. Operations and maintenance for Banjë has been manned and budgeted. Goals for the operations team are maintaining high health, safety and environmental standards, high unit availability, and low costs. Statkraft Markets GmbH, a subsidiary based in Germany, is marketing the power generated by Banjë. Based on the availability of water and on price forecasts, Statkraft will optimize generation and provide a dispatch schedule 2 days ahead. This will be communicated to the transmission system and market operator, who will calculate trading balances and settle payments at the end of each month. In the future, these arrangements will be expanded to the entire Devoll HPP. By that time, it is expected that a day-ahead market for Albania and a regional exchange will be established.

Criteria met: Yes

Analysis against proven best practice

Scoring statement: *In addition, financial management plans provide for well-considered contingency measures for all environmental and social mitigation plans and commitments; and processes are in place to anticipate and respond to emerging risks and opportunities.*

The Environmental and Social Management (ESM) budget for Banjë was more difficult to estimate than the larger contracts, and turned out to be rather generous; actual spending will be lower. Spending on the Moglicë ESM program will be closer to budget. There have been no issues with getting financial approvals for ESM plans and measures.

Cost and schedule overruns are moderate, well-anticipated and well-managed, as described under topic I-4 Integrated Project Management. The largest emerging financial risk faced by the project at this stage is the market risk, with power prices significantly below projections and no market for the CER's generated by the project. This affects all of Statkraft's projects, and one of Statkraft's responses is a group-wide performance improvement programme to reduce costs and increase competitiveness.

On the revenue side, DHP has encouraged government to speed up the liberalization of the power market and establishment of market infrastructure.

Statkraft is also actively looking at learning from its projects to improve their financial viability. One example is a research and development initiative on geological and geotechnical causes for cost over-run and delay.

Criteria met: Yes

6.2.3 Conformance / Compliance

Analysis against basic good practice

Scoring statement: *Processes and objectives relating to financial management have been and are on track to be met with no major non-compliances or non-conformances, and funding commitments have been or are on track to be met.*

No non-compliances with regulations or non-conformances with Statkraft and DHP's financial management procedures have been identified. All funding commitments by Statkraft are on track, including the pre-financing of replacement road construction. Government commitments to reimburse VAT and replacement road costs are also on track, and € 18 million in replacement road costs have already been reimbursed. There are no issues with paying contractors and meeting other financial obligations on time.

Criteria met: Yes

Analysis against proven best practice

Scoring statement: *In addition, there are no non-compliances or non-conformances.*

There are three outstanding legal cases against the tax authority relating to recoverable VAT and penalties in the years 2009 to 2011. DHP is confident that it will win those cases, has not made a provision for potential costs in their financial statements, and their auditors have accepted this; hence this is not considered a gap.

Criteria met: Yes

6.2.4 Outcomes

Analysis against basic good practice

Scoring statement: *The project or the corporate entity to which it belongs can manage financial issues under a range of scenarios, can service its debt, and can pay for all plans and commitments including social and environmental.*

A number of adverse financial developments may affect the rate of return on Statkraft's investment. These include the depressed wholesale power prices, moderately delayed revenues, lack of CDM revenues, and moderately increased costs. There are no reasonable doubts, however, that Statkraft will be financially able to construct and operate Devoll HPP, honour all contractual and other commitments, and generate revenue. On current plans, there will be no debt to service. The timing of the investment is good, as only a short time ago market arrangements were not yet in place, and Statkraft is among the first investors able to benefit from these.

Criteria met: Yes

Analysis against proven best practice

Scoring statement: *The project can manage financial issues under a broad range of scenarios.*

In the third quarter of 2016, Statkraft registered an impairment (i.e. a loss in fair market value, based on a re-evaluation of future cash flows) on a number of assets. The total impairments across five countries amounted to € 270 million, including € 116 million for the Devoll HPP. Although operational results in the quarter were good, the impairments were sufficient to cause an overall loss for Statkraft of € 157 million. The principal reason for writing down the value of Devoll HPP is reduced revenue expectations. While there are widespread expectations that power prices will eventually recover, perhaps after an extended period of lower investment in generation capacity, this is uncertain. The 15% minimum IRR agreed in the CA may not be achieved if the generation target of 59 TWh is reached earlier. There are plausible scenarios in which Devoll HPP will not deliver an acceptable rate of return for Statkraft, which is a **significant gap** against proven best practice.

Criteria met: Yes

6.2.5 Evaluation of Significant Gaps

Analysis of significant gaps against basic good practice

There are no significant gaps against basic good practice.

0 significant gaps

Analysis of significant gaps against proven best practice

There are plausible scenarios in which Devoll HPP will not deliver an acceptable rate of return for Statkraft.

1 significant gap

6.3 Scoring Summary

The € 625 million Devoll HPP is fully financed by Statkraft equity and is a merchant project, relying on market revenues instead of PPAs, which makes its financial structure unusual. Some assurances for the financial viability are provided by the terms of the Concession Agreement. Costs during implementation are well-managed, through Statkraft's standard monitoring and management processes. Costs for replacement roads have been added, but are being reimbursed by government. Funding for the environmental and social management programme as well as other sustainability-related commitments has been made available.

Revenues will be slightly delayed, but a larger concern is the drop in power prices across Europe, which has led to a recent impairment of the value of the project by € 116 million. While this may be reversed in the future, there are plausible scenarios under which the exposure of the Devoll HPP to market risks will result in an unsatisfactory rate of return to Statkraft.

Topic Score: 4

6.4 Relevant Evidence

Interview:	10, 21, 52, 53, 57
Document:	27, 28, 80, 111, 206-208, 226, 230-234
Photo:	-

7 Project Benefits (I-7)

This topic addresses the additional benefits that can arise from a hydropower project, and the sharing of benefits beyond one-time compensation payments or resettlement support for project-affected communities. The intent is that opportunities for additional benefits and benefit sharing are evaluated and implemented, in dialogue with affected communities, so that benefits are delivered to communities affected by the project.

7.1 Background Information

This topic is closely related to topic I-9 Project-Affected Communities and Livelihoods. This topic focuses on the delivery of *additional* benefits for affected communities while I-9 addresses impacts of the project on the livelihoods and living standards of the affected communities. Additional benefits include both benefits leveraged from the project (for example improved access) and benefit-sharing (for example revenue-sharing) in project impact area.

Devoll HPP, Statkraft and Devoll Hydropower Sh.A (DHP) have not established a benefit-sharing mechanism. Instead, Devoll HPP has provided additional benefits by providing replacement infrastructure that exceeds the standard and/or the scope of affected infrastructure (for example replacement roads), or infrastructure to mitigate potential impacts that exceeds the standard or capacity that is necessary for mitigation only (for example Gramsh wastewater treatment plant; WWTP).

Road conditions in Devoll valley were previously poor, and access difficult, especially in the more mountainous area towards the upper valley. The lack of rural access roads was previously a major constraint for social and agricultural development in the region, especially for villages located on the south shore of Banjë reservoir (e.g. Trashovica, Zgjupë and Dushk).

7.2 Detailed Topic Evaluation

7.2.1 Assessment

Analysis against basic good practice

Scoring statement: *Opportunities to increase the development contribution of the project through additional benefits and/or benefit sharing have been assessed. In the case that commitments to additional benefits or benefit sharing have been made, monitoring is being undertaken on delivery of these commitments.*

Opportunities to increase the development contribution of the project through additional benefits were initially assessed through the Environmental and Social Impact Assessment (ESIA). Potential positive project impacts were perceived to comprise: improved local skills; improved access for commercial, health and education services due to a new road; economic growth due to increased accessibility; increased tourism; the environmental benefit of the reservoir ('improved vegetation, rehabilitation of forests and increased fish products'); increased direct and indirect employment; decreased marginalisation of excluded groups due to improved communications; decreased political tension; return of youth; reservoir recreational infrastructure (boating facilities, fishing ramps); reservoir fish development; and improved wastewater and waste treatment facilities. Other identified benefits were mostly embedded in the project design and not considered as additional benefits, including: economic benefits from the influx of migrant workers and construction workers; improved irrigation conditions downstream of Banjë Dam; and improved control over floods downstream of Moglicë Dam.

The Environmental and Social Management Plan (ESMP) summarises project commitments on some of the above benefits, and includes management plans described below under Management. Monitoring is being

undertaken during implementation on delivery of these plans by DHP environmental and social management (ESM) team. The monitoring includes key indicators of success. For example indicators related to delivery of access road include: kilometres of improved roads and paths, and numbers of households with improved access to main roads. Full details of ESM programme monitoring are provide in topic I-3 Environmental and Social Issues Management.

Criteria met: Yes

Analysis against proven best practice

Scoring statement: *In addition, the assessment of delivery of project benefits takes into consideration both risks and opportunities.*

DHP assesses and reports on risks for programme activities in annual and quarterly reports and proposes mitigation measures. For example, according to the original concession agreement, Government of Albania (GoA) would be responsible for constructing the Banjë north shore road (and other replacement infrastructure) . The 2015 Annual Implementation Plan identified there was a risk of GoA delaying road construction (as well as the wastewater treatment and urban waste transfer facility in Gramsh). Accordingly DHP agreed a third amendment of the Concession Agreement with GoA, for DHP to construct this infrastructure on behalf of the government. As the project's additional benefits concern infrastructure of a higher standards, DHP has placed special emphasis on delivering infrastructure to meet these higher standards, reducing the risk of below standard infrastructure through stringent quality management.

DHP has assessed emerging opportunities for enhancing the benefits of existing commitments through ongoing stakeholder engagement. For example, the original Banjë south shore road was unpaved and only included a foot bridge from Trashovica village to Gramsh: DHP identified an opportunity to provide a modern road (not included in the concession agreement) and a bridge that would be passable for motor vehicles, linking the south shore road with Gramsh town and to substantially improving local access to public facilities in Gramsh. A further example is that, when DHP began to construct a water supply system for Cërujë village, they determined that a footbridge could be built to provide improved access for residents. At the same time, DHP established a system to provide potable water to Drizë village, which previously did not have a functioning water supply.

Criteria met: Yes

7.2.2 Management

Analysis against basic good practice

Scoring statement: *Measures are in place to deliver commitments by the project to additional benefits or benefit sharing; and commitments to project benefits are publicly disclosed.*

Commitments to additional benefits are described in the ESMP (for planned activities derived from the ESIA) and measures for their implementation set out in annual implementation plans (including activities agreed with GoA and emerging opportunities). Benefits have been integrated with the delivery of replacement infrastructure and mitigation measures, and consist of:

- Replacement infrastructure that has been delivered with much higher standards than previously existed and with a broader scope than necessary for mitigation only, mainly access roads (Gramsh-Banjë north road, Trashovica Bridge, Moglicë replacement road);
- Infrastructure built for the mitigation of potential project impacts built to much higher standards than necessary, including replacement and improvement of water supply systems (in Shtepanje, Drizë , Cërujë, Qerret, Trashovice, and Dushk villages); improvement of irrigation systems for downstream communities;

replacement Drizë school; construction of the wastewater treatment plant in Gramsh; and provision of equipment and machinery required for the establishment of an urban waste disposal site in Gramsh; and

- 'Fully' additional benefits, comprising Gramsh-Banjë south shore road, a foot bridge to link Cërujë village to the main road; training and capacity building of local educational staff; provision of equipment to local schools; and a health plan, to promote and improve health infrastructure and services in the project-affected area (separately discussed under I-14 Public Health).

Implementation is being coordinated by ESM in close corporation with DHP's Legal Team, Contract Management and Procurement. Mechanisms for delivery have proven to function well, and the majority of planned project benefits have been or are being delivered. DHP has: completed the construction of the Gramsh-Banjë north and south shore roads including the Trashovica Bridge; rolled out capacity-building (computer and English) training to educational workers; upgraded a 300 ha irrigation scheme for downstream villages and established a new 55 ha irrigation scheme for Shushicë village; completed construction of the water supply system for villages including Shtepanje, Drizë , Cërujë, Qerret, Trashovice, and Dushk villages; and completed construction of Drizë School. The Gramsh WWTP and waste disposal site were still under construction at the time of this assessment, but were completed and handed over to Gramsh government for operation soon after.

Commitments in the ESIA Executive Summary and ESMP in English are publicly disclosed, with electronic versions available on the Devoll HPP website (www.devollhydropower.al), and a hard copy of the ESIA report, ESMP, and ESMP brochures in Albanian and English are publically available in the Gramsh Information Centre. The agreements with GoA on construction of infrastructure such as replacement roads are recorded in the third amendment of the Concession Agreement, which is publically available. During this assessment, consultation with affected community and government representatives confirmed they were aware of the DHP commitments.

Criteria met: Yes

Analysis against proven best practice

Scoring statement: *In addition, processes are in place to anticipate and respond to emerging risks and opportunities.*

The grievance redress mechanism and ESM monitoring have provided, and will continue to provide, a process to anticipate and respond to emerging risks and some opportunities, through open communications with both the government and affected communities. Examples are discussed under Assessment above.

The draft ESMP-O includes proposals for a Devoll Social Development Fund (DSDF; USD 20 000 per annum) and a commitment to support agricultural modernization (USD 18 000 per annum), but they are not yet approved. The DSDF has objectives of addressing grievances (resulting from obligations by public authorities, not DHP) and to support local socio-economic development through grassroots initiatives. It will be governed by a board with DHP, village and municipality, and religious representatives, and will provide in-kind support, for example to access roads, small-scale irrigation and water supplies, one-off education and health improvements, and environmental protection projects. The scale of available in-kind support is unclear.

Devoll Hydropower Sh.A. (DHP) has made some attempts to facilitate increased investment in the valley: for example through discussions with USAID and the Norwegian Ministry of Climate and Environment on waste management. However, DHP is reluctant to continue responding to opportunities to provide additional benefits, in order to avoid a perception developing amongst affected communities and local authorities that it is responsible for every demand, or for providing benefits beyond the mitigation of impacts. DHP's concern is understandable, but there is no other mechanism of Devoll HPP (in its widest sense, including government partners) that will continue to identify opportunities for the provision of additional benefits to affected communities. Practical examples of opportunities that are not being taken include: improvement of currently

poor village paths that link some reservoir villages to the Banjë south shore road (e.g. Kuterqar); support to irrigation systems and water supply for Banjë reservoir and downstream villages. There are no plans to facilitate some of the benefits identified in the ESIA: tourism, recreational infrastructure in the reservoir, and regional development. There are no plans to pro-actively leverage the potential of the replacement roads for regional development, or the Banjë reservoir for recreational activities, aside from a tourist viewpoint constructed along the road (as referred to in topic I-19 Reservoir Preparation and Filling). Initially DHP established a Regional Development Plan in 2010 but received limited interest from stakeholders. The plan was then abandoned in 2012. Hydropower projects in developing regions often establish mechanisms for providing additional benefits through community trusts or funds, or through revenue-sharing mechanisms – Devoll HPP has no such mechanisms, other than the DSDF which is not yet approved and is limited in scale. The lack of processes to facilitate significant and sustained ongoing project benefits and to promote regional development is a **significant gap** against best proven practice.

Criteria met: No

7.2.3 Conformance / Compliance

Analysis against basic good practice

Scoring statement: *Processes and objectives relating to project benefits have been and are on track to be met with no major non-compliances or non-conformances, and any additional benefits or benefit sharing commitments have been or are on track to be met.*

Most activities planned in the ESMP and those agreed with local government have already been successfully delivered, and those for Moglicë HPP that are in the process of being delivered, or will be delivered in the future, are all on track to be delivered.

Criteria met: Yes

Analysis against proven best practice

Scoring statement: *In addition, there are no non-compliances or non-conformances.*

Some measures that were included in the ESIA have not been managed or taken forward (e.g. tourism, regional development, recreational infrastructure for the reservoir, equipment for schools). However these concern opportunities for additional benefits, as discussed under Management and Outcomes. There is no evidence of any legal non-compliances.

Criteria met: Yes

7.2.4 Outcomes

Analysis against basic good practice

Scoring statement: *Communities directly affected by the development of the hydropower project have received or are on track to receive benefits.*

Directly-affected communities have already received and will continue to receive additional benefits, which go beyond compensation of impacts by the project. Replacement roads have provided and will provide all-weather access, and thus increased access, to public services, to goods- and labour- markets, and to other communities. Directly-affected community in Devoll valley, and in the region of Elbasan and Korçë Prefectures, have already experienced benefits as a result of the project through the improved road access. The north shore road from Cerrik to Gramsh has halved the travel time between the two cities, and is now accessible all-year round; the south shore road together with the Trashovice Bridge has given these communities access to emergency services (fire trucks and ambulances) which was previously not possible; and the Moglicë -Maliq

roads under construction are expected to deliver similar benefits. In addition, improved access has also stimulated business activities along the road (for example the opening of a night bar in Trashovice Village, and increased recreational fishing activities in Banjë reservoir). The new water supply system in Shtepanje, Drizë, Cërujë, Qerret, Trashovice, and Dushk villages will provide stable potable water to these villages. Drizë School is already in operation. Gramsh WWTP and associated sewage network, and the waste disposal facility in Gramsh will improve environmental conditions beyond what was necessary for the avoidance of impacts on Banjë reservoir.

Criteria met: Yes

Analysis against proven best practice

Scoring statement: *In addition, benefits are significant and the project has delivered or is on track to deliver significant and sustained benefits for communities affected by the project.*

Given the poor pre-project road conditions that hampered economic and agricultural development in area, the high-standard road access that is now available from Cerrik to Moglicë has delivered and is on track to deliver significantly-improved road access for project-affected communities. Gramsh WWTP is being built in compliance with international standards and will provide a sustainable solution to sewage treatment in Gramsh city, making other development opportunities (e.g. tourism) possible, and potentially contributing to sustainable development of the city in the long run. DHP has taken considerable risk in developing these measures beyond what was necessary for mitigation or compensation only, and Devoll HPP has relied on the rigour and technical capacity brought by Statkraft and DHP to deliver higher standards.

However, the construction of infrastructure by itself may not be sufficient to deliver sustained and significant benefits for affected communities, and will not necessarily lead to the economic and regional development that was envisaged in the ESIA and is expected by local authorities. Some of the affected households may not even be present in the area benefitting from improved road access. GoA has no plans to build on the Devoll HPP and associated infrastructure to deliver regional development. The lack of processes to facilitate significant and sustained ongoing project benefits and to promote regional development is a **significant gap** against best proven practice. This is the same gap as on Management above.

Criteria met: Yes

7.2.5 Evaluation of Significant Gaps

Analysis of significant gaps against basic good practice

There are no significant gaps against basic good practice.

0 significant gaps

Analysis of significant gaps against proven best practice

There is no process to facilitate significant and sustained ongoing project benefits and to promote regional development.

1 significant gap

7.3 Scoring Summary

Project benefits were assessed through the ESIA and implemented through the ESMP. Major benefits are being delivered to directly affected communities, as enhanced standard and scope of replacement infrastructure and mitigation measures, including: improvement of road access in the project area; capacity building for local teachers; support to irrigation systems; water supplies and water resources; wastewater treatment facilities and waste disposal in Gramsh. Together these are having or are expected to make a substantial contribution to

regional economic development. However, Devoll HPP has no process to facilitate significant and sustained ongoing benefits to achieve the regional development originally envisaged in the ESIA. There is one significant gap against proven best practice, resulting in a score of 4.

Topic Score: 4

7.4 Relevant Evidence

Interview:	2, 6, 7, 14, 18, 20, 28, 29, 30, 43, 46, 47, 48, 49, 50, 61
Document:	42-54, 112-113, 170-171, 176, 264, 265, 266
Photo:	24-30

8 Procurement (I-8)

This topic addresses all project-related procurement including works, goods and services. The intent is that procurement processes are equitable, transparent and accountable; support achievement of project timeline, quality and budgetary milestones; support developer and contractor environmental, social and ethical performance; and promote opportunities for local industries.

8.1 Background Information

Devoll HPP is implemented through a large number of packages of consultancies, suppliers and contractors which are separately designed and tendered. The largest budget items are civil works on dams and tunnels, electro-mechanical equipment and hydraulic steel works, road works, and engineering services. For a list of the larger contracts above € 2 million, please refer to topic I-4 Integrated Project Management. In addition, there are many smaller contracts, especially in the environmental and social management (ESM) program.

Procurement is subject to Statkraft guidelines and processes, implemented by Devoll Hydropower Sh.A. (DHP) with support from other Statkraft teams. Anti-corruption safeguards are an important concern in Albania. While the project generates a significant amount of local economic activity and employment, procurement processes are not purposely geared towards local content.

8.2 Detailed Topic Evaluation

8.2.1 Assessment

Analysis against basic good practice

Scoring statement: *Major supply needs, supply sources, relevant legislation and guidelines, supply chain risks and corruption risks have been identified through an assessment process; ongoing monitoring is being undertaken to monitor effectiveness of procurement plans and processes.*

Supply needs and sources were first assessed during the feasibility studies, and defined in more detail during the tender design processes for the major contracts. Statkraft and DHP undertook analyses of the context for procurement in Albania and the maturity of DHP's internal anti-corruption programme, specifically through the Albania Corruption Risk Assessments 2014 (report finalized in 2015) and 2016. Currently, most new contracts are relatively small in scale. Different departments (for example, ESM) compile their requests for goods and services and obtain approval for budgets; the procurement unit then provides a procurement strategy, market or supplier analysis, to ensure sufficient quality and competition. Monitoring of procurement-related issues is conducted both by Statkraft (for example, by Corporate Audit regarding the resolution of the contractual relationship with the Owner's Engineer) and by DHP (for example, by project control and quality assurance specialists, regarding sub-contracting practices, see below), and lessons learnt and recommendations formulated.

Criteria met: Yes

Analysis against proven best practice

Scoring statement: *In addition, the assessment includes opportunities for local suppliers and local capacity development.*

There are no requirements, for example in the Concession Agreement (CA) or in major contracts, and no DHP commitments for local content. Experience from the first years of project implementation has shown that there was no need for capacity development for national-level contractors and suppliers, as there is sufficient

competition. The procurement programme was not structured to benefit local companies because local companies often could not compete on quality and deliver the required quantities.

However, DHP has made efforts to identify and promote other opportunities for local economic development. These were developed over time, as opportunities were identified, and include:

- English courses offered in the project area (Gramsh) to increase employability of individuals and ability of companies to participate in DHP small-scale procurement;
- Occasional support provided for small informal companies to become formalized, as required for participation in DHP small-scale procurement (get registered, set up websites, understand tender processes, establish bank accounts, or write invoices);
- Provision of employment, skills and education data from household socio-economic inventories, to help link local people with contractors; and
- Promoting rental of houses, flats and offices in Gramsh, through a database to help link landlords with contractors, as an alternative to contractors setting up their own facilities.

Criteria met: Yes

8.2.2 Management

Analysis against basic good practice

Scoring statement: *Measures are in place to guide procurement of project goods, works and services and address identified issues or risks, and to meet procurement-related commitments.*

The overall procurement strategy was to design a series of works packages to be contracted under standard FIDIC contracts, rather than procure a general contractor or an EPC/turnkey arrangement, as described under topic I-4 Integrated Project Management. Procurement of each package is guided by DHP's own processes. The first contracts, including the largest ones such as for civil works and electro-mechanical equipment, were procured by the DHP joint venture, but since Statkraft took full ownership of DHP, all of Statkraft's processes apply. DHP processes also apply to the replacement roads, where it was agreed with government that DHP does not have to apply public procurement rules.

Key relevant documents are DHP's Procurement Policy, Procurement Instructions, a number of templates for steps in the procurement process, the authority matrix, and the DHP Supplier Code of Conduct (also available in Albanian). These are consistent with Statkraft requirements, for example 'Procurement governance and delegation of authority for projects with budget exceeding 100 million NOK' and 'Framework for integrity reviews of business partners'.

Processes are defined by a total of seven threshold values: for example, all contracts below € 1 million can be awarded by DHP without approval from Statkraft; all deviations for contracts above € 20,000 (for example, a competition waiver) have to be signed off by DHP's head of procurement; local procurements with a value of less than € 5,000 can be conducted by the requesting department directly, with some support from procurement. Processes are relatively flexible, depending on how much competition is expected in a particular case. Where necessary, this is documented in a procurement strategy document. In some cases, there are open invitations for expression of interest on the DHP website and in newspapers; sometimes companies are directly invited to participate in a prequalification process (for civil works, invitations went out to more than 20 companies), or to submit bids if they are already prequalified with DHP; and sometimes when requirements are very specific, a detailed market survey is conducted, trying to identify at least three suppliers. For example, for the livelihoods support program, a total of 37 cows were to be procured: because they needed to be disease-free and with proper documentation, only one eligible supplier was found after an extensive market survey conducted with DHP's veterinary advisor, and after a request for quotation, the contract had to be negotiated directly, with a competition waiver.

Statkraft considers Albania a high-risk country from a compliance perspective, so background checks are mandatory for all service providers and for all suppliers above € 20 000, with the support of Statkraft's compliance unit. In some cases, background checks can consist of a simple online check against Albania's National Business Centre database. In cases of higher risk, they can involve specialised third party service providers such as Control Risks or auditing companies, and interviews with company representatives. There are no examples of companies blacklisted as a result of background checks, but in some cases special precautions have been taken. Additional checks may also be triggered by responses to the self-assessment questionnaires that companies are required to fill out.

Selection of suppliers is usually done by a three-person evaluation team, based on costs and quality criteria. Depending on the type of procurement, quality may be documented through samples, photos, certificates, method statements, HSE (health, safety and environment) and QA (quality assurance) processes, technical capabilities, and references. There is an increasing amount of repeat business, in which case quality is known from previous contracts, and companies understand HSE and other requirements. Results are summarized in a procurement evaluation report for approval.

Contracts contain anti-corruption, other sustainability and compliance commitments, through mandatory reference to the Supplier Code of Conduct. A physical signature is required so that these commitments can be discussed and acknowledged in person. In some cases, special contractual arrangements are negotiated for specific risks detected in the procurement process (for example, closer monitoring, declarations by counterparty, exclusion of individuals with a conflict of interest, internal firewalls). Contractual commitments are enforced through reporting, audits and site inspections that are conducted by DHP and reinforced by supervision through Albanian authorities. Larger contractors have to report the origin of primary supplies. Contractors are trained in HSE after selection. Subcontractors have to be nominated in tenders, and any changes approved by DHP.

A good example of contractor supervision is the quality management system (QMS) audit in October 2016 of the largest contractor, Limak-AGE Joint Venture (LAJV), covering: systems of engagement of sub-contractors; evaluation, pre-qualification, management and payment of sub-contractors; and review of the last audit findings (from a year earlier) and non-conformities. This showed numerous areas for improvement. LAJV's 2015 Supplier Assessment Procedure includes references to HSE and the ESMP, but not to business ethics or specifically to the Supplier Code of Conduct.

All these processes support the most important objectives in the procurement process identified by DHP: value-for-money, quality, and avoidance of corruption and conflict-of-interest risks. Although only a small part of procurement is related to government permits, contractors sometimes claim connections to government officials amongst their credentials, which is ignored by DHP. DHP maintains a strict policy of not accepting any gifts from contractors (potential or otherwise), not even invitations to a coffee, which can be a cultural challenge. Companies are learning that they cannot influence procurement decisions, and increasingly recognise the risk of exposure or of being reported to authorities for offering bribes, so incidences of offers of bribes have gone down. A related benefit is that contractors now have increasing trust in the procurement system and see DHP tenders as predictable and low-risk, resulting in stable prices.

Criteria met: Yes

Analysis against proven best practice

Scoring statement: *In addition, processes are in place to anticipate and respond to emerging risks and opportunities; sustainability and anti-corruption criteria are specified in the pre-qualification screening; and anti-corruption measures are strongly emphasised in procurement planning processes.*

Generic risks were identified through the Albania Corruption Risk Assessments. High corruption risks are associated with: indirect dealings with government (for example, contractors' permits); third party suppliers or

consultants; entering into agreements with public authorities; and market entry (dealing with new business partners and agents during operations). Specific risks associated with a single procurement process or supplier can be detected through the prequalification process, background checks, the whistleblower and grievance mechanisms, and the growing experience of the procurement team with different companies.

While DHP reserves the right to blacklist companies, this has been applied in only one case, where DHP staff were treated rudely. Generally, when risks are detected, solutions are sought which protect the integrity of the procurement process without limiting competition. In some cases, only licensed companies may perform certain works; licenses can be checked with the National Business Centre. For example, procurement of archaeological surveys for the Banjë reservoir was difficult because of potential conflicts of interest, as staff from the only licensed institution were also involved in permitting of impoundment. This conflict of interest, which could have raised costs significantly and/or delayed reservoir filling, was addressed effectively and transparently.

Where bids were higher than anticipated and a risk of budget overrun arose, procurement has cooperated with requesting departments to redefine design specifications or other aspects of the procurement process.

Processes to anticipate and respond to procurement opportunities, include the procurement strategies and market/supplier analyses, as well as the efforts to increase local competitiveness and capacity, mentioned above.

The screening of companies during the prequalification process includes a wide range of criteria that have to be addressed in self-assessment questionnaires and backed up with documentation. The questionnaires are very detailed, and if companies provide any answers that raise 'red flags', these are followed up and clarification is sought. Supporting documents are required on the HSE system, certificates, and the company's legal status, such as clearances from tax authorities, courts and prosecutors.

Statkraft and DHP's procedures strongly emphasize anti-corruption, and the above-mentioned Albania Corruption Risk Assessment provides a detailed anti-corruption plan and a review of implementation of the previous plan, with numerous actions for procurement planning.

Criteria met: Yes

8.2.3 Conformance / Compliance

Analysis against basic good practice

Scoring statement: *Processes and objectives relating to procurement have been and are on track to be met with no major non-compliances or non-conformances, and any procurement related commitments have been or are on track to be met.*

There are no indications of major non-conformances or non-compliances in the procurement process. The objectives mentioned above (value-for-money, quality, and avoidance of corruption and conflict-of-interest risks) have been largely achieved. Through requiring proper documentation, DHP supports the Albanian authorities in their efforts to ensure that businesses are registered, are paying their taxes, and are otherwise in compliance with their legal obligations.

Criteria met: Yes

Analysis against proven best practice

Scoring statement: *In addition, there are no non-compliances or non-conformances.*

There have been minor delays in procurement processes, but these are not considered non-conformances.

However an important issue is that, despite significant efforts by DHP including audits and recommendations, the sub-contractors and suppliers of LAJV are not selected in a manner that is consistent with DHP

expectations, contractual requirements, and LAJV's own quality assurance system. The Supplier Code of Conduct is not annexed to sub-contracts and enforced. This appears to be a non-conformance with LAJV's contract with DHP (clause 4.25 of the Conditions of Contract, on Business Ethics and Compliance), and therefore a **significant gap** against proven best practice. No progress was noted in the last audit against conditions a year earlier. Non-conformances are not necessarily grounds for termination of contract, but should trigger corrective action. There is no information whether this problem also applies to other contractors and their sub-contractors.

Criteria met: No

8.2.4 Outcomes

Analysis against basic good practice

Scoring statement: *Procurement of works, goods and services across major project components is equitable, efficient, transparent, accountable, ethical and timely, and contracts are progressing or have been concluded within budget or that changes on contracts are clearly justifiable.*

To date, procurement processes have enabled the project to be in time and budget, with no major breaches of business ethics (but note the gaps referred to on topics I-12 Labour and Working Conditions and I-18 Waste, Noise and Air Quality).. Procurement has supported overall project objectives by selecting capable contractors at competitive costs. Urgent procurement needs, for example in the selection of replacement roads contractors, have been implemented rapidly. DHP has developed a reputation as a 'clean' company. There have been no complaints from contractors regarding the fairness or transparency of the selection process. Procurement decisions are well justified and documented, and losing bidders are notified with the reasons for rejection. Variations and claims are handled effectively. The overall procurement strategy has proven to be appropriate for a developer like Statkraft, with significant procurement and contract management experience.

Criteria met: Yes

Analysis against proven best practice

Scoring statement: *In addition, opportunities for local suppliers including initiatives for local capacity development have been delivered or are on track to be delivered.*

Because Devoll HPP is implemented through multiple contracts and because of the extensive ESM programme with needs for many goods and services, there are considerable opportunities for smaller local companies. DHP has supported local businesses and promoted local employment through various initiatives, as described above, to take advantage of these opportunities. In addition, contractors have sourced many goods, services and employees locally. As a result, there has been significant economic development in the Gramsh area. There is reportedly no unemployment, and rental rates have increased. Almost all the smaller DHP contracts have been awarded to Albanian companies, except for some specialised services and equipment (for example, a trash boom from Greece and hydrosuction equipment from Norway for the Banjë reservoir).

Ministry of Energy and Industry and contractor representatives have described Devoll HPP as a 'school for contractors and supervision authorities'. There have been learning opportunities in terms of modern tendering and contracting practices; sustainability and anti-corruption requirements through the supply chain; HSE management; and technical skills, helping contractors gain experience with quality management and construction techniques (for example, on the bridges for the replacement roads). Some contractors gained ISO certifications. These experiences will make contractors that have worked on the project more competitive in the future. Reportedly, some contractors have submitted lower bids because of the learning and reputational advantages of working for the Devoll HPP.

Criteria met: Yes

8.2.5 Evaluation of Significant Gaps

Analysis of significant gaps against basic good practice

There are no significant gaps against basic good practice.

0 significant gaps

Analysis of significant gaps against proven best practice

The requirements of the Supplier Code of Conduct are not effectively extended to sub-contractors and suppliers, through the procurement process of the largest contractor LAJV.

1 significant gap

8.3 Scoring Summary

Procurement of works, goods and services is conducted through DHP's own procurement department, with some assistance from and supervision by Statkraft for larger contracts. The context for procurement presents some challenges, with limited capacity of local and national contractors and with a high incidence of corruption in Albania. DHP has managed to create robust processes to overcome these challenges. The objectives of the procurement programme (value-for-money, quality, avoidance of corruption and conflicts-of-interest risks) have largely been met. Additional positive effects are related to the support for local businesses and the capacity building among contractors in general. However, DHP is not extending its ethical and sustainable business practices to sub-contractors and suppliers to the extent possible. The fact that the principal contractor, and possibly others, are not using the Supplier Code of Conduct as intended is seen as a significant gap against best practice, resulting in a score of 4.

Topic Score: 4

8.4 Relevant Evidence

Interview:	8, 22, 23, 32, 51, 63
Document:	7, 8, 10, 27, 28, 32, 40, 41, 114, 115, 196-199, 209, 218-224
Photo:	-

9 Project-Affected Communities and Livelihoods (I-9)

This topic addresses impacts of the project on project-affected communities, in relation to economic displacement, impacts on livelihoods and living standards, and impacts to rights, risks and opportunities of those affected by the project. The intent is that livelihoods and living standards impacted by the project are improved relative to pre-project conditions for project-affected communities with the aim of self-sufficiency in the long-term, and that commitments to project-affected communities are fully delivered.

Topics I-10 'Resettlement' and I-11 'Indigenous Peoples' that follow, specifically address two sub-sets of project-affected communities.

9.1 Background Information

This topic focuses on households affected by economic displacement only (loss of land, resources or other means of livelihoods), and all other social impacts (on individual households or on communities) that are not due to physical displacement. Issues related to physical displacement are addressed under topic I-10 Resettlement. Economic displacement of households that are also physically displaced and issues with Drizë village are discussed under I-10. Issues concerning absentee households are discussed in I-9.

Communities directly affected by Devoll HPP comprise of:

- 505 households in 19 upstream villages that lost land or economic assets but were not relocated by Banjë reservoir;
- 71 households in 11 upstream villages that will lose land or economic assets but will not be relocated by Moglicë reservoir;
- 67 households that were economically displaced by Banjë-Gramsh replacement roads. The number of affected households for Moglicë replacement north shore road is zero, and that of south shore road is still to be determined;
- One absentee household that lost residential buildings that had no legal tenure, but is not physically displaced in Drizë;;
- Approximately 85 absentee households located in the Moglicë project area, 47 of which will lose both residential buildings and land, and 38 of which lose land only; among them, 7 buildings have no legal tenure;
- 7 communes affected by the transmission lines, through temporary and permanent land expropriation;
- Downstream communities of Banjë dam, Moglicë dam and Moglicë HPP that may be affected by the effect of alteration of flows during ongoing operations on irrigation and water supply; and
- Other households in the Banjë and Moglicë area that are not physically or economically displaced, but may experience other project impacts.

Twenty-nine and 21 households physically-displaced for Banjë and Moglicë HPPs respectively are addressed separately in I-10 Resettlement.

Communities in the project area in general have been or may be directly affected by: loss or replacement of public infrastructure including roads, irrigation, water supply and resources, schools and health care facilities; noise, vibration and dust, traffic and accidents during construction; ongoing low-level noise during operation; permanent loss of access to natural resources; social tension and public health impacts caused by the influx of construction workers; and alteration of cultural heritage sites and cemeteries.

Communities may be indirectly affected by increased demand for infrastructure and utilities, and increases in communicable diseases in the area.

The project area is highly rural with difficult pre-project road access. Local youth have been emigrating to cities or abroad seeking employment, resulting in an average age of over 50 years old. Livelihoods are primarily based on agriculture, trading, services, and remittances from young family members. Among them, agricultural activities account for half to two thirds of family incomes, comprising cultivation of crops, vegetables, fodder and fruits, livestock and apiculture. Despite this, agriculture development is challenged by the lack of irrigation, land, labour and rural roads. Gramsh, the geographic centre of Devoll HPP, is one of the poorest Districts in Albania, partly due to its limited industries and pre-project poor road conditions. Public facilities including power lines, water supply, irrigation systems, education and health facilities are only partially functional and in poor condition.

9.2 Detailed Topic Evaluation

9.2.1 Assessment

Analysis against basic good practice

Scoring statement: *Issues relating to project-affected communities have been identified through an assessment process utilising local knowledge; and monitoring of project impacts and effectiveness of management measures is being undertaken during project implementation appropriate to the identified issues.*

Issues relating to project-affected communities were identified through a series of assessment processes during the preparation stage and early implementation stage, including a Strategic Environmental Assessment (2010), Environmental and Social Impact Assessment (ESIA, 2011), Agricultural Status and Livelihood Study for Banjë-affected communities (2012), Communitarian and Individual Livelihood Compensation Study for Banjë (2012), Environmental and Social Management Plan (2013), ESIAs (2015) and Resettlement Action Plans (RAPs) (2016) for Banjë-Gramsh replacement roads (2015). The social impact assessment was led by two international sociologists and supported by five Albanian professionals through participatory approaches, including field surveys, interviews, focus group discussions and consultation meetings with local community and government representatives. The two livelihood studies were conducted by three leading Albanian agricultural experts through intensive field consultations, the ESIAs for Banjë-Gramsh replacement roads were completed by an ITALCONSULT and SGAI joint venture that was appointed as the roads designer, and RAPs for Banjë-Gramsh replacement roads were developed by Devoll Hydropower Sh.A (DHP). Impacts on project-affected communities were assessed through these studies, for both construction and operation phases; and management plans and monitoring programmes were developed by DHP in the ESMP.

Key identified issues included the loss of productive land, economic assets and resources, loss of houses and assets, damage to buildings due to increased erosion and landslides in the reservoir area, loss or damage of public infrastructure (including roads, irrigation systems, electricity supply, water supply and resources, education and health facilities), influx of construction workers, increased communicable diseases including STDs/HIV, social tensions, loss or damages of physical cultural heritage sites and cultural resources, and downstream impacts on irrigation and water supply.

A social baseline was established initially through these assessments, with 593 households registered in DHP's socioeconomic database. This baseline has been continuously updated through the implementation of ESMP programmes. It includes 1) an inventory of natural resources from which local communities derived their livelihoods and sustenance; 2) standard characteristics of displaced households, comprised of production systems, labour, household organization, livelihoods and standards of living; 3) census of inundated losses, including land area, population, dwellings, economic assets and facilities; and 4) public infrastructure and social services to be affected. The socioeconomic baseline survey in most of the affected area has been substantially completed, while that for Moglicë replacement south shore road is yet to be commenced. The baseline survey covers 100% of the affected households that participate in project socioeconomic survey programmes, i.e. 522

(91% of the total of 505+67 affected) in Banjë and 71 (100%, or 46% including absentee households) households in Moglicë, affected by economic displacement. Households displaced by the Moglicë replacement south shore road are yet to be included in the baseline. Note that approximately 135 affected Banjë households are not included in the baseline: 50 households from Drizë village (discussed in I-10 Resettlement separately), and 85 absentee households in the Moglicë project area. Nevertheless, all affected land and assets with legal tenure are included in the government cadastral expropriation system.

Systematic monitoring of project impacts and effectiveness of management measures has been undertaken by DHP's Environmental and Social Management (ESM) team on a routine basis, corresponding to different impacts identified and indicators established in the ESMP and the ESM Monitoring Framework. Monitoring comprises both process and outcome monitoring for project measures, including indicators/proxies of output (e.g. for livelihoods: number of new hectares under production by project-affected households and number of greenhouses established), and outcomes of each measure (e.g. evaluating possible income increased as a result of project intervention through direct and indirect income assessments).

Criteria met: Yes

Analysis against proven best practice

Scoring statement: *In addition, monitoring of project-affected communities issues during project implementation takes into account inter-relationships amongst issues, and both risks and opportunities that become evident during implementation.*

The combined environmental and social monitoring programme, coupled with ESM team quarterly project reports and ESM Annual Implementation Plan (AIP), allow inter-relationships, risks and opportunities to be identified and addressed. Emerging risks may also be identified through the Grievance Redress Mechanism. Examples of opportunities taken are provided on I-7 Project Benefits. Examples of opportunities include water supplies, road access, sanitation, and employment with contractors, including on afforestation programmes. Further examples are provided on I-3 Environmental and Social Issues Management..

Criteria met: Yes

9.2.2 Management

Analysis against basic good practice

Scoring statement: *Measures are in place to address identified issues that affect project-affected communities, and to meet commitments made to address these issues; and if there are any formal agreements with project-affected communities these are publicly disclosed.*

Measures in place to address identified issues are mainly defined in the ESMP and the Guiding Principles and Entitlement Matrix (Entitlement Matrix) for the DHP Project, supported by other documents for specific issues such as the Livelihood Support and Development (LSD) Implementation Manual, the Grievance Redress Mechanism (GRM), two RAPs prepared for Banjë-Gramsh north and south shore roads, and the draft Environmental and Social Management Plan for operations (ESMP-O). These measures are summarised below:

- Government expropriation compensation for land and properties with legal title, paid to land owners. The compensation rates for land are defined by GoA, with reference to the average sale price of land in the market. The rates for agricultural land, forest land and pasture land range respectively from 100 - 450 Albanian Lek (ALL) per m^2, 100 - 200 ALL per m^2 and 100 - 200 ALL per m^2;
- Government expropriation compensation for residential houses and structures with legal title, paid to the house owners (including absentee households). The compensation rate is calculated by a special committee on the basis of the initial value, depreciation, destination, location, indexes of the market price changes and of the currency. The land plot compensation rate ranges from 500 - 1000 ALL per m^2;

- Livelihood assistance to significantly affected households (i.e. households with loss of livelihoods or economic assets greater than 10%), by providing an in-kind support package in proportion to the actual loss through project Livelihood Support and Development (LSD) programmes, regardless of tenure status;
- A Disturbance Allowance (ranging between € 50 and € 250), for affected households whose loss of livelihoods or economic assets is less than 10% or who are affected by other adverse project impacts (e.g. social disturbance, loss of access to natural resources), in proportion to the actual loss/damage of assets, or the estimated magnitude of impacts, with no reference to tenure status;
- Project compensation for structures (e.g. animal pens, fences etc) that are not included in the scope of the legally-required compensation;
- Restoration and improvement of project-affected public infrastructure to at least pre-project standards, through Social Development (SD) Programmes;
- Management of other social impacts through corresponding project programmes, e.g. an Influx Management Plan to address project construction-related environmental, social and health impacts, a Physical Cultural Resources Plan to manage relocation of tombs and graves (see topic I-13 Cultural Heritage), and a Health Plan to address public health issues (see topic I-14 Public Health);
- Provision of additional LSD support on as-needed basis during the operation phase, in case livelihoods are not restored.

The LSD scheme is eligible to all severely-impacted land users (with an impact of 10% or more on household livelihoods and productive assets) on a voluntary basis. The target of LSD support is to provide in-kind compensation or assistance, to ensure that households are able to re-establish their livelihoods to at least pre-project levels. Assistance is categorised in three tiers, commensurate to the actual loss: an LSD package size equal to the value of 3000 m^2 of land multiplied by a factor of 50%, 75% and 100% maximum for the impacts of 10-33%, 34-66% and 67-100% of loss of land respectively. The LSD packages include: 1) agricultural development and promotion measures, including provision of livestock which are pregnant (heifers, goats, sheep and pigs), fruit tree and medicinal herb seedlings, irrigation pipes and pumps, agricultural machinery (ploughs, baling machines etc), greenhouse concrete poles and plastic sheets, as well as continuous technical training and support from DHP agriculture experts; 2) small business development including vocational training (e.g. cooking, hairdressing); and 3) other viable alternatives such as education.

The ESM team is responsible for implementing above measures. It is currently composed of 18 full-time staff (24 at peak), continuously supported by Statkraft's International Hydropower Environmental and Social Governance (ESG) unit and supplemented by external consultants (e.g. agricultural experts) hired on an as-needed basis.

Regarding downstream impacts, the ESIA proposed a minimum flow of 1 m^3/sec downstream of Moglicë and a minimum flow of 2 m^3/sec downstream of Banjë, for use when turbines are out of operation or during off-peak hours. The ESMP further proposed mitigation measures under the Downstream Programme, including: ensure that irrigation water is provided according to Concession Agreement requirements; and a public announcement system and awareness campaigns. However, it is not clear that the preparation of these measures will take account of other downstream community impacts, which may include impacts on sand and gravel extraction, aquaculture farming, water supply, or riverbank agriculture for example. The approach DHP applies will be to mitigate or compensate for any project negative impacts including downstream impacts (such as the impacts on a fish farm experienced during Banjë reservoir filling). Downstream impacts are discussed on topic I-20 Downstream Flow Regimes.

All DHP LSD measures have been fully implemented for Banjë. To date, 302 out of all 505 economically-displaced households affected by the reservoir, and all 24 households economically-displaced by replacement roads have registered in the LSD programme, and 315 had received LSD packages to date. In total 52 and 365 households received structure compensation and the disturbance allowance respectively. Public infrastructure has been replaced and vastly improved compared to pre-project infrastructure, including the Banjë north and

south shore roads, village access roads, water supply and resources, and the Drizë School which is relocated in upper land of the same village. Benefits from improved infrastructure are discussed on topic I-7 Project Benefits. Moglicë programmes have just commenced, and the number of participants is yet to be determined.

Around 246 (505 + 67 – 302 – 24) Banjë economically-displaced households are not included in the DHP LSD programme. Among them, c.196 households are not considered to be significantly affected as the impact on their livelihoods/assets is less than 10%. The remaining 50 are from Drizë village, discussed under topic I-10. Approximately 85 absentee households in Moglicë project area have not participated in the DHP socioeconomic inventory, and are not registered in the LSD programme.

These groups in Banjë and Moglicë project areas will not get additional DHP livelihood support but have been or will be compensated by the government expropriation scheme, with the exception of eight houses that do not have legal tenure and therefore will not be compensated.

Government compensation is managed by GoA, coordinated by DHP Legal Department. Once the government inventory is complete, DHP transfers the corresponding compensation amount to a special escrow account set up for the expropriation, then the affected households complete the document to claim the payment. To date DHP has transferred all (100%) compensation payments to the escrow account. The owners of 691 (62%) land parcels/assets have received the payments, whilst 424 (38%) parcels have not been claimed. On average, one household owns two land parcels in the project area, so there may be over 200 households that have not received the compensation. Reasons they may not have claimed the the compensation include: the owners are elderly with no bank accounts; the owners died after the inventory before claiming the compensation, then their children face a complex legal procedure, including a court notarisation process, to claim it; names of the owners were incorrectly recorded during the survey; and the affected households refused to claim the compensation as they are opposed to land expropriation. The 62% that have successfully claimed the compensation received payment from the escrow account within one week after submitting their application document.

Commitments in the ESIA Executive Summary and ESMP in English are publicly disclosed, with electronic versions available on the Devoll HPP website (www.devollhydropower.al). Hard copies of the ESIA report and ESMP brochures are publically available in the Gramsh Information Centre, and 50 other copies were provided to various stakeholders during the ESIA process. Other disclosure materials in Albanian include the DHP Compensation Policy and Entitlement Matrix, and DHP Information Leaflet on Resettlement and Expropriation, which describe the project commitments to replace and rehabilitate local affected public infrastructure. Agreements with GoA on the construction of infrastructure such as replacement roads in Gramsh are recorded in the third amendment of the Concession Agreement, which is publically available. LSD package agreements signed between DHP and individual affected households are understandably not publicly disclosed. If public infrastructure was affected (e.g. the water supply in Cërujë, Shtepanje and Drizë), a formal agreement was signed with the village and publicly disclosed.

Criteria met: Yes

Analysis against proven best practice

Scoring statement: *In addition, processes are in place to anticipate and respond to emerging risks and opportunities.*

Processes in place to anticipate and respond to emerging risks and opportunities include the GRM and ESM monitoring scheme, as well as the ESM team that interact with affected communities in the field, through open communications. DHP has identified 37 vulnerable households from LSD participants and provided additional consultation and livelihood considerations. Other examples are discussed under Assessment.

However, DHP has concentrated its monitoring efforts on households that are participating in the LSD programme, with less attention to those who are not included: c.196 Banjë households with an impact of less

than 10%, 50 from Drizë, and 85 absentee households in the Moglicë project area. Some of the 196 households may be amongst c.200 households that have not claimed government compensation for over two years. These are not included in the ESM monitoring system, or addressed in the quarterly project reports. Vulnerable households amongst these groups have not been identified or assisted, and no additional assistance has been provided. The absence of a process to identify and respond to the risk that these households do not receive compensation for which they are eligible is a **significant gap** against proven best practice.

Criteria met: No

9.2.3 Stakeholder Engagement

Analysis against basic good practice

Scoring statement: *Ongoing processes are in place for project-affected communities to raise issues and get feedback.*

Ongoing processes in place for project-affected communities to raise issues and get feedback include: consultation processes for LSD and SD programmes; a Grievance Redress Mechanism (GRM); public information offices in Gramsh, Banjë and Nikollarë; roundtable meetings with village, commune and municipal government representatives; village information and consultation meetings in the project-affected area; ESM socio-economic household surveys; and ongoing discussions with municipalities and villages on specific issues (such as replacement road construction, irrigation issues etc). For example, the LSD programme, for example, has set up a process that allows for prior, free, informed consultation. It contains several rounds of two-way consultations before the LSD agreement for each affected household is signed, as follows: sensitization of LSD options; discussion of household preferences; analysis of skill settings and available resources (including labour, land and water); development of draft LSD packages; and finalisation of detailed packages. The programme leaves room for additional consultations in case new project information is available or household preferences change. During the implementation of LSD programmes, project livelihood experts pay regular visits to affected households to track progress and they are on call for any need for technical assistance (e.g. fertilizers application and pest treatment). Interviews with community representatives show that affected households consider communications have been effective and satisfactory.

Community grievances registered to date in the GRM mainly concern physical displacement and livelihood support (58%), and contractors (41%). The ESM team report on the numbers, validity and closure of grievances, with a target of 90% resolution of all grievances raised. The oldest out of 51 grievances in process or under appeal at the end of September 2016 dated to 2014, and 38 (75%) of these are related to contractors. These grievances include damages/loss of water pipes, access roads and other properties, and unpaid salary, for example. This assessment further identified issues raised by affected communities and municipal government in relation to contractors, reflecting similar issues such as unsigned employment contracts, unpaid salaries, and unpaid or delayed payment of government taxes (mainly for transportation and road construction contractors). These issues, occurring directly between the contractors and affected communities/governments, are not recorded in the project GRM database or are being evaluated as invalid because the complainants could not present evidence (e.g. signed employment contract, which they have not received), and hence are not followed up by the ESM monitoring system. However, this is not included as a significant gap on this topic, as non-conformance of contractors with contractual commitments on labour and environmental management are discussed extensively on other topics (I-12 Labour and Working Conditions, and I-18 Waste, Noise and Air Quality).

The process of consultation with Drizë village is a gap against basic good practice in stakeholder engagement, but is discussed under I-10 Resettlement.

Criteria met: Yes

Analysis against proven best practice

Scoring statement: *In addition, feedback on how issues raised are taken into consideration is thorough and timely, and project-affected communities have been involved in decision-making around relevant issues and options.*

The GRM is open to all project-affected households and civil society in the project area. Feedback is provided in written letters thorough and timely, following the GRM standard procedure and timeline. Details are provided under I-1 Communications and Consultation.

Project-affected communities have been able to participate in decision-making around issues and options that directly affect their livelihoods. Examples include the project's consultation with Mazrek Village on alternatives to cross the Devoll River from the south shore to the north shore, and the LSD option discussions with economically-displaced households as described above.

Criteria met: Yes

9.2.4 Stakeholder Support

Analysis against basic good practice

Scoring statement: *Affected communities generally support or have no major ongoing opposition to the plans for the issues that specifically affect their community.*

With the exception of Drizë village, most community leaders and directly-affected families have supported the LSD and social development programmes. The project has not yet conducted a community satisfaction survey, but the many grievances raised that are requests to participate the programmes are a strong indication of support. At first there had been some doubts about the social programmes amongst affected communities in Banjë, probably due to a history of neglect in rural Albania, mistrust of foreign investors, and the legacy of the abandoned 1980's Banjë development. Such community suspicions and misunderstanding has gradually dissolved as DHP has rolled out its social programmes. There have been no such suspicions among Moglicë-affected communities, presumably owing to the high visibility and success of DHP programmes in Banjë. The affected communities interviewed in this assessment all expressed their support for the project programmes. Interviews show that elected representatives such as mayors and governors also support the project.

The ongoing opposition of Drizë village to project plans for the issues that specifically affect their community is a gap discussed under topic I-10 Resettlement.

Criteria met: Yes

Analysis against proven best practice

Scoring statement: *In addition, formal agreements with nearly all the directly affected communities have been reached for the mitigation, management and compensation measures relating to their communities.*

All directly affected households that participated the LSD programmes have signed formal agreements with DHP, detailing project impacts and livelihood support measures provided by DHP. The c.196 households in Banjë that have less than 10% impacts and 85 absentee households in Moglicë project area are eligible for the government expropriation procedure, which requires the signature of formal agreements.

Many of the 50 households from Drizë village have not signed the compensation agreements with GoA as they are opposed to expropriation. This is discussed under I-10.

DHP has reached and signed formal agreements with affected communities regarding mitigation and management measures to other project impacts and benefits. Examples include Shtepanje replacement water supply system, and Cërujë access footbridge. A range of examples are provided on topic I-7 Project Benefits.

Criteria met: Yes

9.2.5 Conformance / Compliance

Analysis against basic good practice

Scoring statement: *Processes and objectives relating to project-affected communities issues have been and are on track to be met with no major non-compliances or non-conformances, and commitments have been or are on track to be met.*

Project objectives, commitments and regulatory requirements for compensation of project-affected communities are incorporated into the ESMP, the Entitlement Matrix and road RAPs. ESM monitoring programmes are in place to track the implementation of these programmes. Most significantly affected households have been covered by the LSD programme, with the exception of Drizë village. DHP commitments have been on track to be met in Banjë and are on track to be met in the Moglicë project area. There is no evidence of non-compliance with Albanian laws and regulations.

Criteria met: Yes

Analysis against proven best practice

Scoring statement: *In addition, there are no non-compliances or non-conformances.*

The following non-conformances against project processes and IFC Performance Standards are identified:

- The ESMP and the Entitlement Matrix requires require that vulnerable groups, who for various reasons cannot participate in livelihood restoration programmes, are identified or provided with special measures. DHP has not identified or assisted vulnerable groups or individuals from 246 project directly-affected households that are not included in the LSD programme;
- The ESM Monitoring Framework commits DHP to publicize monitoring reports periodically to affected communities. This has not been conducted;
- Approximately 38% of economically-displaced households have not claimed government compensation to date; whilst this is due to the household's own reasons, GoA and DHP have not provided assistance for them to obtain the compensation, for example by simplifying the application process, opening bank accounts for the elderly, and correcting incorrect owners names etc;
- Eight absentee households without legal tenure (one in Banjë and seven in Moglicë) are not compensated. This is a non-conformance with IFC Performance Standard 5, which requires replacement cost compensation to all lost assets; and
- Contractors are not in compliance with the ESIA/ESMP requirement to appoint a Community Relationship Officer (CRO) and follow the GRM procedure. As a result, 41% of reported grievances and 75% of outstanding grievances concern contractors.

This range of non-conformances with project processes and objectives and IFC Performance Standards is a **significant gap** against proven best practice.

Criteria met: No

9.2.6 Outcomes

Analysis against basic good practice

Scoring statement: *Livelihoods and living standards impacted by the project have been or are on track to be improved, and economic displacement is fairly compensated, preferably through provision of comparable goods, property or services.*

Livelihoods and living standards of significantly affected communities that have participated in LSD programmes are on track to be improved. To date, all 315 participating households had received LSD packages. These packages have provided, to date, 4 161 olive trees, 4 500 sage seedlings, 635 fruit tress including vines, 7.63 tonnes of fertilizers, 27 pregnant heifers, 29 sheep, 228 goats, 73 tons of fodder concentrate, 25 bee hives, 76 items of agricultural machinery, construction materials for 16 greenhouses and 2 vineyards, 22 irrigation systems, and 24 water pumps. Although the LSD agricultural programmes may take years to fully restore incomes of affected households (the new grape vineyard for example), as DHP is committed to provide additional necessary LSD support during the operation phase until full restoration is achieved, it is expected that the livelihoods and living standards of those participating will be restored and eventually improved.

Impacts on downstream communities are less definite. DHP has established new irrigation system for 55 hectares of land for Shushice Village and improved an existing irrigation system for 300 hectares of land for other downstream villages in Cerrik (but note that the water for these scheme is not extracted from the Devoll). The ESMP-O targets to provide more irrigation assistance for downstream communities. In addition, as DHP is committed to compensating downstream negative impacts, downstream communities are unlikely to face significant risks if their livelihoods are affected.

No significant economic displacement for the construction of transmission line has resulted as the routes of the lines are through communally extensively used forest rather than agricultural land.

Criteria met: Yes

Analysis against proven best practice

Scoring statement: *In addition, the measures put in place to improve livelihoods and living standards are on track to promote self-sufficiency in the long-term.*

Measures put in place to improve livelihoods and living standards for those listed in the LSD programmes are on track to promote self-sufficiency in the long-term, as the assistances aim to promote the productivity and the incomes of the affected households.

However, there is a risk that a significant number of households may not be fairly compensated or become self-sufficient:

- Approximately 196 households in the Banjë area (not including 50 Drizë households) that lose less than 10% of livelihoods/assets and have not enrolled in the LSD programme;
- (Overlapping with the above) up to about 200 households that have not claimed government compensation); and
- 85 absentee households in the Moglicë project area.

Impacts will be marginal for most that lose less than 10% of their assets, and negligible for absentee households, and the compensation scheme managed by the government is fair in principle, taking market prices as a reference. But there may be some vulnerable households amongst the above groups and compensation could not be said to be fair if households are not able to claim it. This is a significant gap against proven best practice, but it is the same gap as discussed under Management.

Criteria met: Yes

9.2.7 Evaluation of Significant Gaps

Analysis of significant gaps against basic good practice

There are no significant gaps against basic good practice.

0 significant gaps

Analysis of significant gaps against proven best practice

The absence of a process to identify and respond to the risk that some affected households do not receive compensation for which they are eligible.

A number of minor non-conformances with project processes and objectives, and IFC Performance Standards.

2 or more significant gaps

9.3 Scoring Summary

Issues relating to project-affected communities were identified through the ESIA during the preparation stage then through development of ESMP and RAPs at the implementation phase, drawing on local knowledge through extensive participatory approaches. Monitoring of commitments is being undertaken, integrated with monitoring of environmental management and physical relocation, through quarterly internal monitoring, and is supported by the Oslo ESG team.

Measures for the compensation of economic displacement are mainly defined in the ESMP and the Guiding Principles and Entitlement Matrix for DHP, encompassing three separate lines: 1) government compensation for land and properties to owners with tenure; 2) project livelihood assistance to affected households through LSD programmes, mainly agricultural development and promotion activities; and 3) restoration and improvement of project-affected public infrastructure.

There is general support amongst affected communities for these measures, and no evidence of major on-going opposition.

Project mitigation measures address economic displacement issues and meet project commitments for most significantly affected households. No measures are provided to less significantly affected and absentee households aside from government compensation, 38% of which are yet to be claimed. In addition, there are a number of minor non-compliances with project processes and objectives and IFC performance standards. There are two significant gaps against proven best practice resulting in a score of 3.

Topic Score: 3

9.4 Relevant Evidence

Interview:	2, 5, 6, 7, 14, 18, 20, 28, 29, 30, 31, 42, 43, 45, 46, 47, 48, 49, 50, 61
Document:	42-54, 90-92, 100-101, 116-125, 212, 242-251
Photo:	31-43

10 Resettlement (I-10)

This topic addresses physical displacement arising from a hydropower project development. The intent is that the dignity and human rights of those physically displaced are respected; that these matters are dealt with in a fair and equitable manner; that livelihoods and standards of living for resettlees and host communities are improved; and that commitments made to resettlees are fully delivered.

10.1 Background Information

This topic addresses physical displacement only. Issues that are related to economic displacement are addressed under topic I-9 Project-Affected Communities and Livelihoods

Communities directly affected by physical displacement for the project comprise of:

- 29 households displaced by Banjë HPP, relocated to higher land within the same village:
  - 16 households in Quafe, Cingar, Dushk, Qerret villages and Gramsh Town,
  - 11 households in Drizë Village;
  - 1 household affected by the transmission line; and
  - 1 household affected by the Banjë-Gramsh replacement road.
- 21 households displaced by Moglicë HPP, in Nikollarë and Lumaj Villages, to be relocated to a resettlement site in Maliq town.

It should be noted that a total of 98 residential buildings are affected by the project, including 79 buildings that have legal tenure and are eligible for government compensation. Only the above 50 buildings (of which 11 did not have legal tenure) were lived in during the inventory survey and are therefore eligible for DHP resettlement support. The remaining 48 residential buildings belong to absentee households, who are not physically displaced. Impacts on their livelihoods are addressed under I-9 Project-Affected Communities and Livelihoods.

Approximately additional 50 households in Drizë Village are economically displaced. Issues related to these households are not considered as significant gaps under topic I-9, as they similar to the issues for physically-displaced households.

At the time of this assessment, resettlement for the Banjë project was substantially completed, with the exception of Drizë village. Resettlement for the Moglicë project is still in the planning stage, and current activities include the selection of the resettlement site and coordination with local government. Please note that Shushicë village in the Banjë area was initially located upstream of the Banjë dam on the reservoir north shore, then relocated in 1988 for the ultimately abandoned Banjë project. All households of the village were provided with replacement houses and land in Cerrik, approximately 10-15 km downstream of the Banjë dam in the 1980s. The current DHP project has not required physical displacement of this village.

Resettlement by Devoll HPP meets the definition of involuntary resettlement in the International Finance Corporation (IFC) Performance Standard 5 Land Acquisition and Involuntary Resettlement (PS5): resettlement is considered involuntary when affected persons or communities do not have the right to refuse land acquisition or restrictions on land use that result in physical or economic displacement. This occurs in cases of (i) lawful expropriation or temporary or permanent restrictions on land use and (ii) negotiated settlements in which the buyer can resort to expropriation or impose legal restrictions on land use if negotiations with the seller fail.

10.2 Detailed Topic Evaluation

10.2.1 Assessment

Analysis against basic good practice

Scoring statement: *An assessment of the resettlement implications of the project has been undertaken that establishes the pre-project socio-economic baseline for resettlees and host communities; monitoring is being undertaken of implementation of the resettlement plans, and to see if commitments made to resettlees and host communities have been delivered and are effective and to identify any ongoing or emerging issues.*

The resettlement implications of Devoll HPP were assessed through the Environmental and Social Impact Assessment (ESIA) during project preparation and the Environmental and Social Management Plan (ESMP) developed in the early phase of project implementation.

A pre-project socio-economic baseline of physically-displaced households and the host communities (virtually the same village in all cases) for the Banjë project was initially established through the ESIA process, and further updated through detailed household socio-economic inventory survey from December 2011 to April 2014, during the implementation of the ESMP. Devoll Hydropower Sh.A. (DHP) updated the socio-economic baseline of affected households of Moglicë project through a second inventory survey in late 2016, as the first inventory was completed in 2014. DHP will conduct a high-level socio-economic baseline survey of host communities once the resettlement site is confirmed for Moglicë-affected communities. These baseline data (including age, background, income and health issues) form the basis for developing the livelihood restoration plan for relocated households.

DHP has undertaken monitoring on a quarterly basis as required by the ESMP and the ESM Monitoring Framework, comprising process/input indicators: house design developed, agreements with project-affected households, construction of houses, quality-certified according to national standards, handover agreements, and provision of legal documentation including ownership. Outcome evaluation monitoring has not been conducted yet but it will be conducted to for Banjë resettled households soon. Monitoring is further supported by Statkraft's International Hydropower Environmental and Social Governance (ESG) team, through *in-situ* investigation and progress review.

It should be noted that approximately 50 households of Drizë village that are eligible for livelihood restoration and development (LSD) support refused to participate in the socio-economic inventory, including five physically-displaced households. Their socio-economic baseline is not established, and these households are not included in the ESM monitoring system. This is a significant gap against basic good practice but it is addressed under Management.

Criteria met: Yes

Analysis against proven best practice

Scoring statement: *In addition, the assessment of delivery of commitments to resettlees and host communities takes into consideration both risks and opportunities.*

Not assessed.

10.2.2 Management

Analysis against basic good practice

Scoring statement: *Measures to address resettlement are documented in a Resettlement Action Plan; measures are in place to deliver commitments to resettlees and host communities, and to manage any identified issues*

relating to resettlement, including provision of grievance mechanisms; and formal agreements with resettlees and host communities are publicly disclosed.

Measures to address resettlement issues were defined in the ESMP, the DHP Compensation Policy and Entitlement Matrix, and the third amendment of the Concession Agreement (CA), including:

- Preparation of a full RAP for Banjë and Moglicë resettlement;
- Government compensation to the affected residential houses based on government published rates, which calculated by a special committee on the basis of initial value, depreciation, destination, location, indexes of market price changes and of currency changes; this amount is also used for budgeting the construction of replacement housing;
- Planning and implementation of a resettlement programme with the consent and agreement of the affected people through a participatory involvement process;
- Provision of replacement housing, additional materials and technical support for displaced people to ensure at least the same standard of their previous dwelling, irrespective of house and land tenure; the discrepancy between government compensation amounts and that needed for the replacement housing is financed by DHP; and if the house had no legal tenure and not eligible for government compensation, DHP provides the funds;
- Transportation of family properties (belongings, materials and moveable objects) to new sites;
- Provision of assistance for project-affected households to secure suitable residential land in consultation with the government of Albania (GoA); and
- Provision of livelihood restoration support (Livelihood Support and Development, LSD) as described under I-9 (Project-Affected Communities and Livelihoods).

A draft RAP was prepared in 2012. It has not been finalised, but instead DHP refers to the ESMP for resettlement management. Construction of replacement housing is GoA's responsibility, but has been managed by DHP for Banjë resettlement since January 2015. DHP's Environmental and Social Management (ESM) team is responsible for undertaking the resettlement programmes, supported by Legal, Contract Management and Procurement teams. ESM conducts consultation with displaced households and local government, and deals with grievances; the Land Access Team within Legal Team provides land and secures land tenure for the replacement housing; the Contract Management team manages the construction contractors; and the Procurement team purchases materials needed for the replacement housing and tenders out the construction contracts.

Routine ESM monitoring and the grievance redress mechanism (GRM) are measures to identify issues relating to resettlement. For example the first ESM Quarterly Project Report in 2016 points out the growing pressure for Drizë resettlement and proposes to increase ESM efforts in explaining policies and maintaining the cut-off date. The majority of grievances received to date by the GRM concern DHP resettlement and social development programmes (58%; contractor issues regarding land access, associated property damages and compensations are 41%).

To date, 16 out of 29 Banjë-affected households have moved into replacement houses, including one household from Drizë village.

Negotiations with Drizë village have been difficult since the commencement of the project. Drizë Village has lost the majority (more than 80%) of its farmland to the Banjë reservoir, and is more adversely affected by economic displacement than any other Banjë-affected village. The timeline of events is as follows:

- In 2012, Drizë village issued a letter to the GoA that contained the following requests: 1) to explain the compensation criteria; 2) to provide compensation for their entire land; 3) to extend the deadline for registration as many residents had not received the notification. The village proposed to resolve the land expropriation issues by 1) resettling the entire village; 2) providing each family with € 500,000 for

compensation, or 10% of DHP revenue. Understandably, GoA considered these high demands unreasonable;

- In February 2013, Drizë village requested a meeting with DHP, asking DHP to answer questions on the scope of expropriation (whether it includes the buffer area in addition to the inundated area); to explain the questionnaire contained in the inventory form; and to discuss compensation rates; and a possible compensation arrangement for replacement of access roads and Drizë School. DHP explained in their response that the GoA was responsible for land expropriation, but DHP had a Resettlement Programme (i.e. the ESMP) that would assist affected communities for livelihood restoration in addition to the government compensation scheme;
- In November 2013 the Deputy Minister of Ministry of Energy and Industry (MEI) then held a meeting in Drizë village to discuss expropriation issues but did not reach any agreement;
- In March 2014, a meeting was held in Gramsh Information Office, and subsequently the Pishaj commune government provided a list of eligible households to Drizë villagers in response to their request for eligibility. Sixty-one households were on the list, including all 11 physically-displaced (note that all physically-displaced households are also affected by economic displacement);
- By 18 April 2014, the cut-off date set in March for Drizë village, 15 households completed the socioeconomic survey but the other affected households refused to participate;
- In February to March 2015, DHP sent invitation letters again, asking for the participation in the resettlement support programme to 11 physically-displaced households, and subsequently closed the offer by 1 April 2015. Only one affected households chose to participate in the project programme, the others formally refusing the offer either by signing a refusal on the household individual consultation records or not responding to the invitation; and
- In February 2016, the 15 households that previously participated the inventory survey signed up to the LSD programme, and by the time of this assessment, 16 affected households from Drizë were included in the LSD programme.

Approximately 50 households from Drizë are no enrolled in the LSD programme. DHP has received grievances raised from these households since the cut-off date on 18 April 2014, requesting to be included, but DHP determined that these grievances are invalid because the households didn't participate in the inventory before the cut-off date. Many of these 50 households have not claimed for government compensation, showing their opposition to the land expropriation.

Specifically, ten out of the 11 physically-displaced households turned down the DHP offer for resettlement support by either signing a waiver letter or refusing to respond, therefore they have since been considered ineligible for DHP resettlement support. In June 2016, with the filling of the Banjë reservoir, six households within the reservoir inundated area still refused to leave their old houses. After that, following DHP consultation with GoA, central government evicted these households and dismantled their houses.

The six households were then temporarily relocated in a school dormitory, later accommodated in municipality-rented apartments in Gramsh and have remained there to date. Four other households unaffected by the impoundment remain in the reservoir buffer zone. One interviewee owner who previously formally rejected the resettlement support programme reported that the reservoir water level reached the foundation of their house during the summer, they were concerned about safety of their houses, and wanted to be relocated to higher ground. Three households of Cingar Village living in the buffer zone have the same issue. The challenge of resettling the six temporarily-housed households and seven remaining households from the buffer zone is a key concern for affected households, village council members and Gramsh governors.

By the time this report was finalised in March 2017, DHP has reached an agreement with Gramsh Government and the MEI to resolve the issue. Under this agreement, Gramsh Government will grant construction land for building replacement apartments for these 13 households; DHP will design, construct and handover the replacement apartments to Gramsh Government, which in turn will provide public utilities, permitting and

licensing documents, as well as the replacement apartments to the households. The government also bear the responsibility of inspecting the construction and addressing community grievances. DHP will finance the discrepancy between government compensation amount and the actual construction cost.

The failure of resettlement planning in Drizë, resulting in temporary re-housing of six households, the absence of project commitments to seven buffer zone households, and absence of livelihood assistance to approximately 50 significantly economically-displaced households, is a **significant gap** against basic good practice. All parties share responsibilities to varying degrees: 1) Drizë households refused to accept fair compensation; 2) DHP and GoA engagement activities did not succeed, despite their best efforts; 3) GoA did not meet its responsibilities to resettle the households on a timely basis, prior to reservoir impoundment; 4) DHP did not succeed in convincing GoA of the urgency of relocation; and 5) although impoundment was delayed for two weeks, DHP did not give any consideration to the possibility of delaying impoundment further.

Commitments in the ESIA Executive Summary and ESMP are publicly disclosed, with electronic versions available on the Devoll HPP website (www.devollhydropower.al), and a hard copy of the ESIA report and ESMP brochures are publically available in the Gramsh Information Office. Other disclosure materials in Albanian include the DHP Compensation Policy and Entitlement Matrix, and DHP Information Leaflet on Resettlement and Expropriation, which describe the project commitments to replace and rehabilitate local affected public infrastructure.

Criteria met: No

Analysis against proven best practice

Scoring statement: *In addition, processes are in place to anticipate and respond to emerging risks and opportunities.*

Not assessed.

10.2.3 Stakeholder Engagement

Analysis against basic good practice

Scoring statement: *Ongoing processes are in place for resettlees and host communities to raise issues and get feedback.*

Ongoing processes are in place for resettlees that participate in resettlement programmes to raise issues and get feedback including: processes for replacement housing construction that contains seven milestone consultations with the resettlees (to agree with house design and material purchased etc); public information offices to disseminate project information and receive grievances; grievance redress mechanism (GRM) to address and document grievances; ESM socio-economic household surveys; consultation processes for project LSD and social development (SD) programmes; and household visits by DHP ESM staff to provide updates as construction progresses. Interviews with representatives of affected households that participated in the resettlement programme indicated that the households consider that communications have been effective and satisfactory.

Engagement with Drizë village has not been successful, partially due to unreasonable demands for compensation from affected households. This is a gap but is the same as identified under Management above.

A minority of households in Nikollarë and Lumaj Villages are located above the Moglicë reservoir level and therefore initially were not eligible for the resettlement programme, whilst a majority are within the reservoir area and were eligible. The minority households have raised grievances to DHP requesting that they are resettled with the majority of the villagers. Reportedly DHP has reached an agreement with the Maliq government to resettle the entire two villages, totalling 20 households (one opting for government compensation).

Criteria met: Yes

Analysis against proven best practice

Scoring statement: *In addition, feedback on how issues raised have been taken into consideration has been thorough and timely, and resettlees and host communities have been involved in decision-making around relevant issues and options.*

Not assessed.

10.2.4 Stakeholder Support

Analysis against basic good practice

Scoring statement: *Resettlees and host communities generally support or have no major on-going opposition to the Resettlement Action Plan.*

There is general support amongst 16 of the households physically-displaced by Banjë and 20 households displaced by Moglicë that enrolled in the DHP resettlement programme. Interviews with affected households that have been and are to be resettled show that they supported the socio-economic baseline surveys, project impacts, proposed resettlement processes, project LSD packages and their entitlements.

For the Banjë project, although other households in the same villages are possible slightly envious of the displaced households' new and better equipped housing, they generally support the programme.

With regard to the Moglicë project, the concerns of remaining households in Nikollarë and Lumaj villagers have been received and discussions are proceeding between DHP and local government. No major opposition of the resettlement measures are expected. Although no consultation had been conducted with the host community around the proposed resettlement site in Maliq, DHP does not expect opposition from the neighbouring communities. The replacement site is located on state-owned land in an urban area, and neighbours are also new in this area. Note however that the area is used by neighbours for grazing sheep, goats and ponies, observed during this assessment.

In total, ten Drizë displaced households and three Cingar households within the buffer zone (45% of physically-displaced households in Banjë) have had ongoing opposition to resettlement. The c.50 households that have not enrolled in the LSD programme also have ongoing opposition. The Drizë village representatives interviewed during this assessment expressed their dissatisfaction of the entire resettlement process, and consider that they have been treated unfairly: they have not received any assistance, but have damages or loss of their houses and land, and are most significantly affected. The opposition of physically-displaced households may dissipate with the new agreement for 13 households reached with government as described above. However ongoing opposition of Drizë households to the resettlement process, up to the time of this assessment and possibly beyond is a **significant gap** against basic good practice. It is the same gap as described above on Management.

Criteria met: No

Analysis against proven best practice

Scoring statement: *In addition, there is consent with legally binding agreements by the resettlees and host communities for the Resettlement Action Plan.*

Not assessed.

10.2.5 Conformance / Compliance

Analysis against basic good practice

Scoring statement: *Processes and objectives in the Resettlement Action Plan have been and are on track to be met with no major non-compliances or non-conformances, and any resettlement related commitments have been or are on track to be met.*

For affected households that participate in the project resettlement programme, processes and objectives related to resettlement have been and are generally on track. There are minor delays of the process, e.g. the GoA are slow to issue property documents to owners of the replacement houses for Banjë project, the GoA had not attended to maintenance (sewage outflow) issues of the replacement houses; locations of the resettlement site for Nikollarë and Lumaj villages has not been finalized. However, these are currently not a significant risk to the process of resettlement and the project. Moglicë resettlement is at an early stage, and DHP has time to address these issues, but ongoing delays will present a significant risk if not addressed in the near term.

Processes and objectives related to resettlement may be on track to be met for 13 physically-displaced households in Drizë and Cingar, provided all three parties (DHP, Gramsh Government and 13 Households) join their efforts to construct the replacement apartments as agreed between DHP and GoA.

Processes and objectives related to land expropriation are not on track for 50 economically-displaced households in Drizë (including five physically-displaced households). Apparently many of these households have not claimed government compensation due to their opposition to the land expropriation. They will not receive any additional support from DHP unless they are able to enrol in LSD programmes. This gap is addressed under Management above.

The project's definition of 'cut-off date' may not be in conformance with IFC Performance Standard 5 (PS5) concerning Land Acquisition and Involuntary Resettlement. The project defines a cut-off date as a deadline for an affected household to register its interest in project social programme, for example it was 18 April, 2014 for Drizë village. After that date, if the household did not register, even though it may be affected, it is not eligible. However PS5 refers to a cut-off date in relation to determining who is eligible for compensation and assistance, and discouraging ineligible persons such as opportunistic settlers from claiming benefits (IFC PS5, Paragraph 12). IFC PS5 Guidance Note GN17 states that the project should accommodate individuals or groups who are not present at the time of registration but who have a legitimate claim to membership of the affected community. The concept of a cut-off date is not intended to make those with legitimate claims ineligible for assistance, for example if they miss the deadline or initially refused to cooperate.

The objectives of Performance Standard 5 include the avoidance of forced eviction, defined as (paragraph 23, footnote) the permanent or temporary removal against the will of individuals, families, and/or communities from the homes and/or land which they occupy without the provision of, and access to, appropriate forms of legal and other protection. However, PS5 Guidance Note (GN55) notes that according to the UN, 'the prohibition on forced eviction does not apply to evictions carried out in force in accordance with the law and in conformity with the provision of International Covenants on Human Rights'. GN55 refers to procedural protections set out in the UN Office of the High Commissioner Basic Principles and Guidelines on Development-Based Evictions and Displacement, including an opportunity for genuine consultation, provision of legal remedies and legal aid. Evictions in Drizë were carried out in accordance with Albanian law. It is beyond the scope of this assessment to determine whether evictions in Drizë followed the UN Principles, but there is no evidence that GoA or DHP made reference to these principles in determining the procedures of eviction.

There is no evidence of non-compliance with Albanian laws and regulations.

Criteria met: Yes

Analysis against proven best practice

Scoring statement: *In addition, there are no non-compliances or non-conformances.*

Not assessed.

10.2.6 Outcomes

Analysis against basic good practice

Scoring statement: *Resettlement has been and is being treated in a fair and equitable manner, and resettlees and host communities have experienced or are on track to experience a timely improvement in livelihoods and living standards relative to the pre-project baseline.*

Resettlement has generally been and is being treated fairly with affected households that participate in the resettlement programme, through highly effective implementation of the programme and transparency in household visits; and equitably, because all affected households receive the same resettlement arrangement and LSD packages corresponding to their actual loss.

Households that have moved to replacement housing to date have experienced a timely improvement in living standards, owing to the provision of much improved housing conditions, insulation, water supply and sanitation. Households affected by the Moglicë project will be relocated to a resettlement site in Maliq City, and can be expected to experience a similar improvement in living standards, due to improved access to public facilities available in Maliq, and much improved replacement housing, compared to pre-project conditions. The resettlement site is a flat area of 20 000 m^2, currently vacant, and located approximately 300 m from Maliq downtown, 31 km from Nikollarë and 12 km from Korçë. It is bounded by residential buildings in the south, east and west, and opposite to a dis-used sugar manufactory plant in the north. A Maliq city waste disposal site is located approximately 1-2 km west of this site, but this will be closed down in the near future when the new city sanitary landfill currently construction put into operation. Despite this, there are vast land and forests in the surrounding area for the resettled households to continue grazing livestock, although the land use right may need to be coordinated with municipal government.

While it is comparatively easier for Banjë-affected households to restore/improve their livelihoods, as they remain close to their remaining agricultural land, the effectiveness of the LSD program for Moglicë resettles, whose livelihoods are mostly land-based, may be more difficult. If villagers from Nikollarë and Lumaj are relocated to Maliq city, they will not have access to their former agricultural land and forests in the reservoir area, therefore tailored livelihood restoration programmes will be necessary to assist livelihood restoration, with consideration of resource limits (e.g. fuelwood, grazing land) and demands (e.g. animal stalls, right to access neighbouring forests) in the resettlement site. Many of the affected households are elderly or have little capacity to adapt, as they have only ever pursued land-based livelihoods. However, assuming DHP recognises these challenges and provides effective livelihood restoration support, households can be expected to experience an improvement to livelihoods compared to the pre-project baseline.

At the time of this report, owing to the loss of their dwelling houses, six affected households from Drizë have experienced a decline living standards. Around 50 economically-displaced households in Drizë (including five physically-displaced households) are not track to improve their livelihoods, if either GoA or DHP provides no additional livelihood support for this group. However, the six physically-displaced households, together with seven households currently remaining in the buffer zone from Drizë and Cingar Villages, will be on track to improve their living standards, provided all three parties (DHP, Gramsh Government and 13 Households) work together to construct the replacement apartments as planned.

A decline in living standards amongst seven evicted, temporarily-housed households, and the possibility of a permanent decline in livelihoods and living standards amongst a wider group, including economically-displaced households in Drizë village, is a **significant gap** against basic good practice. It is the same gap identified under

Management.

Criteria met: No

Analysis against proven best practice

Scoring statement: *In addition, the measures put in place to improve livelihoods and living standards are on track to promote self-sufficiency in the long-term.*

Not assessed.

10.2.7 Evaluation of Significant Gaps

Analysis of significant gaps against basic good practice

Plans for resettlement and engagement failed in Drizë village and with households within the buffer zone in Cingar village, resulting in their opposition, a decline in living standards amongst seven evicted, temporarily-housed households, and the possibility of a permanent decline in livelihoods and living standards amongst a wider group.

1 significant gap

Analysis of significant gaps against proven best practice

Not assessed.

10.3 Scoring Summary

Project resettlement impacts were assessed through the ESIA during the preparation stage and the ESMP in the early phase of implementation. The assessments included an initial socio-economic baseline that has been further updated with the progress of the resettlement programme. Monitoring of commitments is being undertaken, integrated with other social impacts, through internal monitoring, supported by routine external monitoring from the Oslo Statkraft ESG team.

Measures to address physical displacement include: government compensation to houses with legal title for both houses and land; and project construction of replacement housing and supplementary funds for construction, irrespective of tenure . Livelihood restoration support is provided through the implementation of a Livelihood Support and Development programme. All measures are documented in the ESMP and project Compensation Policy and Entitlement Matrix.

Resettlement plans have been very successful with the households that participated, with a significant improvement in living standards and good prospects for improved livelihoods. However, plans for resettlement and engagement failed in one particular village, Drizë, requiring the eviction and temporary housing of six households, leaving seven other households from Drizë and Cingar village within the buffer zone, and excluding most Drizë households from livelihoods assistance.

There is one significant gap against basic good practice resulting in a score of 2.

Topic Score: 2

10.4 Relevant Evidence

Interview:	5, 17, 14, 18, 20, 26, 28, 29, 30, 31, 42, 43, 45, 46, 47, 48, 49, 50, 61
Document:	42-53, 90-92, 117-118, 126-127, 180-181, 212, 242-252
Photo:	44-67

11 Indigenous Peoples (I-11)

This topic addresses the rights, risks and opportunities of indigenous peoples with respect to the project, recognising that as social groups with identities distinct from dominant groups in national societies, they are often the most marginalized and vulnerable segments of the population. The intent is that the project respects the dignity, human rights, aspirations, culture, lands, knowledge, practices and natural resource-based livelihoods of indigenous peoples in an ongoing manner throughout the project life.

This topic is not relevant, as there are no groups that meet the definition of Indigenous Peoples in the project area.

12 Labour and Working Conditions (I-12)

This topic addresses labour and working conditions, including employee and contractor opportunity, equity, diversity, health and safety. The intent is that workers are treated fairly and protected.

12.1 Background Information

A large number of employees, including approximately 80% Albanian as well as Turkish, Norwegian, and other nationalities, contribute to the implementation of Devoll HPP, at worksites in the Devoll valley and in Tirana. The contractor workforce in October 2016 was 1 410 (1 140 Albanians and 270 expatriates), and the owner's workforce was 96 (57 Albanians and 39 expatriates). This number has already reduced from the time when Banjë and Moglicë were being constructed in parallel. The Banjë project is now entering into operation, with contractors leaving and a small number of operational staff remaining.

Statkraft has 3 500 employees overall, and has high expectations on working conditions and Health Safety and Environment (HSE) standards in its projects. Albanian legal requirements on labour and working conditions are also relatively high: as noted on topic I-3, the government of Albania (GoA) is harmonising Albanian law with the EU *acquis* in preparation for negotiations on accession to the European Union (EU). But labour practices in the Albanian and Turkish construction industry are often problematic, so the Devoll HPP has had to make a major effort to lift performance.

12.2 Detailed Topic Evaluation

12.2.1 Assessment

Analysis against basic good practice

Scoring statement: *Human resources and labour management requirements have been identified through an assessment process, including occupational health and safety (OHS) issues and risks; and processes are in place to identify any emerging or ongoing issues, and to monitor if management measures are effective.*

Devoll Hydropower Sh.A (DHP)'s workforce requirements have evolved over time, as the organisation was manned in a number of steps for an increasing workload: from the early establishment of a preparation team; the beginning of tendering, construction, and the ESM programme; taking over HSE (health, safety and environment) responsibilities from the Banjë Owner's Engineer; assuming overall responsibility for replacement roads, and the Moglicë project; and starting operations of Banjë and marketing of power. In parallel, human resources (HR) including OHS requirements for this workforce evolved, designed to attract qualified Albanian and expatriate staff, and to comply with both EVN's and Statkraft's policies. When Statkraft assumed full control of DHP, an integration assessment was undertaken to check whether all HR practices were aligned (see also topic I-2 Governance).

Workforce requirements for contractors were first estimated in the feasibility studies and later, in more detail, during preparation of tender designs. Contractors' HR and labour management practices are assessed during the procurement process (see topic I-8 Procurement). Major contractors such as the Limak-AGE Joint Venture (LAJV) evaluated their requirements as part of the bidding process. LAJV submitted a recruitment plan in 2014, which was approved by DHP after some adjustments. Their HR and labour management choices are constrained by their contractual commitments.

Foreign companies involved with the Devoll HPP had to review Albanian labour legislation and understand special requirements related to expatriate employees, for example regarding work permits. Employers have an

obligation to report all workers and vacancies so that local labour offices can check these against lists of unemployed people, but there are no obligations to share longer-term recruitment plans.

DHP developed a generic hazard identification register in 2014 to identify all hazardous work tasks, persons at risk, the specific risks, and associated precautions. The overall risk register has also identified multiple labour-related risks, and is continuously updated. Audits by DHP, as well as inspections by the Labour Inspectorate, have contributed to better understanding of labour management and OHS issues and to implementing corrective actions over time. The effectiveness of measures for OHS is reported on through project monthly reports, and monitoring of indicators such as lost-time injury frequency. The contractors report to DHP on a range of labour-related indicators.

The assessment of labour requirements for Banjë operations was not very formalized, because the project is being handed over to another business area of Statkraft, not to an external party. There is an organization chart, a description of positions, an overview of required licenses, and a training programme; and a permanent HSE official is included in the personnel plan.

Criteria met: Yes

Analysis against proven best practice

Scoring statement: *In addition, the assessment takes broad considerations into account, and both risks and opportunities.*

Both the generic work hazard identification register and the overall risk register have taken a comprehensive and detailed view of labour risks. Audits by Statkraft's Corporate Audit and HSE groups have also supported DHP's own assessment efforts, and identified opportunities for improvement. Statkraft has benefitted from systematic evaluations of lessons learnt in a series of recent international projects.

Criteria met: Yes

12.2.2 Management

Analysis against basic good practice

Scoring statement: *Human resource and labour management policies, plans and processes are in place that address all labour management planning components, including those of contractors, subcontractors, and intermediaries, with no significant gaps.*

Statkraft and DHP have comprehensive human resource and labour management policies, plans and processes. Key documents are Statkraft's 'Corporate responsibility and HSE Policy', 'Code of Conduct' and 'Supplier Code of Conduct', and DHP's 'Human Resources Policy'. These are supplemented by a range of instructions for processes like recruitment or termination, the HSE program, risk assessments, substance misuse at work, notification and investigation of incidents and specific instructions for hazardous activities such as working at heights and working near or over water, and templates such as for employment contracts.

DHP aims to be one of the most attractive employers in the market. Employment terms are individually negotiated, as employees are not represented by a union and there is no collective bargaining. There is a transparent bonus system for up to 20% of regular annual salary, which depends both on individual behaviour and performance and company performance, measured by a range of company targets (for example, no fatalities and the achievement of milestones). DHP was reportedly the first company in Albania to offer health, life and disability insurance, 100% paid by the employer, to all staff and dependents. Salaries and benefits are determined by usual considerations of levels of responsibility and whether the recruitment is handled locally or internationally. DHP does not tolerate discrimination, and promotion opportunities are equally open to all employees.

The assessors were only able to look at labour management practices at one of the contractors, LAJV. Again, most LAJV workers are not unionized and there is no collective bargaining. Albanian workers are employed temporarily, while many of the Turkish engineers and other skilled workers are permanent employees. LAJV provides health insurance, paid annual and sick leave, transport for home visits, and support in case of accidents. The conditions at the LAJV camps in Banjë and Moglicë are considered good by DHP. All employees at Moglicë, including those of DHP and of other contractors and sub-contractors, have access to the same canteen and health clinic, and if their employer does not choose other accommodation, the same camp.

The LAJV health clinic in the Moglicë camp is well equipped and provides essential services, as the nearest larger hospital in Korçë is 1 hour away by car. It employs a doctor, two nurses, and two ambulance drivers. A satellite first aid station is also due to be installed at the dam work site.

The clinic recorded 2 300 visits in 2015 and 2 464 visits in 2016, among these are the entrance medicals as well as follow-up medicals every 6 months for all workers. More than 10 workers have been found unfit and had to be sent back, and about 20 were sent to hospital. The clinic handled two work accidents in 2015, and 4 in 2016. No major outbreaks of contagious diseases have been noted. Files are kept for all workers. The medical staff also checks sanitary conditions in kitchen, dormitories, as well as on work sites and in tunnels.

DHP and its contractors have a broad array of OHS provisions:

- Contractors are required to develop method statements and risk assessments for hazardous works (for example, a lifting plan is required for complex lifting jobs or above 5 tonnes);
- DHP holds an internal safety meeting every day and bi-weekly safety meetings with contractors; HSE is also the first agenda item for most regular meetings with contractors;
- The HSE manager in LAJV is at same level as the general manager, so his decisions cannot be over-ruled;
- 'Toolbox' safety talks are given daily before shifts; to make them more effective, recently it was agreed that they have to be specific and on different subjects each day, and that they should be given by line managers; each LAJV manager has agreed targets for numbers of talks;
- Management safety walk-throughs by DHP and LAJV are used to highlight the importance of the issue;
- The clinic doctor's reports are analysed by DHP for trends, for example, to detect any increase in first aid cases;
- The number of DHP and LAJV HSE staff was increased by a factor of approximately 3 from Banjë to Moglicë (most of which are local and had little initial qualification before training);
- Workers are encouraged to report 'Unwanted Occurrences', and can win cash prizes (unless they prefer to remain anonymous); there is a KPI of having each worker come forward on average with two observations or improvement proposals per year;
- When new companies come on site, there is at least an HSE induction or, if there are doubts about their HSE practices, close supervision initially until there is confidence that they adhere to regulations;
- The wearing of Personal Protective Equipment (PPE) is enforced, and agreements have been reached with workers on 'PPE-free zones' during breaks;
- Alcohol and drugs abuse is identified during medicals or when issues arise and breathalyser tests are performed, and failed breathalyser tests are grounds for dismissal;
- There is also zero tolerance for speeding and texting while driving; yellow and red cards are used for safety infractions, and 12 workers have been dismissed;
- Missing a toolbox talk or any other safety infraction or unsafe situation can be a reason for stopping work; ordered either by DHP HSE inspectors or by LAJV's own safety team;
- Accidents and near-misses are tracked by LAJV and DHP (however, near-misses are not captured in KPIs);
- Some unexpected HSE issues have been identified and additional health and safety precautions taken, for example, regarding naturally occurring asbestos in tunnels.

There are also a number of emergency response and evacuation plans, which focus on DHP's own personnel but also include the contractors' workforces and the general public.

Criteria met: Yes

Analysis against proven best practice

Scoring statement: *In addition, processes are in place to anticipate and respond to emerging risks and opportunities.*

DHP's recruitment process is competitive, as Statkraft has a good reputation. Employees see a number of advantages, such as a strong focus on HSE, usually no overtime or work during weekends and holidays, team-building exercises and training courses (including opportunities to visit Statkraft headquarters and other Statkraft projects), contribution to the costs of commuting and local rent for staff based in project area, support for gender equality (with several female managers), and good staff information through meetings, newsletters, and the intranet. DHP, as a project-based organization, has not made commitments to long-term employment and is transparent with employees about upcoming changes.

DHP made a commitment in the Environmental and Social Management Plan (ESMP) to contribute to local employment. That commitment was translated into requirements at the contractor level. For example, the contract with LAJV states that there shall be preferential hiring of locals provided adequate qualifications, that information on employable local people and on skills requirements shall be exchanged, that LAJV shall provide information and skills training to local people, and that LAJV shall report monthly on the origin of their workers. While the assessors did not have an opportunity to discuss LAJV's practices in this regard, and some local officials have expressed doubts about preferential hiring and training programmes, a high percentage of Albanian workers do originate from the local area, as described under Outcomes.

Two Level 3 investigations (full root cause) have been performed after incidents by the Statkraft International Hydropower HSE team; as a consequence, a stronger role was defined for SWECO and Multiconsult in supervision of underground and road works, and changes made to practices (for example, tunnel entrances are now cleared in bad weather to avoid possible exposure to rockfalls).

DHP considers the main HSE challenges to be a lack of a safety culture and safety experience among managers and workers, as well as a 'blame culture', where workers rather than supervisors are held responsible for problems. The culture is changing only slowly, but there is an increasing amount of useful safety suggestions, which are also made by contractor and sub-contractor workers.

DHP's team of HSE inspectors check whether workers are registered, have been trained, and hold the required certificates (for example, driver's licenses), sometimes through random interviews with workers. DHP has contractual access to employment data for all contractors and subcontractors, and can easily find out, for example, whether salaries, overtime, and insurance contributions are paid or not. The team was originally more oriented towards inspections, and is now moving more towards auditing and training, to identify and correct the root causes of problems. DHP is careful not to assume liability, but to make suggestions, unless there are unsafe situations and contractual infractions. Workshops have been organised to involve management in HSE issues. Instead of 'bombarding' contractors with multiple observations and non-conformities, DHP now analyses patterns and defines prioritised tasks for contractors to attend to. The success of such cooperative approaches depends on personalities and corporate cultures; thus, Statkraft and DHP refer to a potential lesson that during procurement, instead of focusing on the bidder's past HSE performance it is more relevant to focus on the capabilities of the proposed HSE personnel. These are examples for opportunities to improve HSE management under difficult conditions.

Criteria met: Yes

12.2.3 Stakeholder Engagement

Analysis against basic good practice

Scoring statement: *Ongoing processes are in place for employees and contractors to raise human resources and labour management issues and get feedback.*

DHP tries to maintain an open management culture, for example, through dialogue with line managers over targets, performance and bonuses. Reportedly, it is easy to raise grievances internally, including if necessary, anonymously. DHP is also in the process of creating a Safety and Health Committee, as foreseen under Albanian law for any company above 50 employees, with elected representative of employees.

Within the LAJV, there was a Safety and Health Committee at the Banjë worksite, and this has been re-established at the Moglicë worksite. Normally senior employees are elected as workers' representatives because they are seen as more effective. In principle, workers are also represented by the 'syndicate', the national trade union organisation, although this appears to be less effective, with many members not paying their dues and limited presence. They can also appeal directly to DHP, although this does not happen frequently (the list of grievances in one of the recent monthly reports, October 2016, contains no worker's grievances), or to the Labour Inspectorate (see below under Conformance/Compliance). According to LAJV's HSE manager, typical grievances are related to the air quality in tunnels or late payments.

If a complaint reaches DHP, it is categorized into low or high risk. If the risk is high, Statkraft's HSE unit is involved; otherwise, the project director's approval is obtained for an audit. The DHP audit team, generally composed of HR and legal team members, can review random contracts, payroll and other documents and interview managers and workers. If the complaint is confirmed, a clarification meeting with the contractor is sought; complainants are protected from repercussions.

Criteria met: Yes

Analysis against proven best practice

Scoring statement: *In addition, feedback on how issues raised have been taken into consideration has been thorough and timely.*

Issues can be raised through various channels, as described above, but their resolution has not always been thorough and timely. Several local officials and workers reported that employment contracts remain unsigned and that payments for some workers – particularly those of subcontractors – are delayed, sometimes for months, or that overtime was not getting paid (see also topic I-9 Project-Affected Communities and Livelihoods). There have been several instances when disagreement between LAJV and workers or contractors has led to open conflict. The longest strike, over six days in 2014 in Banjë, was resolved by mediation and with some support from the syndicate. A four-hour strike in Moglicë was related to long work hours and time between leave. There has also been a contractor work protest related to long working hours. DHP has worked with LAJV to resolve disagreements over night shifts. The compromise found was that only the tunnel boring machine would be operated in three shifts, while other LAJV work would continue to be in two shifts. The fact that communication between LAJV and workers, and LAJV and contractors, has not been thorough and timely enough to prevent work conflicts, and resolve them without intervention by third parties, is a **significant gap** against proven best practices.

Criteria met: No

12.2.4 Conformance / Compliance

Analysis against basic good practice

Scoring statement: *Processes and objectives relating to human resource and labour management have been and are on track to be met with no major non-compliances or non-conformances, and any labour-related commitments have been or are on track to be met.*

There is relatively strong enforcement of compliance with Albanian worker protection regulations. The key compliance institution is the Labour Inspectorate. The responsible branches are in Elbasan, whose responsibilities include the Banjë area, and Korçë, whose responsibilities include the Moglicë area.

From the point of view of the Labour Inspectorate, most foreign employers present fewer issues than local employers, and DHP has shown responsible labour relations and does not require close supervision. DHP has been fined once by the Inspectorate for non-compliance against three labour regulations (reportedly, the working booklet for each employee was incorrect, required health inspections were carried out at a private hospital, and leave was granted for less than 5 days). However, this is not considered a gap, because these are minor non-compliances and DHP is appealing the fine. Otherwise, DHP is increasingly seen as a partner in improving worker protection in Devoll HPP.

Reportedly, LAJV is complying with Albanian labour laws, for example by reporting all workers and paying overtime. LAJV also have a dispensation from labour authorities for working longer hours, as required by the Labour Code. The Labour Inspectorate exercises supervision over LAJV and other contractors through audits, inspections, controls, work stoppages, fines and corrective action requests. Fines for breaches of regulations can be up to 50 times the monthly base salary. The focus of inspections (sometimes unannounced) is: to check that each worker is registered with authorities; holding a contract with prescribed minimum content; that salaries, overtime and employer contributions to health and social insurance (11.7%) are paid; and the availability of PPE, toilets, potable water, and places to eat.

A recent inspection of the Moglicë worksite was performed after the Inspectorate received complaints from LAJV workers. A team from the Inspectorate spent three days on the worksite for field observations, including during the night shift, and stopped buses to conduct interviews. Complaints were related to the cold and remote area, daily and weekly working hours, safety, and food. At the end a meeting was conducted with LAJV managers, who agreed to increase the weekly rest time.

The Inspectorate considers the numbers of accidents in the Devoll HPP as low, compared to other projects. Also compared to Statkraft's own targets, they have largely been met. As of October 2016, there had been 31 recordable incidents over 13.4 million man-hours, for a TRI rate (total recordable injuries) of 2.32 against a target of less than 5. That target was only breached in one month (November 2015), with 8 incidents. The target of zero serious injuries was not met, as 3 fatalities occurred on 29 April 2014 due to a landslide, among skilled specialists during preparatory works to improve Moglicë road access. However, this is not a significant gap against basic good practice, as the accident investigation showed no systemic safety issues.

In the early days of the Banjë project LAJV did not follow reporting protocols regarding incidents, until the Owner's Engineer and DHP found out that injuries were occurring and workers were being treated without reporting cases. Statkraft reacted appropriately, by undertaking an audit and implementing significant changes to project and contract management as a result. Incidents were registered retroactively, and there are no indications that the problem persisted after DHP took over responsibility for HSE.

Criteria met: Yes

Analysis against proven best practice

Scoring statement: *In addition, there are no non-compliances or non-conformances.*

At the beginning of the Banjë project the main contractor did not report accidents as contractually required, risked repeat problems and undermined the purpose of the HSE program. While it was addressed, it is a non-conformance and therefore a **significant gap** against proven best practice.

Although DHP has committed to meet IFC Performance Standards (PS), and the ESM team report on several of the standards, that is not the case for PS 2 (Labour and Working Conditions). Whilst most if not all of the requirements of PS 2 appear to be in place, a lesson may be that there should be more comprehensive reporting against PS 2. This issue is discussed with respect to all Performance Standards under I-3 Environmental and Social Issues Management.

In terms of the conformance of labour authorities with agreements, there have been some delays in obtaining work permits for LAJV workers.

Criteria met: No

12.2.5 Outcomes

Analysis against basic good practice

Scoring statement: *There are no identified inconsistencies of labour management policies, plans and practices with internationally recognised labour rights.*

There are no indications that labour management in the Devoll HPP is inconsistent with the four core international labour rights areas, including freedom of association and the right to collective bargaining, no forced and compulsory labour, no child labour, and no discrimination. Statkraft and DHP are working to comply with all applicable legislations and internationally recognized human rights and labour rights standards, including the ILO Core Conventions, OECD Guidelines for Multinational Enterprises, and the UN Global Compact. Labour rights are particularly emphasised in the Supplier Code of Conduct, which also has to be applied by contractors.

Overall, the labour policies in the Devoll HPP are considered good, as are the labour practices in DHP, but despite intensive efforts to achieve good practices across the project, in cooperation with the Labour Inspectorate, there have been and there remain a number of areas for improvement. The experiences with contractors have been mixed, with some strikes, reporting issues, injuries and even fatalities, although the number of accidents has been relatively low. HR and labour management have improved over time, with better performance at Moglicë than at Banjë. There are also positive examples: the Banjë roads replacement was a challenging project due to the short construction time of 14 months, which required several work fronts in parallel; the project was delivered on time and cost, and without injuries, and received Statkraft's annual HSE award.

DHP's local employment objectives have been met to date. A 2016 report on the Banjë social development programme shows that out of 863 Albanian employees that the major contractors and their subcontractors reported, 43% came from the Gramsh area and another 30% from the regional towns Elbasan and Korcë. The smaller contractors are even more likely to be from the area and to recruit locally.

Criteria met: Yes

Analysis against proven best practice

Scoring statement: *In addition, labour management policies, plans and practices are demonstrated to be consistent with internationally recognised labour rights.*

In general, DHP has the ambition to follow the highest standards, whether they are international standards or the Albanian labour regulations. DHP compared the Albanian Labour Code with Norwegian regulations, and found that Albanian requirements are higher in some areas: the maximum work hours per week are 48 against 60 in Norway, for example.

Criteria met: Yes

12.2.6 Evaluation of Significant Gaps

Analysis of significant gaps against basic good practice

There are no significant gaps against basic good practice.

0 significant gaps

Analysis of significant gaps against proven best practice

Communication between LAJV and workers, and LAJV and contractors, has not been thorough and timely enough to prevent labour conflicts, and resolve them without intervention by third parties.

Non-reporting of accidents by the main contractor at the beginning of the Banjë project.

2 or more significant gaps

12.3 Scoring Summary

More than 1 500 people are currently employed on the Devoll HPP, by DHP and a significant number of contractors and subcontractors. A significant share comes from the local area, thus reinforcing the positive development impact. DHP has good human resources and labour management policies and practices, fully in line with Statkraft's expectations. Albanian labour regulations and Statkraft expectations are consistent with internationally recognised labour rights. Policies and practices among contractors and sub-contractors are improving over time, with training, inspections and audits by DHP, Statkraft and the Labour Inspectorate. There have been some labour conflicts as the main contractor LAJV did not respond thoroughly and timely to labour concerns, particularly over long working hours. In the beginning of the project, LAJV also did not report accidents appropriately. DHP has responded well to these problems. Nevertheless, they are two significant gaps against proven best practice, resulting in a score of 3.

Topic Score: 3

12.4 Relevant Evidence

Interview:	1, 12, 15, 13, 22, 23, 24, 25, 32, 33, 34, 36, 54, 55, 64
Document:	3, 9, 11-21, 23-25, 27, 28, 32, 36, 37, 41, 81, 83-85, 88, 128, 129, 156-167, 186-189, 210, 217, 233, 235-239, 253-260
Photo:	22, 23, 68-94

13 Cultural Heritage (I-13)

This topic addresses cultural heritage, with specific reference to physical cultural resources, associated with the hydropower facility. The intent is that physical cultural resources are identified, their importance is understood, and measures are in place to address those identified to be of high importance.

13.1 Background Information

Applicable project standards relevant to this topic encompass Albanian Laws and Regulations, the Concession Agreement, Statkraft's CSR policies, and IFC Performance Standard 8 Cultural Heritage.

The regulatory agency for cultural-heritage management is the National Council on Archaeology within the Ministry of Culture. It monitors and licenses all work on cultural heritage in the country. The Albanian Rescue Archaeology Service Agency (ASHA) within the same Ministry oversees archaeological rescue activities.

The upper Devoll River Valley in the area of Moglicë HPP, and the Korçë plain are rich in prehistoric sites, with some of the most important sites for the prehistory of Albania, providing a chronological and typological sequence from the early Neolithic up to the late medieval period. However the central and lower Devoll Valley in the area of Banjë HPP is reported to be of low cultural heritage value. In Gramsh there is a city-level museum, preserving cultural heritage artefacts and objects unearthed in this area. Ceramic pieces excavated from the project cultural heritage excavation studies are stored in this museum.

Other sites with local religious and cultural significance include tombs, graveyards, World War II monuments, and road memorials associated with traffic accidents.

This topic does not address intangible cultural heritage issues such as festivals, cultural dress, song and ceremonies, which are discussed in topic I-3 Environmental and Social Issues Management.

13.2 Detailed Topic Evaluation

13.2.1 Assessment

Analysis against basic good practice

Scoring statement: *Cultural heritage issues, with respect to physical cultural resources, that are relevant to project implementation and operation have been identified through an assessment process utilising appropriate expertise; and monitoring is being undertaken during the project implementation stage appropriate to the identified issues.*

Issues of cultural heritage were initially assessed through the Devoll HPP Environmental and Social Impact Assessment (ESIA). The assessment was conducted by a professor of Archaeology and Cultural Heritage Management with the University of Tirana, in accordance with the Albanian legislation. The ESIA identified 39 sites of potentially significant scientific importance in the project area (31 in Banjë and 8 in Moglicë), and concluded that burial mounds of high importance and one landscape (a river terrace near Darzeze Village) with archaeological potential would be inundated by Banjë reservoir. Other important sites include two burial mound sites of moderate to high importance near the Moglicë HPP, and two historic sites of moderate importance (a castle and a church) close to the Moglicë transmission line. The ESIA ranked potential impacts of inundation (without mitigation) on cultural heritage sites of historic and religious significance in operation stage as high.

A second cultural heritage excavation and investigation study of two burial sites in Banjë was conducted by a licensed archaeological consulting company ABKONS in February 2016. A team of over forty national

archaeologists was deployed. In addition, Devoll Hydropower Sh.A (DHP) hired an internationally-renowned archaeologist from the American University of Rome to supervise the study. The process was also monitored by experts sent from the Ministry of Culture, comprising experts from ASHA and the National Archeological Council. The protection and salvage measures applied during these excavations were monitored against the applicable national and international requirements. This second study encompasses two phases, the screening phase to assess the results of the ESIA studies, excluding areas not affected or already assessed in earlier archeological studies; subsequently a more in-depth, excavation-based assessment phase, which investigated seven focus sites with high archeological potential and verified the location of one tumulus site. It concluded that the excavated objects (mainly prehistoric ceramics) help to provide a more complete picture of local territory but required no further study. The National Council on Archaeology later approved the study report and approved inundation by Banjë reservoir. Further, DHP are currently conducting monitoring and additional surveys on other identified sites in Moglicë area, in accordance to Albanian and international standards.

Other sites of local religion and cultural significance were assessed during the preparation of the Devoll HPP Environmental and Social Management Plan (ESMP). These were cultural resources to be inundated, removed or relocated by the project, including tombs, graveyards, World War II monuments, and road memorials from traffic accidents. Mitigation actions were recommended as described under Management below. Monitoring of implementation is carried out as part of the reporting on DHP's Environmental and Social Management (ESM) activities, more fully described under topic I-3 Environmental and Social Issues Management. Activities relevant to cultural heritage are reported on under the work breakdown categories for physical cultural resources. Indicators include numbers of physical cultural resources relocated and compensated.

Criteria met: Yes

Analysis against proven best practice

Scoring statement: *In addition, monitoring of cultural heritage issues during project implementation takes into account inter-relationships amongst issues, and both risks and opportunities that become evident during implementation.*

Supervision of the second cultural heritage excavation and investigation study in Banjë was extensive, using expertise from both domestic and international academic resources. Moreover DHP is committed to regularly hire archaeological support when there is the risk of affecting public cultural resources.

The ESM team is responsible for a wide range of socio-environmental issues, providing a mechanism for addressing inter-relationships relevant for cultural heritage. The ESMP provisions for monitoring of landslide and shoreline erosion, for example, would enable the ESM to identify emerging threats to cultural resources as a result of erosion. However, monitoring has not proactively sought to identify emerging opportunities for cultural heritage, which is further discussed below under Management.

Criteria met: Yes

13.2.2 Management

Analysis against basic good practice

Scoring statement: *Processes are in place to ensure management of identified cultural heritage issues, and to meet commitments, relevant to the project implementation stage; plans are in place for the operation stage for ongoing cultural heritage issues management.*

Mitigation measures originally proposed in the ESIA concerning cultural heritage included: preventative excavation to the two burial mounds of Banjë; intensive surface surveys of the landscape site of Banjë and the two burial sites in Moglicë; avoidance and monitoring for the other 34 remaining sites. The ESMP however made no reference to the ESIA and included no action plans to follow up recommendations for identified

cultural heritage sites. Eventually the preventative excavation study for the two burial mounds and the landscape site of Banjë was coordinated by ESM and it was completed one month before the Banjë reservoir filling. In accordance with ASA approval conditions, project-excavated artefacts (mainly ceramic pieces) were submitted to Gramsh Museum for preservation but without exhibition, partly due to the limited condition of the museum. No measures have been conducted for other archaeological sites.

Under the heading of 'Physical Cultural Resources' of the Infrastructure Development Plan, the ESMP proposed mitigation measures for negative impacts from relocation of affected religious structures, memorials and graves, as follows: identification and assessment of sites; consultation with affected families or responsible institutions; replacement of shrines and other religious structures; support for ceremonies and acceptable arrangements for the relocation of moveable items and re-establishment at new site; support to remove accident memorials; and cooperation with specialized agencies and licenses for exhumations. These procedures are managed by ESM.

The ESMP also required contractors to implement a chance-finds procedure. This requirement is formalized by the clauses related to 'fossils' under the conditions of contract attached to all contracts, which refers to requirements to: stop construction activities in the event of the chance find; report the discovery to DHP; and wait for DHP's further instruction. There was one occasion when, during road construction, an un-marked number of graves were found and works immediately stopped. Otherwise there is little evidence that contractors have adopted chance-finds procedures to fulfill these requirements – please refer to I-8 Procurement and I-18 Waste, Noise and Air Quality for related issues of contractor management.

There is no separate plan in place to manage impacts on physical cultural heritage during the operation phase, but this is not a significant gap against basic good practice, as the project has addressed the main risks (through the second cultural heritage excavation study) and is committed to managing cultural heritage impacts whenever issues arise. In addition, the project will support Gramsh Museum (see below).

Criteria met: Yes

Analysis against proven best practice

Scoring statement: *In addition, processes are in place to anticipate and respond to emerging risks and opportunities.*

The ongoing ESM monitoring scheme and an effective grievance redress mechanism enable the ESM team to anticipate and respond to emerging risks regarding physical cultural resources, especially sites of religious importance and memorials.

The ESMP for the operation stage (ESMP-O) includes commitments to support the Gramsh Museum, including preparation of basic display standards, installation of archaeological findings in the museum including a catalogue, installation and update on hydropower development in the area, and repair and upgrade of the museum display on an annual basis. Also the project Social Development Fund is available for further archaeological activities outside of the project impact area, based on collaboration of local communities and public authorities.

Criteria met: Yes

13.2.3 Stakeholder Support

Analysis against basic good practice

Scoring statement: *There is general support or no major ongoing opposition amongst directly affected stakeholder groups for the cultural heritage assessment, planning or implementation measures.*

Directly affected stakeholder groups for physical cultural heritage and resources include the ASA, the National Archaeological Council, Gramsh Museum, community users or owners of identified cultural resources and heritage sites, and responsible institutions and local government for cultural resources, e.g. Gramsh Municipality and Gramsh Public Health Directorate (for grave relocation). Interviews during this assessment indicate that these stakeholder groups generally support the assessment, planning and management of cultural heritage.

Communities have been able to negotiate and influence the actions taken in relation to the graveyard and memorial sites that were inundated by the reservoir or relocated due to road construction. In Banjë two affected households have opted not to move road memorials while 56 (including 46 from Dushk Village) have settled on a managed relocation accompanied by appropriate ceremonies, supported by the project.

Criteria met: Yes

Analysis against proven best practice

Scoring statement: *In addition, formal agreements with the directly affected stakeholder groups have been reached for cultural heritage management measures.*

ESM signed formal written agreements with each directly-affected owner or responsible institution of physical cultural resources for compensation and relocation measures.

DHP obtained the permit for cultural heritage excavation prior to each study, and was granted with an official letter from the National Council on Archaeology regarding reservoir filling.

Criteria met: Yes

13.2.4 Conformance / Compliance

Analysis against basic good practice

Scoring statement: *Processes and objectives in place to manage cultural heritage issues have been and are on track to be met with no significant non-compliances or non-conformances, and cultural heritage related commitments have been or are on track to be met.*

Applicable laws, regulation and safeguards relevant to cultural heritage include: Law on Cultural Heritage (Law No. 9048 of April 2003); Law no. 9220, dated 15.04.2004; IFC Performance Standard 8: Cultural Heritage. The project has no identified significant non-compliances against any of the above instruments, and no significant non-conformances.

Criteria met: Yes

Analysis against proven best practice

Scoring statement: *In addition, there are no non-compliances or non-conformances.*

There are some measures that were included in the ESIA that have not been taken forward (further study of other heritage sites, and monitoring of identified sites) but DHP is addressing opportunities in other areas (Gramsh Museum) as discussed under Management. There is no evidence of any non-compliances or non-conformances.

Criteria met: Yes

13.2.5 Outcomes

Analysis against basic good practice

Scoring statement: *Negative cultural heritage impacts arising from project implementation are avoided, minimised, mitigated and compensated with no significant gaps.*

Cultural heritage impacts caused by the DHP's implementation have been, and likely to continue to be, avoided, minimised, mitigated or compensated with no gaps. Seven key archaeological sites were excavated and documented before Banjë reservoir filling. DHP paid compensation for grave/memorial owners to conduct ceremonies during tomb removal, and there have been no further impacts arising from implementation that require compensation. Interview evidence, including with affected communities, confirms stakeholder satisfaction with the management of cultural heritage issues.

Criteria met: Yes

Analysis against proven best practice

Scoring statement: *In addition, negative cultural heritage impacts arising from project implementation are avoided, minimised, mitigated and compensated with no identified gaps; and contributions to addressing cultural heritage issues beyond those impacts caused by the project are achieved or are on track to be achieved.*

As noted above, cultural heritage impacts have been, and likely to continue to be, avoided, minimised, mitigated or compensated with no gaps.

With the implementation of the ESMP-O and the Social Development Plan, contributions to addressing cultural heritage issues beyond project impacts are on track to be achieved.

Criteria met: Yes

13.2.6 Evaluation of Significant Gaps

Analysis of significant gaps against basic good practice

There are no significant gaps against basic good practice.

Number of significant gaps

Analysis of significant gaps against proven best practice

There are no significant gaps against proven best practice.

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0 significant gaps

13.3 Scoring Summary

Albanian archaeological expertise performed the assessment of cultural heritage, as presented in the ESIA. Thirty-nine sites of potential archaeological importance were identified, three of which are located in the inundated area of Banjë reservoir. DHP commissioned a licensed archaeological consulting company AEKON to conduct a second study for excavation and documentation of the two sites of high importance. The process was supervised and monitored by domestic and international expertise. The objects excavated were found to be of interest in completing history of the local territory but with no significance requiring further study. Other physical cultural resources such as graves, war monuments and memorials are managed by the ESM team according to the project Infrastructure Replacement Plan defined in the 2013 ESMP. Contractors are required to manage chance finds.

Cultural heritage impacts have been, and likely to continue to be, avoided, minimised, mitigated or compensated. Contributions to addressing cultural heritage issues beyond project impacts are on track to be achieved There are no significant gaps against proven best practice scored under this topic, resulting in a score of 5.

Topic Score: 5

13.4 Relevant Evidence

Interview:	3, 14, 18, 19, 20, 61
Document:	46, 49, 51-53, 130-132, 174, 176, 182, 213
Photo:	95-100

14 Public Health (I-14)

This topic addresses public health issues associated with the hydropower project. The intent is that the project does not create or exacerbate any public health issues, that improvements in public health are achieved through the project in project-affected areas where there are significant pre-existing public health issues, and that commitments made by the project to implement public health measures are fulfilled.

14.1 Background Information

Prior to Devoll HPP, local villagers had limited access to improved potable water, sanitation, waste-disposal facilities and health services. According to the project database of affected communities in Banjë, the average age of local residents was 52 years old in 2013, 56% of which were female and 44% were male, and 92% reported sickness. Common diseases or medical risks in the region include heart disease, hypertension, bone and musculoskeletal diseases, neurologic disorders and pulmonary problems.

Local health services consist of village-level primary health care, i.e. a health service, health sub-centre or health centre; and municipal-level secondary heath care, i.e. hospitals. Village-level health centres provide basic medical services for children, pregnant women and seniors: health checks, treatment of minor injuries and infections, vaccinations and anti-allergic injections. Normally there is only one nurse working at health centres and a doctor who works 2 or 3 times per week. These health centres are old and dilapidated facilities with poor sanitation conditions, with a lack of water supply, heating in winter, or septic tanks. Medical wastes are burnt or buried near the health centres. Equipment and medicines needed are limited.

Local potable water in villages is mainly drawn from springs, without stable supply. Tap water was previously only available in cities such as Gramsh, Maliq and Elbasan.

All health issues relevant to the construction work force are dealt with under topic I-12, Labour and Working Conditions. Many closely related social aspects relevant for the general wellbeing of the project-affected communities are dealt with under the social topics, e.g. I-7 Project Benefits; I-9, Project-Affected Communities and Livelihoods; and I-10, Resettlement.

14.2 Detailed Topic Evaluation

14.2.1 Assessment

Analysis against basic good practice

Scoring statement: *Public health issues relevant to project implementation and operation have been identified through an assessment process utilising appropriate expertise; and monitoring is being undertaken during the project implementation stage appropriate to the identified issues.*

Public health issues were assessed through the Devoll HPP Environmental and Social Impact Assessment (ESIA) by a team of social experts, two international and five national. It included a social baseline and identified potential project-induced health impacts for construction and operation. The social baseline identified the pre-project health status of project-affected households, and their access to, utilisation of and capacity of the existing health-care services. Household baseline information has been continually updated during the implementation of project social programs described below.

The main predicted construction-period impacts were: the inundation of two health centres by Moglicë reservoir, notably Nikollarë and Lumaj health centres; environmental health impacts resulting from noise, dust, vehicle emissions; uncontrolled waste disposal; traffic and construction accidents; risk of accidents and injuries; influx of construction workers which may exacerbate social tension or even crime; risks of sanitation; and

sexually transmitted infections (STIs), including HIV/AIDS. The main predicted operations-period impacts were: health impacts due to the accumulation of pollution in the reservoirs; traffic accidents; and public safety due to reservoir access. The ESIA also perceived project opportunities for public health including: wastewater management in Gramsh and Moglicë, replaced and improved water supply in local affected villages, and improved sanitation service in Gramsh.

Devoll Hydropower Sh.A (DHP) has continued to assess the main issues through the programmes described under Management below. Monitoring of implementation is carried out as part of reporting on DHP's Environmental and Social Management (ESM) activities, more fully described under topic I-3 (Environmental and Social Issues Management): specifically, activities relevant to public health management are reported on under the work breakdown categories for the health plan and influx management plan. Indicators include: access to health care, support for participation in training programs for health centre staff and attendance of these programs, upgrading and improving health facilities required equipment, number of medical equipment packages distributed, number of health facilities assisted, number of project-affected households that have access to health services at resettlement sites, number of crimes reported, and STD rates etc.

Criteria met: Yes

Analysis against proven best practice

Scoring statement: *In addition, monitoring of public health issues during project implementation takes into account inter-relationships amongst issues, and both risks and opportunities for different community groups that become evident during implementation.*

ESM monitoring can identify inter-relationships, as they simultaneously monitor various social impacts on project-affected peoples, including income, accommodation, health, and inter-personal relationships. This will allow their monitoring to evaluate inter-relationships relating to the delivery of the ESMP and communities' health status (e.g. psycho-social impacts from resettlement, health impacts to the resident population from the interaction between the community and the construction workers, and road safety risks for the elderly, children and livestock in relation to much-improved replacement roads). It can also identify emerging risks specific to each group (e.g. road safety risks for schoolchildren in the Banjë south shore area).

Criteria met: Yes

14.2.2 Management

Analysis against basic good practice

Scoring statement: *Processes are in place to ensure management of identified public health issues, and to meet commitments, relevant to the project implementation stage; plans are in place for the operation stage for ongoing public health issues management including hand-over to local authorities as appropriate.*

Public health issues during implementation are managed by the ESM team through the health plan and influx management plan defined in the Environmental and Social Management Plan (ESMP). The health plan contains three main activities: mitigating loss of health facilities in Lumaj and Nikollarë villages through ensuring health care in the resettlement site and/or replacing health centres in the villages on as-needed basis, i.e. in case there are households that remain in the villages after reservoir filling; improving health services in the project area, including promoting health education through campaigns on primary health cares, trainings for health personnel, and providing health equipment; and facilitating and supporting improvement of health facilities, through provision of electricity and water supply. The influx management plan provides activities as follows: awareness campaigns with schools and communities on health; a road and transport safety program; provision of high visibility materials to schoolchildren and community members; speed bumps and traffic controls on newly constructed roads; and awareness campaigns on HIV/STDs. Both plans contain objectives, indicators, and costs for implementation.

ESM has rolled out these activities in close cooperation with local health authorities and government agencies: health campaigns on diabetes, heart diseases, HIV/STDs, and breast cancer; trainings for health personnel; high visibility materials to schoolchildren and community members; and installation of road bumps. In addition, DHP donated an ambulance to Gramsh Hospital to promote local emergency response capacity, provided first-aid kits to Gramsh Hospital and health centres in Sult, Dushk, Zgjupë, Mazrek, and Gjergjovinë Villages, and disseminated health campaign materials (e.g. leaflets, posters, red ribbons, balloons) to local communities in cooperation with Gramsh Public Health Directorate. The on-site clinics, equipped with ambulances, provide first-aid and emergency services to local communities on an as-needed basis. Relocation of the Lumaj and Nikollarë villages is still under discussion. DHP will work with Maliq municipal government to determine how to mitigate/compensate the loss of two village health centres.

Plans concerning impacts on public health related to reservoir water pollution during operation are set out in the ESMP, comprising wastewater management and waste management in local communities to reduce polluted water and waste entering the reservoirs. Plans of public safety for the operation of both Banjë and Moglicë are in a draft stage, and actions include safety awareness campaigns, blockage of areas close to the dams and shorelines, safety signage, fencing and booms for safety, discouragement of swimming, and CPR training.

The Annual Implementation Report (AIP) 2016 of ESM activities provides plans for ongoing public health management including hand-over to local authorities. The potable water system built for villages of Gjegjovin, Cërujë and Drizë has been handed over to local government for operation. At the time of this assessment, the government was in the process of issuing the operational permit for this facility. The wastewater treatment plant (WWTP) and waste disposal site in Gramsh were still under construction and will be handed over to Gramsh government upon the completion of construction.

Criteria met: Yes

Analysis against proven best practice

Scoring statement: *In addition, processes are in place to anticipate and respond to emerging risks and opportunities.*

The ESM monitoring mechanism and the grievance mechanism have been and will continue identifying emerging issues, enabling the project to respond appropriately. For example the new Banjë south shore road presents risks of community safety especially to local children. In response to this, DHP is planning to provide speed bumps on the road and implement traffic safety campaigns in schools and communities in south shore area. The Statkraft Oslo ESG team regularly review project progress, which also provides a mechanism for responding to emerging issues. In addition, DHP systematically assesses and reports on risks for programme activities in annual and quarterly reports and proposes mitigation measures. The latest quarterly report identified delayed handover of Gramsh WWTP and the need for re-design as a risk.

The ESM team identifies opportunities through processes of the ESM annual implementation plan. Each year, a health support programme is developed and implemented based on consultation with local health authorities, including the above-described health campaigns, trainings for health personnel; provision first-aid kits and campaign materials. The programmes have been focused on Banjë affected area and now gradually moved to Moglicë. Emerging opportunities that DHP may be able to consider through these processes are: improvement of local health care facilities in Moglicë project area where local communities have to travel long distance to Gramsh Hospital; awareness campaigns on water-borne diseases in Banjë; sponsorships for local health staff to attend capacity training class (as the current attendance appeared to be low), and/or sponsorships for additional health care personnel in local area.

Criteria met: Yes

14.2.3 Conformance / Compliance

Analysis against basic good practice

Scoring statement: *Processes and objectives in place to manage public health issues have been and are on track to be met with no significant non-compliances or non-conformances, and public health related commitments have been or are on track to be met.*

All public health-related commitments are on track to be met and there are no identified significant non-compliances or non-conformances.

Criteria met: Yes

Analysis against proven best practice

Scoring statement: *In addition, there are no non-compliances or non-conformances.*

Some measures that were included in the ESIA and ESMP have not been taken forward (e.g. provision of equipment, electricity and water supply to health centres). However these concerns project opportunities, as discussed above under Management. There is no evidence of any legal non-compliances.

Criteria met: Yes

14.2.4 Outcomes

Analysis against basic good practice

Scoring statement: *Negative public health impacts arising from project activities are avoided, minimised and mitigated with no significant gaps.*

Negative public health impacts arising from project activities has been successfully avoided, minimised and mitigated with no significant gaps. These health issues have been avoided through a number of preventive measures implemented with project health programmes, for example education campaigns to prevent STDs, installation of road bumps, and provision of high visibility materials to school children and community members.

Criteria met: Yes

Analysis against proven best practice

Scoring statement: *In addition, negative public health impacts arising from project implementation are avoided, minimised, mitigated and compensated with no identified gaps; and enhancements to pre-project public health conditions or contributions to addressing public health issues beyond those impacts caused by the project are achieved or are on track to be achieved.*

Negative public-health impacts will be avoided, minimised or mitigated with no identified gaps. No further compensation is necessary.

The project has addressed certain issues beyond the impacts caused by the project. Enhancements to pre-project public health conditions are being delivered: for example, resulting from improved sanitation around Gramsh, with the clean-up of the dump and the WWTP, and improved access to hospitals via improved road conditions, especially with the Gramsh Hospital ambulance. Contributions to health issues beyond the impacts caused by the project include: health campaigns on diabetes, heart diseases, and breast cancer; trainings for health personnel; first-aid kits to Gramsh Hospital and health centres in Sult, Dushk, Zgjupë, Mazrek, and Gjergjovinë Villages, and health campaign materials for Gramsh Public Health Directorate.

Criteria met: Yes

14.2.5 Evaluation of Significant Gaps

Analysis of significant gaps against basic good practice

There are no significant gaps against basic good practice.

0 significant gaps

Analysis of significant gaps against proven best practice

There are no significant gaps against proven best practice.

0 significant gaps

14.3 Scoring Summary

Public health was assessed through the ESIA. Baseline data was initially established in ESIA and ESMP studies and has been continuously updated. The assessment identified key pre-existing health issues and also the risks associated with project construction. Long-term issues, specific to the operational phase of the project were also assessed. Potential public health issues include inundation of two village health care centres, construction emissions, sanitation and waste disposal, STDs, traffic and reservoir safety, and health issues associated with reservoir pollution. Risks and impacts identified through the ESIA are managed by the ESMP as defined in a health plan and influx management plan, and both contain objectives, indicators, and costs for implementation. Negative health impacts are expected to be avoided, minimised or mitigated with no gaps. The project is contributing to improving the pre-project conditions and is addressing public-health issues beyond the mitigation of its own impacts. There are no significant gaps against proven best practice, resulting in a score of 5.

Topic Score: 5

14.4 Relevant Evidence

Interview:	7, 14, 18, 20, 24, 28, 50, 61
Document:	42-53, 176
Photo:	-

15 Biodiversity and Invasive Species (I-15)

This topic addresses ecosystem values, habitat and specific issues such as threatened species and fish passage in the catchment, reservoir and downstream areas, as well as potential impacts arising from pest and invasive species associated with the project. The intent is that there are healthy, functional and viable aquatic and terrestrial ecosystems in the project-affected area that are sustainable over the long-term; that biodiversity impacts arising from project activities are managed responsibly; that ongoing or emerging biodiversity issues are identified and addressed as required; and that commitments to implement biodiversity and invasive species measures are fulfilled.

15.1 Background Information

Albania has a rich diversity of flora and fauna species with about 3 200 species of vascular plants, 2 350 species of non-vascular plants, and 15 600 species of invertebrates and vertebrates. It has a high diversity of ecosystems and habitats, across three main ecological zones – the coastal plain zone, the hilly transitional sub-mountainous zone, and the mountainous zone – and 13 sub-zones, and Albania's coastal lagoons and lakes are important migration routes for birds. There are a number of autochthonous breeds of cattle, goats, sheep and crop varieties.

In recent years the government of Albania has extended its conservation legislation, seeking to fully implement the EU *acquis* in the field of nature protection by 2020, including the Habitats Directive. Albania's legislative framework addresses the protection of species of conservation interest, protection of wild fauna, invasive species, and protected areas including new Areas of Special Interest. There is a network of 798 protected areas that form part of the European Natura 2000 network and in addition, four Ramsar sites of wetlands of international importance and Important Bird Areas.

Terrestrial habitats in the DHP area have been degraded due to forestry and grazing over decades. The Moglicë area consists of xerothermophilous (tolerant of dry and hot conditions) formations of box (*Buxus sempervirans*) on rocky slopes (which is characteristic of degraded oak woodlands), degraded Macedonian oak (*Quercus trojana*), degraded Illyrian oak-hornbeam forests, sub-mediterranean forest with endemic black pines (widespread, and with little diversity), and arborescent mattoral with juniper (*Juniperus* sp.) (anthropogenic, not of high value). In the Moglicë area, habitats with highest diversity are riverine galleries of white willow (*Salix albanica*) and white poplar (*Populus albanicum*), and rocky slopes with species that grow in rock fissures, where several rare, endemic species are found, in localised areas. The Banjë area also includes riparian galleries of salt cedar (*Tamarix* sp.), mattoral with laurel (*Laurus nobilis*), and muddy river banks, none of which have high biodiversity value.

Two-hundred and eighty-nine species of vertebrates are found in the DHP area, compared to a national total of 499. Twelve of these are categorised in IUCN Red List categories as critical (CR), endangered (EN) or vulnerable (VU) at a global level, and 53 are CR, EN or VU at a national level. Three plant species that are endemic to Albania are found in the area, including an endemic grass, *Festucopsis serpentine.* There are over 60 plant species are of medicinal or aromatic value. Mammals include the brown bear (*Ursus arctos;* not threatened) and wolf (*Canis lupus*; not threatened), and Eurasian otter (*Lutra lutra*) which is in the Red List category NT (near threatened). Threatened bird species include the Egyptian vulture (*Neophron percnopterus* EN) and Dalmatian pelican (*Pelicanus crispus* VU). Little was understood of fish species, prior to the ESIA and baseline studies, but none of the species recorded during the ESIA are rare. European eel (*Anguilla anguilla* CR) has been observed downstream of Banjë dam.

There are no protected areas in the directly-affected areas. Tomorri National Park (4000 ha) lies to the south of Moglicë, on the mountain south of Tomorrice: river, the main tributary above Moglicë. The transboundary Prespa Lake National Park lies to the north-east, outside of the Devoll catchment. Maliqi marshland and nature

reserve, totalling 150 ha, but flooding to an area of 1000-2500 ha in winter, lies to the north of Moglicë. The Dushk Lake, a high altitude lake within Gramsh municipality, is not protected, but includes several species of conservation value (note: it has no inflow from or discharge to the Devoll River or its tributaries). Downstream, the Devoll flows into the Seman river, the estuary of which is the southern part of one of Albania's two strict nature reserves, and Ramsar site, the Karavastra Lagoon. The Thanë reservoir, used for irrigation about 40 km downstream, may be important for migratory birds.

15.2 Detailed Topic Evaluation

15.2.1 Assessment

Analysis against basic good practice

Scoring statement: *Biodiversity issues relevant to project implementation and operation have been identified through an assessment process utilising appropriate expertise; and monitoring is being undertaken during the project implementation stage appropriate to the identified issues.*

Biodiversity issues were assessed through the Devoll HPP Environmental and Social Impact Assessment (ESIA). The assessment of terrestrial habitats and species was based on a review of secondary information and 22 days of field observations in 8 field trips between October 2009 and October 2010, using transects and fixed point observations, and additional otter surveys. The assessment of fish species was based on secondary information and a new survey conducted at 13 locations from the Banjë reservoir site to high in the catchment above Moglicë in August 2009 and May-June 2010. This survey did not sample fish downstream of the proposed Banjë dam, but the ESIA mentions that local people refer to sightings of European eel and trout.

The baseline section of the ESIA main report presents information in four sub-sections:

- Fish and aquatic ecosystems: fish, otter, other vertebrates, river bottom plants and fauna, and Aquatic biodiversity values at direct impact zones;
- Terrestrial Fauna: general status of Albania fauna; Devoll watershed fauna (terrestrial vertebrates, mammals, birds, reptiles and amphibians, insects), Thanë reservoir, Seman Delta and Karavastra Lagoon, and Faunal species and values at direct impact zones;
- Flora – Terrestrial Vegetation: general, status, Devoll catchment vegetation (river-related habitat, terrestrial habitats, wetlands and artificial lakes, anthropogenic habitats), and vegetation and values at direct impact zones; and
- Protected areas.

The ESIA also included mesohabitat observation, i.e. the observation of the physical availability of habitats within the river channel at high and low flows. This concluded there would be high diversity of habitats even at low flows, with water covering the riverbed.

The ESIA concluded that most potential biodiversity impacts would not be significant. Dewatering below Moglicë, and the loss of habitat for the Moglicë reservoir would have medium negative impacts, even with mitigation in the latter case. It also refers to medium impacts due to large daily flow fluctuations in the Kokël reservoir, and some species affected due to the creation of the Kokël reservoir – the Kokël component of the scheme has not proceeded, but it is possible that large fluctuations downstream of Moglicë powerhouse could have similar impacts. The creation of reservoirs was considered a small positive impact for the otter. The ESIA also considered potential impacts of the transmission line, concluding that impacts of construction on the clearing of vegetation would be high, even following mitigation, and that interference with birds was of medium significance. The assessment does not mention invasive species, except briefly in relation to the presence of some introduced fish species and the risk of introducing invasive species along the transmission

lines. The assessment concluded that biodiversity in the Seman delta and Thanë reservoir would not be affected.

DHP has carried out sampling of aquatic ecology during the implementation stage. Initial proposals for aquatic ecology monitoring, including phytoplankton, zooplankton, macrophytes and fish fauna, were set out in the Environmental and Social Management Plan (ESMP) of October 2013, with the aim of establishing trends in species composition, including the presence of invasive species, through construction and operation. On a monthly basis over June-August in 2015, DHP sampled phytoplankton, zooplankton and benthic fauna in five or six locations (downstream of Banjë dam, Banjë mid-reservoir – 2 locations for plankton here, Banjë reservoir tail, downstream of Moglicë dam, and mid-Moglicë reservoir). The samples are yet to be analysed. They are stored in the DHP laboratory, and will be assessed when DHP has found a specialised biological laboratory.

DHP has sampled fish fauna with gill and cast nets in seven river reaches (downstream of Banjë dam, the Holt and Tomorricë tributaries to the Banjë reservoir, the tail of the Banjë reservoir, the Kokël reach, downstream of Moglicë dam to upstream, and a further tributary that will be within the Moglicë reservoir), and with nets installed overnight, at six sampling spots (downstream of each dam, downstream of the Moglicë powerhouse, mid-point of each reservoir, and the tail of Banjë reservoir). The sampling has found a total of 12 species, 4 of which were not identified in the ESIA. The European Eel has been found in fish catch monitoring downstream of Banjë only. The ESIA found a further two species which have not been found through the sampling.

DHP has not carried out monitoring of terrestrial fauna and flora during the implementation stage to date. Terrestrial fauna and flora observation was originally proposed in the Environmental and Social Management Plan (ESMP), i.e. annual investigations and observations, with seasonal field visits, by environmental authorities and experts. The timescale for the observations was not made clear. Terrestrial biodiversity was not mentioned in any of the annual implementation plans (AIPs) from 2013 to 2015.

However, DHP plans a study to update and verify the status of both aquatic and terrestrial biodiversity, with support from the external ESIA consultant. The update / verification is important: the ESIA doesn't clearly identify biodiversity except in the terrestrial vegetation section (for example in terms of impacts on IUCN Red-Listed species), and how impacts are concluded as small is not transparent, and it didn't include an assessment downstream of Moglicë powerhouse. (This information may be available in the Appendices, but DHP has not made the appendices available to this assessment). DHP intended to undertake the studies for Banjë prior to impoundment in the second quarter of 2016, and the update was included as a key performance indicator in the AIP 2016. To date, no update has been carried out. DHP has prepared Terms of Reference for analysis of the aquatic samples collected, including quantitative analysis, comparison with the ESIA, and the development of an ecological quality index, and a similar Terms of Reference on Terrestrial Biodiversity concerning the verification of the ESIA and design of terrestrial monitoring. Procurement has been delayed, due to the availability of qualified expertise. This is not considered significant as aquatic biodiversity samples have been taken, i.e. it is not too late to do the analysis, and the terrestrial biodiversity of the Banjë area is limited. The terrestrial biodiversity assessment for Moglicë, where the presence of endangered species is more likely, will not be delayed beyond impoundment.

Criteria met: Yes

Analysis against proven best practice

Scoring statement: *In addition, monitoring of biodiversity issues during project implementation takes into account inter-relationships amongst issues, and both risks and opportunities that become evident during implementation.*

The above-mentioned studies, to update and verify the status of aquatic and terrestrial biodiversity, will begin ongoing biannual assessments, set out in both the AIP 2016 and the draft Environmental and Social Management Plan for the operation stage (ESMP-O) (intended to be 2016 for Banjë, 2017 Moglicë, 2018 Banjë,

2019 Moglicë). The monitoring is intended to identify any unforeseen additional biodiversity loss, which may require additional offset programmes, as a requirement against IFC Performance Standards. The terrestrial assessments will consist of biannual rapid field studies, biannual in order to focus limited resources more effectively than on more frequent annual surveys. It will be based on seasonal field visits by authorities as experts, as originally proposed in the ESMP, to determine trends, project impacts, and mitigation actions. DHP would like to contract a university for this work, in order to build local capacity.

As discussed above, the biannual surveys have been subject to delay. Specifically, the surveys do not focus on specific risks for biodiversity, but refer simply to tracing the development of biodiversity, and verification of the ESIA. The surveys, and monitoring up to now, could have focused on specific risks: downstream impacts on the European eel, risks for red-listed species and the near threatened otter species, risks for specific sites of endemic flora. Inter-relationships between issues might include: monitoring of biodiversity impacts during filling, with measures to translocate stranded fish; monitoring in the Moglicë reservoir area to capture stranded wildlife; inventorising species during clearance for Moglicë; and monitoring of the colonisation of re-afforested areas. However, aquatic biodiversity monitoring, combined with ESM team QPR and AIP preparation, and water quality and sedimentation data should allow links between flows, water quality, sedimentation and biodiversity to be monitored.

A specific inter-linkage is the risk of introducing invasive species through the forestry programme. Black locust (*Robinia pseudoaccacia*) is recognised internationally as an invasive species, and is used in the forestry programme. Invasive species were not considered in the ESIA, and the forestry programme was then only a proposed mitigation measure. DHP ruled out certain invasive species from the forestry programme, but DHP, and its governmental partners that were consulted, did not rule out black locust. The species is widely used in tree planting programmes in Albania, and is considered to be naturalised, but it is identified as an invasive (it is identified as a risk in a recent World Bank-financed forestry programme, for example).

The absence of clear plans for the monitoring of biodiversity risks, and inter-linkages with project operations and impacts, is a **significant gap** against proven best practice.

DHP does not have a process for the identification of opportunities to have a positive biodiversity impact. These might include support to protected areas in the catchment, managing reforestation proactively for biodiversity benefits, or research partnerships. The absence of a process to identify opportunities for biodiversity is a **significant gap** against proven best practice.

Criteria met: No

15.2.2 Management

Analysis against basic good practice

Scoring statement: *Processes are in place to ensure management of identified biodiversity issues, and to meet commitments, relevant to the project implementation stage; and plans are in place for the operation stage for ongoing biodiversity issues management.*

DHP is implementing a reforestation programme, to re-establish an area of forest in the Devoll catchment equal to the forest removed from the reservoir areas. The programme is designed for catchment management and benefits for local communities, and may have some biodiversity value by extending forest cover with a similar range of species as is locally present. There are no other management processes in place for implementation or planned for operation, but this is not significant because significant impacts are not known. No biodiversity-related actions were proposed as priority mitigation actions in the ESMP, except reforestation.

Monitoring of terrestrial biodiversity to verify that impacts are not significant, and further analysis of aquatic monitoring data, will begin soon and continue through implementation and early operation, as described above.

Criteria met: Yes

Analysis against proven best practice

Scoring statement: *In addition, processes are in place to anticipate and respond to emerging risks and opportunities.*

The above-described biannual surveys will provide a process specifically to identify emerging risks for biodiversity. DHP processes for environmental management, as described in topic I-3, may provide a means to respond to emerging risks.

There are no processes to identify and respond to emerging opportunities to have a positive contribution for biodiversity. This is a **significant gap**, but this is addressed under Assessment above.

Criteria met: No

15.2.3 Conformance / Compliance

Analysis against basic good practice

Scoring statement: *Processes and objectives in place to manage biodiversity issues have been and are on track to be met with no significant non-compliances or non-conformances, and biodiversity related commitments have been or are on track to be met.*

Processes for the annual surveys as described above are delayed, but they are likely to proceed in 2017 and beyond. The delay of the first survey beyond impoundment of Banjë is not significant, as there are no habitats of significance in the reservoir area, but delay of the survey beyond impoundment of Moglicë would be significant owing to the higher diversity of habitats. DHP has set 'no high impact on biodiversity in the river and the reservoir surroundings' as a key indicator of success. There is no evidence that DHP has not met this objective to date.

Criteria met: Yes

Analysis against proven best practice

Scoring statement: *In addition, there are no non-compliances or non-conformances.*

The delays in monitoring biodiversity are an ongoing non-compliance. The monitoring of plankton and benthic fauna carried out to-date could not be described as monitoring, rather than sampling, as no analysis has been conducted (but note that fish sampling is presented in QPRs and AIPs). This gap is addressed under Assessment above.

Criteria met: No

15.2.4 Outcomes

Analysis against basic good practice

Scoring statement: *Negative biodiversity impacts arising from project activities are avoided, minimised, mitigated, and compensated with no significant gaps.*

There is no evidence of negative impacts on biodiversity arising from DHP implementation to date. Forest removal in the Banjë reservoir area has been compensated with reforestation.

Criteria met: Yes

Analysis against proven best practice

Scoring statement: *In addition, negative biodiversity impacts arising from project implementation are avoided, minimised, mitigated and compensated with no identified gaps; and enhancements to pre-project biodiversity conditions or contribution to addressing biodiversity issues beyond those impacts caused by the project are achieved or are on track to be achieved.*

There is no evidence of negative biodiversity impacts from implementation.

DHP has no plans to enhance pre-project biodiversity conditions or contribute to addressing biodiversity issues beyond those impacts caused by the project. The absence of a process for the identification of such plans is a **significant gap** addressed under Assessment above.

Criteria met: No

15.2.5 Evaluation of Significant Gaps

Analysis of significant gaps against basic good practice

There are no significant gaps against basic good practice.

0 significant gaps

Analysis of significant gaps against proven best practice

The absence of clear plans for the monitoring of biodiversity risks, and inter-linkages with project operations and impacts.

No processes to identify and respond to emerging opportunities to have a positive contribution for biodiversity.

2 or more significant gaps

15.3 Scoring Summary

Potential biodiversity impacts of Devoll HPP initially assessed through the Environmental and Social Impact Assessment (ESIA), based on secondary information and new surveys for aquatic and terrestrial biodiversity. Most potential biodiversity impacts are not significant, so there are no management plans for biodiversity for implementation or planned for operation, apart from a programme to reforest areas within the catchment, equal to the forest removed from the reservoir areas, which may have benefits by re-establishing forest cover with a similar species assemblage as found in the catchment. There is no evidence of negative impacts on biodiversity arising from DHP implementation to date.

DHP has monitored aquatic ecology (phytoplankton, zooplankton, benthic fauna and fish fauna) during the implementation stage. DHP plans a study to update and verify the status of aquatic biodiversity using this data, and a similar study on terrestrial biodiversity. These studies will verify ESIA findings and establish monitoring practices, which are intended to identify any unforeseen biodiversity impacts. However, the surveys do not focus on specific risks for biodiversity, but refer simply to tracing the development of biodiversity.

There are no processes to identify and respond to emerging opportunities to have a positive contribution for biodiversity, beyond any impacts caused by the project. There are two significant gaps against proven best practice, resulting in a score of 3.

Topic Score: 3

15.4 Relevant Evidence

Interview:	14, 37, 40, 65
Document:	46, 49, 51-53, 96, 133, 175, 176, 200-203 , 240, 241

Photo:	101-106

16 Erosion and Sedimentation (I-16)

This topic addresses the management of erosion and sedimentation issues associated with the project. The intent is that erosion and sedimentation caused by the project is managed responsibly and does not present problems with respect to other social, environmental and economic objectives; that external erosion or sedimentation occurrences which may have impacts on the project are recognised and managed; and that commitments to implement measures to address erosion and sedimentation are fulfilled.

16.1 Background Information

The Devoll valley has very active erosion processes, and its rivers transport very large volumes of sediment. There are two main types of rock in the valley, sedimentary flysch, i.e. shales and sandstone, and the harder magmatic ophiolite. Landslides are common and sometimes large, for example the 1 million m^3 landslide occurring near Moglicë in 1974 (so large, the site has been recognised as a national monument for educational purposes).

Sediment yield rates are amongst the highest in the world. Sediment loads are measured as 405,000 tonnes per year upstream of Moglicë in the Devoll river, 1.45 million tonnes per year by Kökel, and 2.85 million per year at the confluence with the Osum river. Sediment load varies over time considerably, with large increases in load with increased flows. Load is typically 200,000 tonnes per month from December to February, and 50,000 tonnes per month in the summer at Kökel. It is not certain whether the data records are truly representative of the long term sediment yield.

The large volume of sediment results in a braided river morphology along the Devoll and its main tributaries, with large deposits of sand, gravel, fine silt and clay. Apart from the steep, narrow part of the river between Moglicë and Kökel, the river valley is wide, with the river forming numerous braided channels at lower flows.

Soil erosion is widespread, due to forest degradation. Reforestation can slow erosion and improve slope stability in localities.

Following the confluence of the Devoll and Osum rivers, the Seman river flows west to the coast, forming a delta. The Seman has been referred to as the most turbid river in the Mediterranean sea, and is estimated to deposit 16.5 million m^3 of sediment per year into the delta. The delta has continuously changing geomorphology, influencing the Karavasta lagoon, for example with a southward shift of the Seman river mouth in the 1970s. The construction of the coffer dam at Banjë in the 1980s may have influenced the delta.

In many places there is private and commercial extraction of sand and gravel deposits. There is a large-scale gravel mining and a concrete enterprise downstream of Banjë.

Findings are presented below according to the following potential erosion and sedimentation issues: localised erosion from construction sites during implementation; erosion around roads on an ongoing basis; landslides and shoreline erosion around the reservoirs; soil erosion within the catchments; the absence of an adequate baseline understanding of catchment sediment balance; reduced reservoir lifetime due to sedimentation; and altered sedimentation dynamics downstream.

16.2 Detailed Topic Evaluation

16.2.1 Assessment

Analysis against basic good practice

Scoring statement: *Erosion and sedimentation issues relevant to project implementation and operation have been identified through an assessment process utilising appropriate expertise; and monitoring is being undertaken during the project implementation stage appropriate to the identified issues.*

The Devoll HPP Environmental and Social Impact Assessment (ESIA) identified erosion and increased sediment pollution caused by vegetation clearance and construction as a large negative potential impact, and erosion and landslides from transmission line construction as of very high significance. Regarding monitoring, inspection of erosion and sediment controls is included the requirements attached to all construction contracts, and issues would be identified through HSE inspections. Slope stability above the tunnelling site is being monitored.

The environmental assessments of the replacement roads identified the effect of surface water flows from the roads on localised erosion.

Landslides and shoreline erosion around the reservoirs were identified as a large negative potential impact in the ESIA, and shoreline erosion due to fluctuations in reservoir levels is identified as a social risk in the draft Environmental and Social Management Plan for the operation stage (the ESMP-O). A further assessment of the risk of landslides in 32 areas around both Banjë and Moglicë reservoirs was carried out, categorising risks for the dam and other areas into very low, low, medium and high categories. The results indicate that the area around Moglicë reservoir has more potentially unstable areas than the area around Banjë, where the topography is less steep. Devoll Hydropower Sh.A. (DHP) is now monitoring ground movement in the areas of low and medium risk around Banjë, for example in November 2016 following impoundment (there are no areas of high risk), and on an ongoing basis in populated areas. In 2015, Statkraft commissioned an historical InSAR (Synthetic Aperture Radar interferometry, using satellite imagery) analysis, covering 2007 to 2010, to produce surface deformation maps, mapping slower and faster moving masses in the Banjë and Moglicë areas. DHP is also monitoring slope and shoreline stability of the Banjë reservoir by boat, taking pictures, at least quarterly. Similar monitoring is assumed for Moglicë.

Regarding soil erosion within the catchments, the ESIA presented increased erosion due to increased economic activity as a potential induced impact, and proposed afforestation programmes. DHP assessed areas most prone to erosion as part of its preparation of the afforestation programmes.

Basic information on erosion and sediment loads was presented in the baseline of the ESIA, using two series of data on sediment load from 1974 to 1983, and 1965 to 1996, and it identified the need for further studies on downstream erosion and sediment trapping. To address this, DHP has implemented a hydrology, sedimentology and meteorology programme within the Environmental and Social Management Plan (ESMP), which has now been handed over to the Banjë Operations and Maintenance Department. This included the gathering and analysis of data on sediments, in weekly samples from May 2013, analysed for grain size and sediment concentrations. DHP is collaborating with Statkraft's central research and development programme on a project to improve inflow predictions, estimate deposition and the total sediment mass balance, in order to be able to optimize operational routines. As part of this, sediment load is continuously monitored with advanced acoustic monitoring techniques (Acoustic Doppler Current Profiler, ADCP), and with turbidity meters and manual bottle sampling including the major tributaries. A numerical model of sediment balance has been established.

Statkraft and associated researchers have assessed the lifetime of the Banjë and Moglicë reservoirs using this improved data on sediment balance and a preliminary 1-dimensional model incorporating sensitivity analysis.

Reservoir depositions will be monitored by bathymetric surveys of the reservoirs, planned every year for the first years, and then every 5 to 10 years. The researchers can also estimate the sediment load reaching the turbines for future inflow scenarios combined with operations of the plants.

Regarding downstream dynamics, the ESIA identified a potential impact on the Seman delta, sudden fluxes of sediment transport from flushing as a medium negative potential impact, and a potential benefit of reduced sediment load for downstream irrigation systems.

Assessment of erosion and sedimentation has employed a range of highly qualified expertise, including scientists from the Hydraulic Engineering Laboratory of the University of Bologna, the Department of Hydraulic and Environmental Engineering at the Norwegian University of Science and Technology, Trondheim (NTNU) and Statkraft's Principal Engineer for Geology and Geotechnics.

Criteria met: Yes

Analysis against proven best practice

Scoring statement: *In addition, monitoring of erosion and sedimentation issues during project implementation takes into account inter-relationships amongst issues, and both risks and opportunities that become evident during implementation.*

Risks and inter-relationships amongst issues might include: significant erosion events such as landslides during construction; the risk of slope stability and landslides around the reservoirs; seedling survival in the afforestation programmes; faster reservoir sedimentation than expected; sedimentation in the reservoir tails and tributaries with implications for flooding and the backwater effect; and the inter-relationship between altered downstream sediment dynamics and social or biodiversity impacts, especially when combined with altered downstream flows. The monitoring described above takes all of these risks into account, with the exception of sedimentation in the reservoir tails and tributaries, and the inter-relationship between downstream effects and social or biodiversity impacts.

The level of the Banjë reservoir at its tail at Gramsh has been found to be higher than predicted, owing to a 'backwater effect', with implications for the Gramsh wastewater treatment plant (WWTP). In time, with the possible deposition of sediment at this location, the backwater effect may be worsened. There are no plans to monitor this, or the risk that sedimentation in the tails and tributaries of the reservoirs has social or environmental impacts.

There are no plans to monitor sedimentation dynamics downstream of Banjë dam, either the effect of operations immediately downstream, or the long term influence on the Seman delta. DHP could prevent 7.2 million m^3 of sediment reaching the delta, which is a significant proportion of the estimated 16.5 million m^3 currently reaching the delta. The minimum flow requirement of 1 m^3/sec downstream of Moglicë may be insufficient to remove landslides and sediment in the Kokël reach. The absence of plans to monitor and respond to risks of reservoir tail sedimentation and downstream impacts is a **significant gap** against proven best practice. Monitoring of erosion and sedimentation risks may also be affected following the cessation of the R&D project, as the DHP owner is unlikely to have the operational resources for a long term programme.

Criteria met: No

16.2.2 Management

Analysis against basic good practice

Scoring statement: *Processes are in place to ensure management of identified erosion and sedimentation issues, and to meet commitments, relevant to the project implementation stage; plans are in place for the operation stage for ongoing erosion and sedimentation issues management.*

The management of erosion from construction sites during implementation is managed through DHP's Health, Safety and Environment (HSE) procedures for subcontractor management and oversight. An erosion and sediment control sub-plan is included in the Environmental Management and Action Plan attached to all contracts. This sets out measures such as identification and avoidance of sensitive areas, management of topsoil stockpiles, re-vegetation of disturbed areas, and collection of wastewater from tunnelling in a sediment basin. Measures are required to withstand a 2-year flood event. The sediment basin at the tunnelling site was observed during this assessment.

Erosion around the replacement roads has been addressed by the inclusion of measures in road design, i.e. bank protection, roadside drainage, and culverts. Observation of the Banjë-Gramsh replacement road during this assessment indicates that great attention has been paid to incorporating these measures into road construction (please refer to Appendix D for photos). Planting of tree seedlings along roads amounts to approximately 12 ha to date.

To address erosion of the Banjë reservoir shoreline, DHP plans to afforest 18.5 ha within the reservoir buffer zone (i.e. 70% of the 3 m wide, 88 km long buffer zone), and where impacts cannot be avoided, instigate land acquisition and compensation. The project's Grievance Redress Mechanism will provide a means of identifying concerns. DHP will use emergency and evacuation plans where there is increased risk of landslides, and has prepared a Community Evacuation and Relocation Plan for one area inhabited by 150 people that is at a medium risk. The plan includes risks, impacts, measures for evacuation and long-term relocation, basic emergency assistance and long-term recovery.

The afforestation programme is a legal requirement to compensate for the removal of forested areas within the reservoirs, but has been designed for erosion control (as well as community benefits). The Banjë programme will conclude in the winter of 2016/17, and has covered 255 ha, planting almost 360 000 tree seedlings over 238 ha, and over 228 000 lavender plants in 17 ha. DHP is now procuring contractors for the clearance and afforestation programme for Moglicë. The Agricultural University of Tirana was used for design, Elbasan Regional Forest Service Directorate was consulted, and two contracting companies used, with final payment withheld unless a survival rate of 85% at 3 years is achieved. The areas are guarded by forest guards from the nearby village(s), who were employed by the contractor but now employed by the municipality for 2 years. The parcels will be handed over to the Elbasan Regional Forest Service Directorate for management. In addition, during operation, DHP will support awareness of erosion control through a 'one seedling per pupil programme' on environmental day annually, with local schools.

As a measure to maintain reservoir storage volume, and especially reduce sedimentation around the intake and reduce turbine abrasion, DHP will install 'SediCon' dredges, immediately upstream of the intake. This is a high capacity hydrosuction dredging system, which will transfer sediment by gravity through a 1200 mm diameter pipe that has been installed under Banjë dam, and will be installed under the Moglicë dam. The dredge is the result of sediment research at NTNU since the 1980's and is a proven technology for long-term sediment removal from reservoirs.

Regarding downstream, the ESMP-O refers to the risk of downstream erosion from operations, and proposes soft ramping to reduce the risk, but no soft ramping has been adopted in operations planning. Downstream issues are discussed under topic I-20 Downstream Flow Regimes.

Criteria met: Yes

Analysis against proven best practice

Scoring statement: *In addition, processes are in place to anticipate and respond to emerging risks and opportunities.*

The monitoring procedures described under Assessment and plans described above include processes for responding to emerging risks and opportunities. For example, HSE monitoring during construction, the

Grievance Redress Mechanism (GRM), slope instability monitoring, monitoring of seedling survival, follow-up bathymetric surveys, and soft ramping to reduce erosion risk downstream of Banjë.

However, the absence of plans to monitor and respond to certain risks - risks of reservoir tail sedimentation and downstream impacts including on Seman delta – is a **significant gap** against proven best practice. This is the same gap referred to under Assessment.

The inclusion of Banjë as a case study within Statkraft's R&D project 'future sediment handling strategies' provides a mechanism for identifying opportunities to better understand sedimentation in the catchment. This is a 12.5 million NOK, 4-year project, with a strategic objective of building competence and increasing capacity in solving sediment-related problems in Statkraft, and an objective of developing new technologies and methods for sediment prediction and handling. The project has provided DHP with opportunities to test suspended sediment and bed load monitoring using ADCP, apply advanced catchment and sediments analysis utilizing new remote sensing technologies, and test gravity dredging.

Criteria met: No

16.2.3 Conformance / Compliance

Analysis against basic good practice

Scoring statement: *Processes and objectives in place to manage erosion and sedimentation issues have been and are on track to be met with no significant non-compliances or non-conformances, and erosion and sedimentation related commitments have been or are on track to be met.*

Processes, objectives and commitments have been and are on track to be met with no significant non-compliances or non-conformances.

Criteria met: Yes

Analysis against proven best practice

Scoring statement: *In addition, there are no non-compliances or non-conformances.*

There are no non-compliances and non-conformances.

Criteria met: Yes

16.2.4 Outcomes

Analysis against basic good practice

Scoring statement: *Erosion and sedimentation issues during project implementation are avoided, minimised and mitigated with no significant gaps.*

There have been complaints from local communities concerning damages to land arising from site construction and road construction. These issues have been identified by the DHP's GRM and mitigated with appropriate measures, for example the construction of retaining walls. The question of anticipating and there avoiding these issues is discussed in topic I-3 Environmental and Social Issues Management.

The impact of landslides and slope stability on the project is a significant concern: for example slope instability on the left bank of the Moglicë dam site has led to a current delay in construction, and there has been slope instability around the Banjë site. However, this is inevitable in the context of DHP, and DHP has responded with physical protection at Banjë and monitoring at Moglicë.

Monitoring of ground movement in medium risk areas following impoundment has shown that there is no link between impoundment and the rate of movement, so mitigation measures are not required.

Improved sediment load analysis shows that sediment load is expected to be 7 260 000 tonnes per year at Banjë at first, reducing to 4 863 000 following the impoundment of Moglicë, and it is expected to be 2 397 000 tonnes per year at Moglicë. Banjë reservoir is expected to lose about 3.5 million m^3 of its volume per year due to sediment deposition, when Moglicë reservoir is in operation. But reservoir loss rates are manageable: 1.29% per year of Banjë reservoir, reducing to 0.86% per year after Moglicë is built, and 0.47% per year of Moglicë reservoir.

Criteria met: Yes

Analysis against proven best practice

Scoring statement: *In addition, erosion and sedimentation issues during project implementation are avoided, minimised, mitigated and compensated with no identified gaps; and enhancements to pre-project erosion and sedimentation conditions or contribution to addressing erosion and sedimentation issues beyond those impacts caused by the project are achieved or are on track to be achieved.*

All erosion damages to land have been mitigated during implementation, with no requirement for further compensation.

The afforestation programme and afforestation of the reservoir shorelines will enhance conditions in localities by slowing erosion and improving slope stability in localities, unrelated to the impacts caused by the project. Note that the control of erosion in these areas would be inconsequential for sediment load, due to the large volumes of sediment in the valley.

In addition, DHP is addressing issues of erosion and sedimentation beyond its own impacts by contributing to the development, testing and dissemination of methodologies and technologies in sedimentation monitoring and management, through the research activities and the SediCon dredge described above. The work has involved a Sediment Collaboration Group, a workshop in Tirana on the estimation of sediment-related costs, and a wide range of scientists, including those from the Norwegian University of Science and Technology (NTNU), the Norwegian Institute for Nature Research (NINA), University of Bologna, and Hydro Lab from Nepal.

Criteria met: Yes

16.2.5 Evaluation of Significant Gaps

Analysis of significant gaps against basic good practice

There are no significant gaps against basic good practice.

0 significant gaps

Analysis of significant gaps against proven best practice

The absence of plans to monitor and respond to risks of reservoir tail sedimentation and downstream impacts including on Seman delta.

1 significant gap

16.3 Scoring Summary

DHP has assessed issues of erosion and sedimentation in detail: the ESIA initially identified potential risks of vegetation clearance and construction, landslides and shoreline erosion around the reservoirs, increased erosion in the catchment, and downstream risks; DHP has subsequently assessed the risks of landslides in depth, and implemented a sedimentology monitoring programme. Statkraft has financed state-of-the-art research on sedimentation dynamics, and predicted reservoir lifetimes.

Measures have been put in place for a range of issues: management of erosion from construction sites is managed through HSE procedures; erosion around the replacement roads has been addressed by the road design measures; DHP plans to afforest 18.5 ha within the reservoir buffer zone; DHP will use emergency and evacuation plans where there is an increased risk of landslides; both dams incorporate 'SediCon' dredges to maintain reservoir storage volume, and reduce sedimentation around the intake and reduce turbine abrasion. A afforestation programme re-establishes forest cover in the catchment, covering 255 ha to date in the Banjë catchment. All erosion damages to land have been mitigated during implementation, with no requirement for further compensation.

Afforestation will enhance conditions in localities by slowing erosion and improving slope stability in localities, unrelated to the impacts caused by the project. In addition, Devoll HPP is addressing issues of erosion and sedimentation beyond its own impacts by contributing to research activities and collaboration.

There are no plans to monitor sedimentation dynamics downstream of Banjë dam, and no plans to monitor and respond to certain risks, including reservoir tail sedimentation and downstream impacts. There is one significant gap against proven best practice, resulting in a score of 4.

Topic Score: 4

16.4 Relevant Evidence

Interview:	14, 35, 37, 40, 65
Document:	46, 49, 51-53, 56, 57, 58-65, 76, 96, 134, 168, 169, 176, 183-185, 204, 205, 240, 241
Photo:	107-118

17 Water Quality (I-17)

This topic addresses the management of water quality issues associated with the project. The intent is that water quality in the vicinity of the project is not adversely impacted by project activities; that water quality issues are monitored and addressed as required; and commitments to implement measures to address water quality are fulfilled.

17.1 Background Information

Water quality in the Devoll River has high dissolved carbonates due to its groundwater sources and the prevalence of sediments in the rivers, and the water quickly reverts to this quality following rapid run-off of rainfall. Domestic wastewater is the main source of pollution in the catchment, the future influence of which could be adverse, depending on the attenuation capacity in the reservoirs. Devoll River does not provide water of drinking quality especially in the summer months when coliform bacteria levels are highest. There are elevated levels of dissolved solids and turbidity, and slight exceedance of heavy metals in some locations (possibly linked to an old military storage or coal mines).

A further potential source of pollution is agricultural pollution from the Korçë Plain in the uppermost part of catchment above Moglicë. At the time of the project's preparation, uncontrolled solid waste dumps and uncollected waste were found all over the catchment, and solid waste pollution could be found in the river, most notably from a dump at the riverside in Gramsh.

17.2 Detailed Topic Evaluation

17.2.1 Assessment

Analysis against basic good practice

Scoring statement: *Water quality issues relevant to project implementation and operation have been identified through an assessment process utilising appropriate expertise; and monitoring is being undertaken during the project implementation stage appropriate to the identified issues.*

Water quality issues were initially assessed through the Environmental and Social Impact Assessment (ESIA), which comprehensively surveyed water quality, reporting on water quality parameters, with reference to EU standards, pollution, and water supply and sanitation infrastructure in the area. This included a spatial analysis of sources of domestic wastewater from settlements. This assessment has not been provided with the Appendices to the ESIA that provide this detailed information, but has been provided with summaries in the ESIA Executive Summary and baseline section of the ESIA Main Report. A water resources legal framework was presented as an appendix to the ESIA report.

The ESIA assessed potential impacts during both implementation and operation. Potential impacts were identified as follows: pollution from DHP construction activities (considered to be a large negative impact); reduced capacity of the Kokël reach downstream of Moglicë dam to attenuate pollution (medium negative); reduced capacity to attenuate pollution in other reaches (minimal, though peaking operation may create some recipient problems, and there could be a positive impact from increased flows in the low flow seasons); oxygen depletion in reservoirs due to organic matter accumulation (small negative / minimal); accumulation of solid waste in reservoirs (medium negative); and (a possibly dubious) large positive improved downstream water quality due to sediment trapping in the reservoirs. The ESIA also identified cumulative impacts with increased economic activity, and a potential positive cumulative impact on the Seman river due to higher flows during dry seasons attenuating pollution from the town of Fier. The transmission line ESIA identified contamination of water with fuels, lubricants and chemicals as a potential impact during construction. In addition, replacement

roads ESIA studies mention the risk of affecting groundwater quality, and accidental release of contaminants. The ESIA did not consider impacts of reduced downstream flows during filling or operations on water quality, but this issue is addressed under topic I-20 Downstream Flow Regimes.

Regarding appropriate expertise, the main ESIA used a professor at the Agricultural University of Tirana as its water quality expert, combined with Norconsult consultants for the assessment of pollution sources.

Monitoring is being undertaken during implementation appropriate to the identified issues: the environmental and social management (ESM) team of Devoll Hydropower Sh.A (DHP) has monitored water quality to establish a baseline; and the main contractor, Limak-AGE Joint Venture (LAVG) conducts water quality monitoring downstream of any outfalls.

The ESM team have monitored water quality in the river at a total of 20 points to establish a pre-impoundment baseline over Q2 2014 to Q1 2016: at Banjë, downstream of the dam site, upstream of the dam site, three at tributaries within the area to be inundated, adjacent to Gramsh; two upstream and one downstream of the Devoll / Tomorrice confluence, Verces tributary, Devoll at the end of the narrow gorge near Bratilë, Grabove tributary and Devoll prior to this tributary; and at Moglicë, downstream at the confluence with Dushari tributary, downstream of the dam site, at the confluence with Malsise, upstream near Lozhan, and at two locations on the Korçë Plain, and finally at Nikolicë at the source of the Devoll. The baseline consists of: monthly physical parameters (water temperature, pH, total organic compounds); monthly, the oxygen regime (biological oxygen demand, chemical oxygen demand, dissolved oxygen, saturation oxygen); major ions (calcium carbonate and electrical conductivity on a monthly basis, and calcium, sodium, potassium, chloride quarterly); nutrients (total nitrogen, total phosphate, ammonium on a monthly basis, and nitrite, nitrate, and orthophosphate quarterly); monthly, bacteria (total coliforms, *E.Coli*); and quarterly, eleven heavy metals including mercury. The team have set up a small laboratory in Gramsh for the analysis and storage of samples.

With the establishment of this baseline, DHP will now continue to monitor water quality through operations at ten points, to assess reservoir water quality development, and identify potential sources of pollution: downstream of Banjë dam; at three points in Banjë reservoir, i.e. upstream of the tailrace inflow, mid-reservoir, and at the reservoir tail; downstream of Gramsh at the inflow to the reservoir; upstream of Gramsh; downstream of the Moglicë dam; at two points in the Moglicë reservoir, i.e. upstream of the tailrace inflow and mid-reservoir; and on the Korçë Plain, downstream of the Korçë wastewater treatment plant. At river locations (including before impoundment at the Moglicë reservoir locations), the full range of parameters described above will be monitored, except heavy metals to avoid unnecessary costs. At reservoir locations, the full range of parameters will be monitored, plus chlorophyll A and except heavy metals, in the euphotic zone, and basic physical parameters only at the bottom of the reservoir.

A brief Water Quality Monitoring Sub-Plan is included in the Environmental Management and Action Plan (EMAP) attached to all sub-contracts. This sets out the requirement that a water monitoring programme is described, specifying possible contamination sources/construction activity impacts and the parameters that are to be monitored, monitoring is to be undertaken monthly or more frequently in the events of incidents, and measures to be implemented in case water quality criteria are exceeded. It requires monitoring locations 50 m upstream and downstream of discharge points, midstream, where practical. The results of water quality monitoring should be reported monthly, including a comparison of monitoring results against acceptance criteria. The need for groundwater monitoring downstream contamination sources should be assessed.

LAJV state that they monitor water quality parameters 50 m upstream and 50 m downstream of all outfalls from their sites. However, the only documentary evidence available during this assessment were reports of analysis of physical and chemical parameters at 2 locations in May 2015, microbes (coliforms, E.coli, faecal Streptococcus) at 5 locations in May 2015, and physical and chemical parameters at 5 locations in November 2016. The Ministry of Health was used in 2015, and the Chemical laboratory of the Albanian Geological Service

in November 2016. Limited management and monitoring of environmental impacts of LAJV construction sites is a significant gap, but is addressed on topic I-18 Waste, Noise and Air Quality.

Criteria met: Yes

Analysis against proven best practice

Scoring statement: *In addition, monitoring of water quality issues during project implementation takes into account inter-relationships amongst issues, and both risks and opportunities that become evident during implementation.*

'Interrelationships amongst issues' here requires that analysis of monitoring data allows a connection to be drawn between the data, and other types of data collection or information on site activities. Such inter-relationships and risks for water quality have not been monitored during implementation to date.

During operation, continued water quality monitoring, from a range of geographical areas and throughout the year, will enable DHP to build up a picture of the developing water quality of the river and reservoirs, and identify causes. DHP's draft Environmental and Social Management Plan for the operation stage (the ESMP-O) requires 'strong monitoring presence and early identification of potential issues'. It states that the baseline for Moglicë may be extended if major changes are found prior to impoundment, for example following the commissioning of the Maliq landfill, which is located higher in the catchment.

DHP's ongoing environmental and social management programme, as described under I-3 (Environmental and Social Issues Management) has been able to identify opportunities linked to water quality through implementation, and will continue through operation. For example, DHP has provided replacement infrastructure that exceeds the standards previously found in the area (potable water supply schemes, and wastewater treatment plants). In addition, DHP has supported capacity-building at the laboratory of the Agricultural University of Tirana, by contracting the laboratory for analysis of all DHP water quality samples, and agreeing to pay for the services in-kind by the provision of laboratory materials (chemicals) and improved heavy metals testing equipment.

Criteria met: Yes

17.2.2 Management

Analysis against basic good practice

Scoring statement: *Processes are in place to ensure management of identified water quality issues, and to meet commitments, relevant to the project implementation stage; and plans are in place for the operation stage for ongoing water quality issues management.*

Some processes for the management of water quality during implementation are set out in project documentation, and some are put in place, such as a site camp wastewater treatment plant and construction site sediment traps and oil skimmer. A specification for contractor's HSE programme, and an Environmental Management and Action Plan are attached to all sub-contractor's contracts. The former makes no direct reference to water quality, but provides a basic description for the type of management procedures to be used for environmental management. The latter describes a number of sub-plans for construction management that were initially identified in the Environmental and Social Management Plan (ESMP): specific measures of relevance to water quality include notification within 48 hours of the discovery of water quality conditions that could cause harm to humans or the environment, and the construction camp sub-plan requires sanitary facilities comprising a septic tank system with adequate capacity. These plans are copied directly into the LAJV EMP for Moglicë. Limited management and monitoring of environmental impacts of LAJV construction sites is a significant gap, but is addressed on topic I-18 Waste, Noise and Air Quality.

Plans concerning impacts on water quality during operation were initially set out in the ESMP, comprising wastewater management and waste management in local communities to reduce polluted water and waste entering the reservoirs, and minimum downstream flows. Reservoir clearance prior to filling was also included, but not in relation to water quality objectives.

Support to wastewater management, encompassing the construction of a wastewater treatment plant (WWTP) for the town of Gramsh and septic tanks in the village of Pishaj, is a major area of DHP activity. DHP has developed a shared responsibility agreement concerning a WWTP with Gramsh municipality, and commissioning was planned for December 2016. It will collect more than 80% of Gramsh's wastewater and waste from septic tanks in the surrounding area. In the first six months, the plant will be run jointly by DHP and the municipality, whilst three personnel are trained. The municipality will collect tariffs from water users for maintenance.

Regarding solid waste management, DHP cleared the dump site in Gramsh at the reservoir tail, prior to impoundment, and has supported Gramsh municipality in the development of a new dump site, away from the reservoir shore, during 2016. There are no other plans to support improved solid waste and wastewater management, such as the Moglicë wastewater treatment proposed in the ESIA, but the development of new infrastructure in the region will reduce sources of pollution. A modern WWTP with secondary treatment of sludge now collects all stormwater, industrial and domestic wastewater from Korçë, and operates to European standards and permit requirements. Gramsh municipality was fined by the Ministry of Environment in 2014 for an illegal landfill at the entrance to town. A large new sanitary landfill site is under construction near Maliq that will manage solid waste from all of Maliq municipality.

Minimum downstream flow requirements should minimise the impacts of reduced dilution of effluents entering the river, for example through the operation of the ecological turbine(s) at Banjë and (to be confirmed) Moglicë. The ESIA identified flows at Gramsh and Moglicë wastewater discharges that would be necessary to dilute wastewater, and the planned minimum flow from Moglicë dam exceeds the identified flows greatly .

Criteria met: Yes

Analysis against proven best practice

Scoring statement: *In addition, processes are in place to anticipate and respond to emerging risks and opportunities.*

Risks have arisen in relation to solutions for solid waste and wastewater management during implementation, and DHP has responded accordingly: the planned development of an urban waste transfer station for Gramsh has not gone ahead, due to Gramsh municipality retaining the allocated land for another purpose, requiring the project to alter its plans to a new basic dump site; higher levels of Banjë reservoir have required the re-design of the Gramsh WWTP, involving the use of a barrier and an alternative route for the discharge pipe. DHP's five-year agreement with Gramsh municipality includes requirements to monitor WWTP effluent, and to dispose of the dried sludge from the plant to be disposed of outside of the catchment or in legally certified site, avoiding the risk it is dumped into the river.

DHP's Environmental and Social Management Plan for the operation stage (ESMP-O) refers to water quality risks as high likelihood and high exposure, identifying monitoring and the assessment of causes, and cooperation with the authorities on developing solutions, as the necessary response. However, during operation, there will be no monitoring of water quality downstream of Banjë, except at one point immediately below the dam. DHP considers one point to be sufficient for monitoring water quality that is attributable to the project, and no further monitoring is necessary because water quality will be improved anyway, due to the higher flows from generation and the minimum flow. However, this means there will be no monitoring of the expected positive effect, and no monitoring of any unanticipated negative effect. DHP states that it would

share water quality monitoring data should there be documented negative water quality impacts arising. The limited range of monitoring downstream of Banjë dam, Moglicë power house, and Moglicë dam, by DHP or any other agency, particularly in relation to linkages with sources of pollution or impacts on water and irrigation users, to identify emerging risks of cumulative impacts, is a **significant gap** against proven best practice.

The ESMP-O includes a KPI on support to a maximum of 3 small-scale activities per year for the prevention of sources of pollution, such as maintenance of sewage systems, and upgrade of dump sites. DHP is likely to continue to identify and respond to other opportunities such as the potable water supply projects through operation.

Criteria met: Yes

17.2.3 Conformance / Compliance

Analysis against basic good practice

Scoring statement: *Processes and objectives in place to manage water quality issues have been and are on track to be met with no significant non-compliances or non-conformances, and water quality related commitments have been or are on track to be met.*

The apparent absence of water quality monitoring and monthly reporting of water quality parameters to DHP by contractors is a significant non-conformance, but this is addressed on I-18 Waste, Noise and Air Quality. Otherwise, there are no significant non-compliances and non-conformances.

Criteria met: Yes

Analysis against proven best practice

Scoring statement: *In addition, there are no non-compliances or non-conformances.*

There is one minor non-conformances with commitments included in the ESIA, to improve wastewater management in Moglicë village, but this is not considered significant, as DHP argues it will have little impact on water quality in the reservoir compared to Gramsh wastewater in Banjë reservoir.

Criteria met: Yes

17.2.4 Outcomes

Analysis against basic good practice

Scoring statement: *Negative water quality impacts arising from project activities are avoided, minimised and mitigated with no significant gaps.*

There is no evidence of negative water quality impacts during implementation. This is despite weak environmental management on construction sites, and it may be a matter of time until there is a significant incident. This issue is more fully discussed on I-18 Waste, Noise and Air Quality.

It is likely that negative water quality impacts will be avoided during operations. Improved solid waste management in the catchment should reduce the amount of waste entering the river, which the ESIA estimated was at risk of reaching 60 000 tonnes per year. There is no evidence from the water monitoring conducted to-date that wastewater from Gramsh is reducing Banjë reservoir water quality, prior to the functioning of the wastewater treatment plant.

Due to the absence of legally-required standards in Albania, DHP developed benchmarks for water quality derived from EU standards and the baseline data. The baseline is within these standards, at all times, with the exception of a consistent peak in chemical and biological oxygen demand at the monitoring point downstream

of Korçë Plain, and temporarily at the point downstream of Gramsh in early 2016. Nitrates and phosphates peak in October downstream of Korçë Plain, probably due to run-off from decaying agricultural residues.

Criteria met: Yes

Analysis against proven best practice

Scoring statement: *In addition, negative water quality impacts arising from project implementation are avoided, minimised, mitigated and compensated with no identified gaps; and enhancements to pre-project water quality conditions or contribution to addressing water quality issues beyond those impacts caused by the project are achieved or are on track to be achieved.*

There are no impacts arising from implementation that require compensation.

To date, the project has enhanced pre-project water quality conditions by removing the dump at Gramsh, and in future, the Gramsh WWTP, network and septic tanks will prevent domestic wastewater from entering the river and Banjë reservoir. Whilst the WWTP is implemented in order to avoid a cumulative impact of the reservoir and wastewater discharges – a reservoir is less able to dilute and discharge pollution than a flowing river – the plant has goes beyond the capacity and quality that would have been necessary as a simple mitigation measure, it removes the visual impact and odour of sewage disposal in the summer when river flows are lower, and it is linked to an improved sewage network for the town. DHP has supported potable water projects, in the villages of Shushicë (2 wells and pipeline), Drizë / Cërujë (2 new wells and pipeline network), Trashovicë (replacement pipe along bridge), Qafe (old Banjë; new pipeline) and Dushk (tapping spring above village), providing them with improved quality of water supplies compared to the pre-project situation. DHP has also supported the development of a waste management plan for Gramsh, and septic tanks in villages.

Criteria met: Yes

17.2.5 Evaluation of Significant Gaps

Analysis of significant gaps against basic good practice

There are no significant gaps against basic good practice.

0 significant gaps

Analysis of significant gaps against proven best practice

Limited range of monitoring downstream of Banjë dam, Moglicë power house, and Moglicë dam, to identify emerging risks of cumulative impacts.

1 significant gap

17.3 Scoring Summary

Water quality issues were initially assessed through the ESIA, comprehensively surveying water quality, and assessing potential impacts and cumulative impacts during both implementation and operation. DHP has undertaken monitoring a total of 20 points during implementation to establish a baseline, and the civil works contractor conducts water quality monitoring downstream of any outfalls. DHP will now continue to monitor water quality through operations at ten points.

Measures to manage water quality during implementation have been put in place, such as a site camp wastewater treatment plant and construction site sediment traps. DHP has provided significant support to waste and wastewater management in neighbouring communities to prevent their wastes negatively affecting water quality in the Banjë reservoir. DHP has responded to risks arising for these activities during implementation, for example with the re-design of the Gramsh WWTP. There is no evidence of ongoing

negative water quality impacts during implementation, despite weak environmental management on construction sites.

DHP's ongoing environmental and social management programme has been able to identify opportunities to enhance pre-project water quality conditions through implementation, and this will continue through operation. However, during operation, there will be no monitoring of water quality downstream of Banjë except at one point. The limited range of monitoring downstream of Banjë dam, Moglicë power house, and Moglicë dam to identify emerging risks of cumulative impacts is a significant gap against proven best practice, resulting in a score of 4.

Topic Score: 4

17.4 Relevant Evidence

Interview:	14, 16, 27, 37, 60, 65
Document:	46, 49, 51-53, 96, 135-138, 176, 261-266
Photo:	119-130

18 Waste, Noise and Air Quality (I-18)

This topic addresses the management of waste, noise and air quality issues associated with the project. The intent is that noise and air quality in the vicinity of the project are of a high quality and not adversely impacted by project activities, and that project wastes are responsibly managed.

18.1 Background Information

Devoll HPP's implementation involves several construction sites: two large and complex dam sites, the entrance to tunnelling works at the Moglicë site, site camp facilities, batching plant, tunnelling works opening at the Moglicë dam site and at a downstream adit, replacement roads, quarries and borrow pits, and the transmission line. It produces a wide range and a large volume of solid waste, hazardous wastes and spoil, and numerous sources of noise and air pollutants from tunnelling, blasting and crushing, and vehicles. The nearest landfill site that conforms to modern standards is at Elbasan, and services for the management of hazardous waste are new and/or rare in Albania. The management of waste, noise and air quality generally falls within the remit of health, safety and environment (HSE) within Statkraft and Devoll Hydropower Sh.A.

This topic concerns the management of project wastes, noise and air pollutants. The findings here also encompass contractor's management of wastewater, but wider issues of water quality in the river and reservoirs is addressed in I-17 Water Quality. The issue of the accumulation of waste from other sources in the reservoirs is addressed under topics I-17 Water Quality and I-19 Reservoir Preparation and Filling.

18.2 Detailed Topic Evaluation

18.2.1 Assessment

Analysis against basic good practice

Scoring statement: *Waste, noise and air quality issues relevant to project implementation and operation have been identified through an assessment process utilising appropriate expertise; and monitoring is being undertaken during the project implementation stage appropriate to the identified issues.*

In very general terms, the Devoll HPP Environmental and Social Impact Assessment (ESIA) identified potential impacts of traffic, stone crushing, and tunnelling during construction on air quality and noise, and a potential impact of soil and water contamination from wastes associated with transmission line construction. Noise and air quality impacts are predicted to be medium-negative during construction, and minimal during operation, and international standards of noise and air quality parameters are referred to. There is some mention of construction solid wastes in the ESIA, but the ESIA mainly refers to waste in relation to domestic solid waste accumulating in the reservoir. The Environmental and Social Management Plan (ESMP) recognises the absence of waste management facilities in both Banjë and Moglicë areas as an environmental issue, with implications for Devoll HPP assets, and includes the management plans described below (see Management).

Although there was no assessment of implementation stage wastes, Devoll Hydropower SH.A (DHP) and the Limak-AGE Joint Venture (LAJV) developed a waste management plan for both Banjë and Moglicë civil works in April 2014, soon after construction began in 2013. This identifies pertinent legislation and types of waste. A more timely assessment could have predicted, at an earlier stage, volumes and types of waste, capacities amongst local contractors for waste management, capacity for waste disposal in Albania, including of specialist hazardous waste disposal services, and strategies to address gaps in capacity. This is not considered a significant gap because the waste management plan was developed early in the construction phase. In addition, there is no assessment of wastes during operations, but this is not considered significant as there is time to assess operation stage wastes and plan accordingly.

Monitoring has included reporting of major environmental incidents as part of monthly reports, dust monitoring at one of the Moglicë quarries and in Moglicë village, and monitoring of contractor's compliance with its commitments. Monthly reports on complaints about dust and noise and monthly reports to DHP are included as requirements in an Environmental Management and Action Plan (EMAP) attached to all contractors' contracts, but there is no evidence they have been carried out (see Management below).

Criteria met: No

Analysis against proven best practice

Scoring statement: *In addition, monitoring of waste, noise and air quality issues during project implementation takes into account inter-relationships amongst issues, and both risks and opportunities that become evident during implementation.*

Not assessed.

18.2.2 Management

Analysis against basic good practice

Scoring statement: *Processes are in place to ensure management of identified waste, noise and air quality issues, and to meet commitments, relevant to the project implementation stage; and plans are in place for the operation stage for ongoing waste management.*

Mitigation of dust, noise and air pollution is referred to as a priority mitigation action in the ESIA, and sub-plans for spoil disposal, emissions and dust control, noise control and waste management are referred to in the ESMP and set out in an Environmental Management and Action Plan (EMAP).

DHP has included requirements for environmental management in contractor's contracts. All contractor's conditions of contract include a requirement to comply with a specification for a contractor's HSE programme, and the EMAP, and take all reasonable steps to protect the environment on and off sites, to limit damage and nuisance to people and property resulting from pollution, noise and other results of its operations, to be responsible for discharge, disposal and safe keeping of all hazardous substances and wastes that may be produced, and to comply with the law. The specification for a contractors HSE programme and the EMAP are attached as administrative requirements to all contracts. Plans and measures included in the EMAP include, for example:

- Location of spoil areas to avoid steep gradients, maximum sizes of spoil areas, and measures to control run-off;
- Chemicals and hazardous materials management, including spill response;
- Minimisation of exposed areas, dust suppression, and vehicle maintenance to reduce emissions;
- Minimisation of noise generation, construction and blasting only between the hours of 06.00 to 18.00, 12 hours notice of blasting to residents, and no blasting within 1 km of village;
- Non-hazardous waste collected, segregated into appropriate waste streams, and disposed of at centralised waste disposal areas;
- Hazardous wastes stored at a single, central hazardous waste storage area;
- Prohibition of the burning of waste; and
- Identification of a suitable hazardous waste treatment facility for the disposal and treatment of hazardous wastes, during the pre-start-up phase.

The civil works contractor, Limak-AGE Joint Venture (LAJV) has adopted the EMAP as their environmental management plan, and with DHP has developed a separate waste management plan. Similar content as the EMAP is set out in controlled documents, i.e. an Environmental Protection Plan (LAJ-HSE.005) and Environmental Management Plan (LAJ-HSE.017).

The DHP HSE manager and a team of 7 HSE inspectors and a Deputy HSE Manager oversee LAJV at Moglicë, conducting daily inspections, toolbox talks, and environmental audits (i.e. four out of eight compliance mini-audits in 2016, in February, April, August and September). Specific measures on the Moglicë site include waste separation, wastewater treatment at the camp facilities, and a sediment pool at the tunnel boring machine site, with oil skimmer. The disposal of specialised waste has been difficult, as there are few service providers in Albania, but LAJV now has arrangements in place and permits for disposal of oils and oil filters, tyres, steel, waste batteries and medical waste. LAJV employs 18 HSE personnel and 118 security guards.

Measures are also taken for infrastructure built under DHP's environmental and social programmes. For example, Albstar, the contractor for the Gramsh WWTP, employs an HSE officer, staff sign procedures for HSE, and they provide mandatory monthly reports to the supervising engineer and municipality.

LAJV performance on waste management is improving, and efforts have been made by Statkraft and DHP to move from an approach of inspections, to an approach where the contractors has improved capacity and better understanding of DHP's requirements, for example with toolbox talks and training workshops. Examples of improvements provided by DHP include increased use of spill kits, bund areas around fuel and chemical tanks, and the cleaning of sediment pools. DHP removed HSE management from the Owner's Engineer's responsibilities during Banjë construction as this approach was seen to be failing. But critical non-conformities remain (as evidenced on the DHP HSE audit register) and observations during this assessment indicate that the management of waste and air quality is below standard: for example with poor housekeeping on site, the failure of the camp WWTP resulting in the direct disposal of sewage into the river (note: this was rectified soon after), and no suppression of dust on roads (during this assessment). There is no evidence that LAJV has followed all of the EMAP requirements, and there can be little confidence that other contractors have done so. Many grievances raised by communities have related to contractors (then DHP requires contractors to engage in the resolution). Performance, measures for the management of waste, noise and air quality during implementation are limited, with probable impacts on the local environment. This is a **significant gap** against basic good practice.

All of the above concerns implementation only. Regarding operation, the ESIA concluded that noise and air quality impacts would be minimal. One HSE officer will be employed at Banjë during operation, DHP project control or HSE procedures developed to-date concerning waste, noise or air quality, include a procedure on noise and vibration (this includes the requirement to procure and maintain equipment in order to minimise noise from the equipment), DHP-HSE-S-18 Ozone Depleting Substances, and a standard operating procedure for the removal of trash from the trash boom, setting out steps for the safe removal of trash and its transfer to Cerrik municipality waste handling company. These are likely to be sufficient for waste, noise or air quality management during the operation stage.

Criteria met: No

Analysis against proven best practice

Scoring statement: *In addition, processes are in place to anticipate and respond to emerging risks and opportunities.*

Not assessed.

18.2.3 Conformance / Compliance

Analysis against basic good practice

Scoring statement: *Processes and objectives relating to waste, noise and air quality have been and are on track to be met with no significant non-compliances or non-conformances, and any related commitments have been or are on track to be met.*

The DHP HSE inspector's environmental audits indicate that LAJV at Moglicë have had numerous non-conformities with their commitments. Many of these have been addressed and completed, but some critical issues remain open. Examples of non-conformities have concerned: insufficient non-hazardous waste storage area; insufficient recycling of tyres, batteries and accumulators; insufficient recycling; no signage of storage areas; hazardous wastes not stored correctly; disposal of oil contaminated materials; secondary containment of oil drums; lack of spill kits; unsafe storage of flammable materials; poor housekeeping standards; persistent observations of oil leaks from machinery; basic excavated holes used as a sediment trap; and signs of pollution from the tunnel boring machine sediment pool. The DHP HSE inspector noted that careful and repeated monitoring and follow-up from DHP is necessary to ensure LAJV close out the environmental issues raised.

DHP has had difficulty getting LAJV to implement satisfactory occupational health and safety management (as described in topic I-12 Labour and Working Conditions) and this may be why less emphasis has been placed, by DHP and LAJV, on the environmental aspects of HSE management. DHP has not imposed any penalties for environmental reasons on LAJV. However, LAJV has been fined by the environmental authorities, on both Banjë and Moglicë. The specification for contractor HSE attached to all contractors requires that they have an environmental management system corresponding to a recognised international standard such as ISO 14001: 2000 or EMAS, but there is no evidence that any of the contractors have attempted this requirement. The HSE department within Statkraft do not report on conformance with IFC Performance Standards concerning pollution prevention. The management of waste, noise and air quality has not been in compliance with contractor's obligations, legal requirements, the Statkraft Way (Statkraft's Corporate Responsibility policy statement) or IFC Performance Standards. This is a **significant gap**, but is the same gap as described under Management above.

It is notable that Statkraft's 'Legal and Compliance Policy' (see I-2 Governance) does not mention compliance with environmental regulations.

Criteria met: No

Analysis against proven best practice

Scoring statement: *In addition, there are no non-compliances or non-conformances.*

Not assessed.

18.2.4 Outcomes

Analysis against basic good practice

Scoring statement: *Negative noise and air quality impacts arising from project activities are avoided, minimised and mitigated with no significant gaps, and project wastes managed responsibly.*

Project wastes have not been managed responsibly for much of the implementation stage, although improvements have been made. Negative impacts on air quality occur from inadequate dust suppression, and communities around Moglicë have complained of dust on roads. Contractor management is a frequent category of grievances raised through the Grievance Redress Mechanism, requiring compensation. The LAJV HSE Manager complains of consistent, continuing minor incidents. The monthly project report for October 2016 describes LAJV's environmental management at Banjë as well below average. It makes no mention of environmental management at Moglicë, because the HSE part of the report is focused on more urgent issues of occupational safety. DHP has not reported any major environmental breaches, but this may be a matter of time. Limited implementation of plans for the management of waste, noise and air quality during implementation, with probable impacts on the local environment, is a **significant gap** against basic good practice, but is the same gap as described above under Management.

Criteria met: No

Analysis against proven best practice

Scoring statement: *In addition, negative noise and air quality impacts arising from project activities are avoided, minimised, mitigated and compensated with no identified gaps; project wastes are managed responsibly; and the project contributes to addressing waste management issues beyond those impacts caused by the project.*

Not assessed.

18.2.5 Evaluation of Significant Gaps

Analysis of significant gaps against basic good practice

Limited implementation of plans for the management of waste, noise and air quality during implementation, with probable impacts on the local environment.

1 significant gap

Analysis of significant gaps against proven best practice

Not assessed.

18.3 Scoring Summary

The ESIA assessed some impacts during construction on air quality and noise, and a potential impact of soil and water contamination from wastes associated with transmission line construction, and the ESMP recognized the absence of waste management facilities. Monitoring has included reporting of major environmental incidents and monitoring of contractor's compliance. There was no assessment of waste, noise and air quality issues for project implementation, but this is not significant as a waste management plan was developed early during construction.

DHP has included requirements for environmental management in contractor's contracts, and all contractor's conditions of contract include a requirement to comply with a specification for a contractor's HSE programme, and an Environmental Management and Action Plan. DHP HSE staff oversee contractors on a day-to-day basis, and the main civil works contractor (LAJV) also has established HSE staff. DHP have developed an additional waste management plan. Measures are also taken for infrastructure built under DHP's environmental and social programmes.

LAJV performance on waste management is improving, and efforts have been made by Statkraft and DHP to move from an approach of inspections to capacity-building. However, critical non-conformities remain and observations during this assessment indicate that the management of waste and air quality is below standard. The management of waste, noise and air quality during construction has not been in compliance with contractor's obligations, legal requirements, the Statkraft Way or IFC Performance Standards.

There is one gap against basic good practice, resulting in a score of 2.

Topic Score: 2

18.4 Relevant Evidence

Interview:	1, 25, 36, 38, 39, 58, 64
Document:	7, 9, 21, 25, 26, 29, 34, 41, 51-53, 74, 78, 87, 98, 99, 100, 139-145, 153, 159, 176, 186-188, 190, 204, 205, 261-273

Photo:	131-144

19 Reservoir Preparation and Filling (I-19)

This topic addresses management of environmental, social and economic issues within the reservoir area during project implementation, and planning for reservoir management for the operating hydropower facility. The intent is that reservoir preparation and filling is well managed, taking into account construction, environmental and social management requirements, and future power generation operation, maintenance and multi-purpose uses where relevant.

19.1 Background Information

Banjë and Moglicë reservoirs will have the following characteristics:

	Banjë	Moglicë
Reservoir area (km^2)	14	11
Storage (million m^3)	391	362
Live storage (million m^3)	178	152
Dead storage (million m^3)	213	210
Average retention time (days)	44	63
Maximum operating level / High water level (metres above sea level)	175	650
Minimum operating level / Low water level (metres above sea level)	160	625

Filling of Banjë reservoir began on 15 April 2016 and was complete by 25 September 2016, with a stoppage of some weeks to ensure stability of slopes and structures. Trial operations were carried out over September-October 2016. Impoundment of Moglicë is planned for May-June 2018.

In both cases, the reservoir area is a wide, highly alluvial riverbed, with braided channels of sediment, surrounded by steeply-rising valleys sides, which are cultivated where topography allows, but otherwise vegetated with scrub and semi-natural forest.

The construction of the 50 m high coffer dam at Banjë in the 1980s, prior to the DHP construction, resulted in the formation and emptying of a limited reservoir each year, with maximum capacity of about 200 million m^3.

A major part of preparation of the reservoir areas for filling is the expropriation of land, and the management of physical and economic displacement of people. These are more fully described in topic I-10 (Resettlement).

19.2 Detailed Topic Evaluation

19.2.1 Assessment

Analysis against basic good practice

Scoring statement: *The important considerations prior to and during reservoir filling and during operations have been identified through an assessment process; and monitoring of implementation activities is being undertaken appropriate to any identified issues.*

Issues of reservoir preparation, filling and operations were initially identified through the Devoll HPP Environmental and Social Impact Assessment (ESIA). This included a social impact assessment and the preparation of a social baseline that identified the villages and numbers of households displaced by the reservoirs. The need for replacement roads was part and parcel of the design of the project. Further potential

social impacts identified were the loss of pathways, bridges and river crossing points, damage to buildings due to increased erosion and landslides, and health impacts due to the accumulation of pollution in the reservoirs. The ESIA included an inventory of infrastructure, a survey of cultural heritage sites in the reservoir areas, and identified a potential issue of greenhouse gas (GHG) emissions from the reservoirs. Resettlement and displacement, and the loss of productive and forest land were considered in the assessment of alternative schemes.

The ESIA assessed and ranked potential biophysical impacts, without mitigation, as follows: visual impact of the reservoirs (small negative impact); reservoir bank erosion and landslides (large negative); inundation of sand and gravel extraction sites (minimal); modification of extreme high and low temperatures (micro-climate; small positive); GHG emissions (small negative); oxygen depletion and release of deoxygenated water downstream (small negative or minimal); solid waste accumulation in reservoirs (medium negative); development of valuable fish populations (medium positive); reservoirs providing improved conditions for otters (small positive); loss of wildlife habitat and migration corridors (overall, small negative impact or minimal).

Devoll Hydropower Sh.A (DHP) estimated the length of time of reservoir filling, for both Banjë and Moglicë in April 2015, identifying the shortest, median, and maximum filling times that would be expected in each month of the year for both reservoirs.

Sedimentation of the reservoirs was mentioned in the ESIA and covered in detail in the technical feasibility studies conducted by Norconsult (2010). Statkraft has recognised the need for improved information on sediment dynamics, and is conducting a research programme, full details of which are set out in topic I-16 (Erosion and Sedimentation).

DHP has continued to assess the main issues through the programmes described under Management below. Monitoring of implementation is carried out as part of the reporting on DHP's Environmental and Social Management (ESM) activities, more fully described under topic I-3 (Environmental and Social Issues Management): specifically, activities relevant to reservoir management are reported on under the work breakdown categories for reservoir management, physical relocation, and replacement roads, for Banjë and Moglicë.

Criteria met: Yes

Analysis against proven best practice

Scoring statement: *In addition, monitoring of reservoir preparation and filling activities takes into account inter-relationships amongst issues, and both risks and opportunities that become evident during implementation.*

DHP has paid close attention to risks for reservoir preparation and filling of the Banjë reservoir, especially the risk to delayed impoundment from delayed relocation or deforestation, and now, the higher than expected water level at the reservoir tail (see below). DHP can be expected to follow a similar approach on Moglicë. DHP systematically assesses and reports on risks for programme activities in annual and quarterly reports and proposes mitigation measures. For example, in the latest quarterly report, risks and challenges related to reservoir preparation were identified as follows: additional relocation may be necessary for the Moglicë south shore replacement road; and delayed handover of Gramsh WWTP and the need for re-design. It reports risks during ongoing reservoir management as: the risk of water quality in the Banjë reservoir ultimately being below required standards with health and tourism implications; people entering the Banjë reservoir to swim and fish; and higher reservoir levels than expected. Monitoring has not explicitly sought to identify emerging opportunities during preparation and filling, but it is difficult to envisage what such opportunities might be. Opportunities for reservoir management are discussed below.

Criteria met: Yes

19.2.2 Management

Analysis against basic good practice

Scoring statement: *Measures are in place to address identified needs during reservoir preparation and filling; and plans are in place to manage the reservoir and any associated issues for the operating hydropower facility.*

Priority mitigation measures originally proposed in the ESIA that concern reservoir preparation, filling, and ongoing management were: clearing of vegetation in the reservoir areas; the excavation and removal of cultural heritage sites; re-establishment of access; waste management in Gramsh; wastewater management in Gramsh and Moglicë; reforestation; erosion control on reservoir banks; catchment protection; recreational infrastructure (boating facilities, fishing ramps); and 'integrated water resources management' and river basin planning. The Devoll HPP Environmental and Social Management Plan (ESMP) included plans for resettlement that are discussed in more detail in I-10 (Resettlement), and measures concerning displacement for the replacement roads were set out in two separate Resettlement Action Plans.

Under the heading of 'Reservoir management, water quality and aquatic ecology', the ESMP proposed: a database on reservoir topography and bathymetry related to sediment assessment; monitoring of water quality and aquatic ecology in the reservoirs; wastewater management to reduce impacts on water quality in the reservoirs; waste clearance prior to filling and waste management to prevent accumulation in the reservoirs; and a forestry programme including reservoir clearance and afforestation (with goals to facilitate increased slope stability, reduce soil erosion around the reservoir, and possibly improve scenic landscapes). The ESMP also referred to: an infrastructure development plan; relocation of graves and memorials (though no mention is made of the two burial mounds and a landscape with archaeological potential, that are mentioned in the ESIA); and a chance finds procedure.

Most of these plans were put in place for Banjë reservoir preparation and filling, with: the resettlement programme; construction of the Banjë-Gramsh and south shore replacement roads; development of a wastewater treatment plant in Gramsh; establishment of a water quality baseline and continuing monitoring (see I-17 Water Quality); deforestation of forested parcels and clearance of a 1 km radius around the intake (1421 ha removed from the forest cadastre for both Banjë and Moglicë, and 500 ha clear-felled); an afforestation programme (255 ha reforested); removal of all graves of Dushk old graveyard, road memorials and WW2 memorials, and construction of WW2 replacement memorials in Drizë; and consultations with local authorities and a reservoir impoundment awareness campaign prior to impoundment (Q4 2015 to Q2 2016).

Filling was conducted slowly, with no more than a 10 cm per day increase in the reservoir level at first, then 20 cm per day between 168 and 171 m ASL, and no more than 50 cm per day thereafter, to avoid affecting slope stability around the reservoir. Plans to construct a waste transfer facility in Gramsh have been amended to support for a replacement dump site (to replace the area used as a open dump in the reservoir area) when it emerged that the local government was unwilling to amend the current use of the site.

DHP is conducting similar water quality monitoring for Moglicë, is now preparing deforestation/afforestation activities, and is planning the Moglicë replacement road and associated resettlement. The latter is delayed but unlikely to ultimately delay reservoir impoundment. The originally-proposed wastewater treatment plant for Moglicë appears to have been dropped.

Key plans for reservoir management during operations are the planned buffer zones around the reservoirs. In emergency preparedness planning, the Banjë reservoir level is permitted to go beyond 175 m above sea level, to a maximum of 176.5 m above sea level during floods, if necessary to avoid allowing the flooding to damage downstream areas. For both Banjë and Moglicë, buffer zones are intended to allow for a backwater effect, wave actions, shoreline erosion and protection against pollution. The buffer will be expropriated only on privately-owned agricultural land, not on government-owned forest land. It will vary according to use and topography: at minimum, a 3 m vertical (maximum 20 m horizontal) zone in privately-owned land, affecting

50% of the Banjë shoreline and 3 km of Moglicë's; an additional 3-5 m vertical where slopes are greater than 20 degrees, or additional 10 m where they are greater than 45 degrees; and an additional 3 m or 4 m where houses are present (3 m when the slope is up to 15 degrees, and 4 m when it is 15-30 degrees.

Other plans for the operation stage for both Banjë and Moglicë are in a draft stage, and include:

- Water quality monitoring (please refer to topic I-17 Water Quality);
- Support to additional wastewater management. This will entail 3 small-scale activities per year such as septic tanks, closing missing sections in sewage networks, and providing expertise;
- Shoreline erosion monitoring and management. Monitoring of slopes and shoreline by boat, afforestation of 18.5 ha along the Banjë shoreline, compensation/livelihood restoration for unforeseen impacts, and a 'one seedling per pupil' programme for afforestation;
- Emergency and evacuation plans where there is increased risk of landslides, and a Community Evacuation and Relocation Plan for one area inhabited by 150 people that is at a medium risk;
- Public safety. This is considered a risk with high likelihood and exposure (difficulty of managing). Actions include safety awareness campaigns, blockage of areas close to the dams and shorelines, safety signage, and discussions with local government and the Ministry of the Interior on their responsibilities (as DHP does not accept responsibility or liability for reservoir safety); extensive signage, fencing and booms for safety, and discouragement of swimming; and CPR training.

Criteria met: Yes

Analysis against proven best practice

Scoring statement: *In addition, processes are in place to anticipate and respond to emerging risks and opportunities.*

Upon filling, the level of the Banjë reservoir was higher at the reservoir tail near Gramsh than predicted – between 0.4 and 0.6 m higher – and a different shoreline developed than had been anticipated. The buffer zone at Gramsh is very narrow, and has left no room for this higher-than-expected level. This has required a further assessment of impacts on land and structures, and re-design of the Gramsh WWTP and its discharge pipe system. In addition, during flood events, there is a risk that water levels reach above the buffer zone in places: the buffer zone at Gramsh does not allow for the emergency level of 176 m ASL. Some buildings within the Banjë buffer zone, even though they are expropriated, have not yet been demolished by governmental authorities.

DHP has effective processes in place to respond to emerging risks for its activities, and considers the impacts arising from the higher water level as manageable. For example, DHP is now assessing impacts of inundation on a tree nursery that is outside of buffer area in response to a grievance raised by the owner and the required compensation. A good example of a response to an emerging risk is the support provided to re-establish access to an area of agricultural land that was lost following impoundment of Banjë, which had not been identified previously through consultations.

DHP has drafted an environmental and social management plan for the operation stage (ESMP-O) which includes an analysis of risk: public safety in the reservoir seen as high likelihood and high exposure (difficulty of managing); shoreline erosion is medium likelihood and exposure; flooding to 178m due to an aggressive operational regime is low likelihood and low exposure (i.e. easily managed). The extension of the reservoir beyond the buffer zone that has been expropriated during flood events is recognised as a risk. Water quality in the reservoir with community health and tourism implications, people entering the buffer area for swimming and fishing, and the survival rate in afforestation (managed by a strict payment regime) are identified in a risk matrix presented in the ESM Quarterly Progress Report for Q3 2016.

However, the risk of a higher reservoir level than expected was not anticipated, throughout the design, ESIA and ongoing implementation of the Banjë project. Despite planned shoreline monitoring, DHP's approach to

impacts arising from flooding or erosion along the shoreline is to provide compensation and livelihood restoration, rather than to take measures to avoid or reduce the impacts arising. This issue of anticipating and thereby avoiding and reducing risks is discussed as an issue of wider environmental and social issues management under topic I-3.

However, there are no Devoll HPP plans to identify opportunities for the use of the reservoirs for purposes other than power generation. DHP is right to consider recreational use of the reservoirs as a safety risk and a liability for DHP, and DHP has no remit to encourage recreational use. But local people have already started to use Banjë reservoir for swimming and fishing, and it may not be realistic to prevent such use in future. There is no evidence that governmental stakeholders in the region have any intention to take opportunities to develop safe recreational use of Banjë reservoir as a component of regional development, with the exception of the development of a viewing / picnic area along the north shore replacement road. This seems to be a missed opportunity if the project seeks to make a significant contribution to regional development. Opportunities for the use of Moglicë reservoir are less likely than Banjë. The absence of any intent to promote recreational opportunities on the Banjë reservoir, as a contribution to regional development is a **significant gap** against proven best practice.

Criteria met: No

19.2.3 Conformance / Compliance

Analysis against basic good practice

Scoring statement: *Processes and objectives in place for reservoir management have been and are on track to be met with no significant non-compliances or non-conformances, and reservoir management related commitments have been or are on track to be met.*

Processes, objectives and commitments for reservoir preparation and filling have been met to date. There is no evidence of any legal non-compliances.

Criteria met: Yes

Analysis against proven best practice

Scoring statement: *In addition, there are no non-compliances or non-conformances.*

There are some measures that were included in the ESIA and ESMP that have not been taken forward: recreational infrastructure such as boating facilities and 'integrated water resources management' (fishing ramps as mentioned in the ESIA are not necessary as the old roads now function as ramps). However these concern opportunities for recreation, as discussed above under Management. There is no evidence of any legal non-compliances.

Criteria met: Yes

19.2.4 Evaluation of Significant Gaps

Analysis of significant gaps against basic good practice

There are no significant gaps against basic good practice.

0 significant gaps

Analysis of significant gaps against proven best practice

There is no promotion of recreational opportunities on the Banjë reservoir, as a contribution to regional development.

1 significant gap

19.3 Scoring Summary

Issues of reservoir preparation, filling and operations were initially identified through the ESIA, including social impacts and ranking of potential visual, bank erosion and a range of other impacts. DHP has continued to assess and monitor the main issues through ESM programmes for reservoir management, physical relocation, and replacement roads. DHP has paid close attention to risks for reservoir preparation and filling of the Banjë reservoir, especially the risk to delayed impoundment from delayed relocation or deforestation, and can be expected to take the same approach for Moglicë.

The ESIA and ESIA set out a number of plans, most of which have been implemented for Banjë: resettlement; replacement roads; a wastewater treatment plant in Gramsh; establishment of a water quality baseline and continuing monitoring; deforestation and a catchment afforestation programme; relocation of graves and memorials; and a reservoir impoundment awareness campaign. Filling was conducted slowly for slope stability.

Plans for reservoir management during operations include buffer zones around the reservoirs, emergency preparedness planning, and a maximum Banjë reservoir level higher than normal operating level during floods, water quality monitoring, shoreline monitoring, and safety signage.

DHP has responded to emerging risks related to the Banjë reservoir, and plans for operations take account of risks with specific reference to reservoir issues. However, there is no intention to identify opportunities for the use of the Banjë reservoir for purposes other than power generation, specifically recreational opportunities as a contribution to regional development. There is one significant gap against proven best practice, resulting in a score of 4.

Topic Score: 4

19.4 Relevant Evidence

Interview:	14, 37, 40, 65
Document:	46, 49, 51-53, 55, 68, 96, 134, 146, 147, 176, 191, 197, 198, 274
Photo:	145-149

20 Downstream Flow Regimes (I-20)

This topic addresses the flow regimes downstream of project infrastructure during the project implementation stage. The intent is that flow regimes downstream of project infrastructure are planned and delivered with an awareness of and measures incorporated to address environmental, social and economic objectives affected by those flows.

20.1 Background Information

Precipitation and flows in the project area follow a bimodal distribution, with high flows in November-December due to the onset of rainfall, and April-May due to snowmelt. At Kokël, monthly average flows in the Devoll River range from around 6 m^3/sec in August to around 47 m^3/sec in April, based on historical data 1950 to 2005, and recent data received by DHP. The minima and maxima through 1950 to 2005 were 1 m^3/sec (or 0 m^3/sec recorded by DHP) and 405 m^3/sec in February 1963. The annual average flows at Kozare (downstream of Banjë) is 47 m^3/sec and at Gjinikas, close to Moglicë dam, are 13 m^3/sec. A thousand-year flood is estimated at 2180 m^3/sec at Banjë.

The construction of the 50 m high coffer dam at Banjë in the 1980s affected downstream flows to some extent, prior to the DHP construction, resulting in the formation and emptying of a limited reservoir each year, because the bottom outlet could not discharge more than 250-300 m^3/sec.

Both Banjë and Moglicë reservoirs have sufficient capacity for seasonal storage, and could be operated for base load and peaking production. Maximum turbine flows at Banjë and Moglicë are, respectively, 95 and 65 m^3/sec.

DHP has had or will have the following effects on flows in the Devoll River:

- During the filing of the Banjë reservoir, reduced downstream flows in 2016;
- During filling of Moglicë reservoir, reduced flows downstream of the dam and beyond, expected in 2018;
- During operations of Banjë and Moglicë, flows downstream of each powerhouse that will be on average, higher during dryer months and lower during wetter months;
- Also during Moglicë operations, permanently reduced flows in the dewatered reach between the dam and the powerhouse tailrace (hereafter referred to as the Kokël reach), 12 km in length; and
- During short term operations of both Banjë and Moglicë, greater variation in short term flows due to generation operations, and spilling during higher flows.

There is no legal requirement in Albania for a minimum flow for social or environmental reasons. The Concession Agreement includes a provision that the Concessionaire shall respect and preserve existing rights of third parties to extract water for irrigation to the extent such rights were legally authorized and used. There are a number of minor irrigation schemes downstream of Banjë and Moglicë, and a larger scheme with an irrigation capacity of 35 100 hectares, fed by the Vlashuk Barrage which diverts water to the Thanë Reservoir, approximately 40 km downstream.

20.2 Detailed Topic Evaluation

20.2.1 Assessment

Analysis against basic good practice

Scoring statement: *Issues in relation to flow regimes downstream of project infrastructure during the project implementation stage have been identified and assessed; and monitoring is undertaken to assess effectiveness of flow management measures or any emerging issues during project implementation.*

Downstream flow issues were initially assessed in the Environmental and Social Impact Assessment (ESIA) process. The ESIA assessed and ranked potential impacts, without mitigation, as follows: reduction in damaging floods and increased flows in the dry season (large positive impact); rapid changes in flow affecting erosion and safety (small negative); reduced dilution of pollution in the Kokël reach (small negative); increased dilution of pollution downstream in driest period (positive); aquatic biodiversity impacts from dewatering the Kokël reach (medium negative), altered seasonal flow patterns and daily fluctuations downstream of Banjë (small negative); and impacts on bird habitats of the Thanë reservoir (minimal or no impact). Regulation of extreme low and high flows is reported as a significant positive cumulative impact, and reduced flows reaching the Seman Delta, (oddly) as higher flows in summer will enable greater irrigation extraction, is reported as a small negative cumulative impact. The ESIA proposes minimum flows that it states are based on ecological assessments, meso-habitat mapping, quantifying tributary inflows, and socio-economic dependence on water supply, irrigation and waste assimilation.

The ESIA did not consider impacts during filling of the reservoirs. It did not consider flows downstream of the Moglicë powerhouse, because it assesses the entire scheme including the Kokël HPP, and Moglicë powerhouse would have discharged into the tail of the Kokël reservoir. Appendices to the ESIA report include the modelling of regulated river reaches and low flows, and an inventory of irrigation activities. In addition, the Strategic Environmental Assessment also considered that irrigation demand is likely to grow in future, and stabilising flow will be useful for irrigation.

The project's Environmental and Social Management Plan (ESMP) included proposals for further assessment, monitoring, and management measures, under the title of a Downstream Programme. DHP commissioned a dam break analysis, initially proposed as part of this programme as an assessment of flood zone mapping downstream of Banjë for Q_5 to Q_{1000}. The assessment of downstream impacts remains a commitment, and has evolved to include flows downstream of Moglicë, but implementation of the proposed assessments has been continuously delayed. A proposed assessment of the downstream impacts of Banjë on the local population (on land, structures, and irrigation) has been delayed throughout 2015 and 2016. It was cited as a challenge in the ESM team Annual Implementation Report on 2015 and identified as a Key Performance Indicator for 2016, and subsequently cited as a challenge in the Quarterly Progress Report for Q3 2016. These reports refer to a lack of information on operational regimes and flood levels, and request better cooperation between DHP departments in this area. It is now being treated, in the environmental and social management plan for the operation stage (ESMP-O), as a risk to be assessed in annual reports during operations. However, a specific study will proceed in 2017 on impacts on the Thanë irrigation scheme and three unregistered schemes, at the request of the Ministry of Agriculture and involving Cerrik municipality, which will map out needs and propose mitigation measures.

DHP recently carried out a survey of existing irrigation uses in the reach between the Moglicë dam and the tailrace outlet. This found 11 parcels of agricultural land alongside the river, 4 of which extract irrigation water from a tributary, and just 1 of which extracts directly from Devoll, with an area of 3.2 ha. The assessment concluded that the latter could be irrigated from a tributary if minimum flows prove to be insufficient, and also concluded that a further assessment should be made on the relation between minimum flow and sewage discharge of Moglicë (not specifying village or site). The Downstream Programme for Moglicë will also henceforth be considered as risk to be assessed during operations.

In summary, although there have been assessments in specific stretches for specific issues, there has not been a complete assessment of the social and environmental impacts of altered flows. This is a **significant gap** against basic good practice. Taking each of the effects listed under the Background in turn:

- There was no assessment of potential downstream impacts from the filling of the Banjë reservoir;
- There is no assessment of the potential impacts of reduced flows downstream of the dam to Gramsh, during filling of Moglicë reservoir;

- There is no assessment of the potential impacts that may arise downstream of the Moglicë powerhouse during operations; the ESIA included a general assessment of flows arising from Banjë operations (higher during dryer months and lower during wetter months); and
- There is an assessment, including the recent irrigation survey, of the impacts of permanently reduced flows in the 12 km Kokël reach.

There was no assessment of the impact of short term variations in flow, due to generation operations and spilling, but a recently-prepared Emergency Response Plan and emergency response system for Banjë address safety risks at least for Banjë.

It is not clear how information on tributary inflows has been incorporated into an analysis of how far downstream the influence of operations will be felt, mentioned only in reference to inflows downstream of Moglicë (estimated at 0.5 m^3/sec by the tail of the Kokël reservoir) in the ESIA. No information on the impacts of altered flows on groundwater downstream of Banjë is available. There is no assessment of the cumulative impact of Banjë and Moglicë or whether impacts could be minimised through coordinated operations. The simulator of inflows, reservoir levels, and production (see Management) has not been used to predict social and environmental impacts.

Regarding monitoring, DHP has followed a programme on Hydrology, Meteorology and Sedimentology that was proposed in the ESMP. This included measures to gather more flow data, including from six new automated gauging stations, permanent gauging and meteorological stations in the catchment, and a hydrological model. The ESMP also proposed monitoring of adequate water and sediment releases according to agreed quantities, and monitoring aquatic ecology downstream and assess possible impacts. DHP's monitoring plans for operations that may identify impacts of altered flows include: water quality, benthic fauna, phytoplankton, and zooplankton immediately downstream of Banjë and immediately downstream of Moglicë dam; fish, in a zone several km downstream of Banjë and a zone several km downstream of Moglicë dam; and water quality downstream of Moglicë tailrace.

Criteria met: No

Analysis against proven best practice

Scoring statement: *In addition, monitoring of downstream flow issues takes into account inter-relationships amongst issues, and both risks and opportunities that become evident during implementation.*

Not assessed.

20.2.2 Management

Analysis against basic good practice

Scoring statement: *In the case that a need to address downstream flow regimes has been identified, measures are in place to manage identified downstream flow issues; and where formal commitments have been made, these are publicly disclosed.*

The ESIA proposed a minimum flow of 1 m^3/sec with the possibility to later consider seasonal variations, in the dewatered Kokël reach, on the basis of 'medium negative' biophysical impacts, no serious social impacts that cannot be compensated, tributary inflows reaching 0.5 m^3/sec (it does not state whether this is an annual average or other), and acceptable meso-habitat changes at low flows.

It proposed a minimum flow of 2 m^3/sec downstream of Banjë, for use when turbines are out of operation or during off-peak hours, and a small turbine to generate power from this minimum. This and the Moglicë minimum are presented as priority mitigation actions, in the ESIA, and a 'slow start up and closure' is referred to as a measure to mitigate flow variations, and the start-up rate to be determined.

The ESMP included proposals for further management measures, under the Downstream Programme. Proposed measures included: an operational protocol, prior to impoundment, to avoid any problems related to sediments and unscheduled operation interruptions for Thanë reservoir; ensure that irrigation water is provided according to Concession Agreement requirements; and a public announcement system and awareness campaigns. The first two of these may be developed through the studies referred to above, but it is not clear whether the second is proceeding.

Daily operations of Banjë and Moglicë will be determined by in-flows and a flood forecast, as well as maintenance requirements, constrained by the above minimum flow requirements and the high and low permitted reservoir water levels. The operator will hold a daily meeting on rainfall, reservoir levels, and the flood forecast, and will have a veto over generation/dispatch if required on grounds of safety. DHP has developed a technical regulation for the operation, maintenance and control of structures and sub-structures of Banjë in 2016, which sets out principles and responsibilities for operation and maintenance, and monitoring of reservoir levels, but does not specify downstream requirements. An 'ecological turbine' at Banjë can provide flows of up to 10 m^3/sec during maintenance, and it is likely one will be provided at Moglicë also.

No ramping rules ('slow start up and closure' as described in the ESMP) are proposed at Banjë because the river channel is considered to be wide enough to accommodate very large increases without causing surge waves. With high inflows, the reservoir must spill, and operators anticipate an arrangement in which they inform Cerrik municipality and the emergency services when the reservoir reaches its maximum level.

As noted above, downstream impacts arising from an aggressive operational regime with impacts on land, structures or insufficient water for basic needs, are now considered as a risk, with low likelihood and high manageability. The ESMP-O includes measures to: update predicted impacts based on observed water levels; consultation and mitigation/compensation measures with affected households if any impacts arise; monitoring of adequate water and sediment released according to agreed quantities; ensure irrigation water is provided as in the Concession Agreement; monitoring of aquatic ecology downstream; and a public announcement programme and awareness campaigns. Additionally, DHP plans to inform the local authorities at Thanë reservoir when forecasts in lower flows seasons show increased inflow, and there is an opportunity to fill the Thanë reservoir.

The only formal commitments to have been made are the 1 and 2 m^3/sec minimum flow requirements, and commitments to provide sufficient water for legal irrigation schemes. These were publicly disclosed, respectively, in the ESIA and Concession Agreement.

Criteria met: Yes

Analysis against proven best practice

Scoring statement: *In addition, processes are in place to anticipate and respond to emerging risks and opportunities.*

Not assessed.

20.2.3 Conformance / Compliance

Analysis against basic good practice

Scoring statement: *In the case that a need to address downstream flow regimes has been identified, processes and objectives in place to manage downstream flows have been and are on track to be met with no significant non-compliances or non-conformances, and downstream flow related commitments have been or are on track to be met.*

Commitments to assess downstream impacts have been subject to delay, as discussed under assessment above. This is a non-conformance, but is the same gap as discussed under Assessment above.

It is likely that the 2 and 1 m^3/sec commitments will be met during operations, especially with the inclusion of the ecological turbine at Banjë. During filling of Banjë reservoir, no downstream flow was provided for two weeks, with resulting impacts on fish kills and on a riverbank fish farm. But this was planed, and is considered in relation to the gap concerning anticipating and avoiding risks on topic I-3 Environmental and Social Issues Management, and it is also closely linked to the gap on Assessment above. No information has been provided on how the commitment will be met during filling of Moglicë.

Criteria met: Yes

Analysis against proven best practice

Scoring statement: *In addition, there are no non-compliances or non-conformances*

Not assessed.

20.2.4 Outcomes

Analysis against basic good practice

Scoring statement: *In the case that a need to address downstream flow regimes has been identified and commitments to downstream flow regimes have been made, these take into account environmental, social and economic objectives, and where relevant, agreed transboundary objectives.*

The 1 and 2 m^3/sec minimum flow commitments were based on environmental, social and economic considerations, assessed in the ESIA, at least for the reaches immediately downstream of the dams. Measures concerning availability of irrigation water, public warning systems, and mitigation and compensation of any impacts arising, are further ways that the project takes into account environmental, social and economic considerations.

No water at all was discharged for two weeks (followed by 2 m^3/s and 4 m^3/s) as expected and planned for in the impoundment plan. Issues arising to date during the filling and testing of Banjë were: fish mortality; opportunistic fishing by local communities, enabled by lower flows; fish mortality in a downstream fish farm; the discovery of more (undocumented) irrigation schemes than expected; construction activities within the dewatered riverbed area, and the need to work with the authorities to establish more warning signs. There are already requests from downstream stakeholders for additional water releases, such as Cerrik municipality, arguing for a minimum of 7 m^3/s, for their 350 hectare irrigation scheme.

DHP recognises that an aggressive operational regime may have impacts on land, structures or insufficient water for basic needs, considering it as a risk with low likelihood and high manageability. The approach is to mitigate or compensate for downstream flow impacts rather than take environmental or social objectives into account. Without an assessment of such impacts, it is difficult to consider the significance of the impacts that may arise, so this is not considered a significant gap.

Criteria met: Yes

Analysis against proven best practice

Scoring statement: *In the case that a need to address downstream flow regimes has been identified and commitments to downstream flow regimes have been made, in addition these represent an optimal fit amongst environmental, social and economic objectives within practical constraints of the present circumstances.*

Not assessed.

20.2.5 Evaluation of Significant Gaps

Analysis of significant gaps against basic good practice

There has not been a complete assessment of the social and environmental impacts of altered flows.

1 significant gap

Analysis of significant gaps against proven best practice

Not assessed.

20.3 Scoring Summary

Potential downstream flow impacts were initially assessed in the ESIA, which proposed minimum flows based on ecological assessments, meso-habitat mapping, quantifying tributary inflows, and socio-economic demands. The ESMP included a Downstream Programme encompassing further assessment, monitoring, and management measures. A number of ongoing monitoring plans may identify impacts of altered flows.

The project is committed to a minimum flow of 2 m^3/sec downstream of Banjë, and 1 m3/sec downstream of Moglicë, although in reality, flows downstream of Banjë are unlikely to be this low as an ecological turbine will provide a flow of up to 10 m^3/sec even during maintenance. Impacts of downstream flows will be mitigated or compensated as they arise.

However, there was not a complete assessment of the social and environmental impacts of altered flows, particularly during filling of Banjë or Moglicë reservoirs, and downstream of Moglicë powerhouse during operations, and short term variations in flow, due to generation operations and spilling. There is one significant gap against proven best practice, resulting in a score of 2.

Topic Score: 2

20.4 Relevant Evidence

Interview:	14, 15, 65
Document:	46, 49, 51-53, 75, 77, 82, 86, 96, 107, 108, 148-150, 176, 199, 279
Photo:	150-155

Appendix A: Written Support of the Project Developer

Statkraft

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Att.: Mr. Doug Smith

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ASSESSMENT OF DEVOLL HPP USING THE IMPLEMENTATION TOOL OF THE HYDROPOWER SUSTAINABILITY ASSESSMENT PROTOCOL

Statkraft has for many years contributed to the development of the Hydropower Sustainability Assessment Protocol (HSAP), and we are proud to apply it in the Devoll Hydropower Project.

Statkraft International Hydro (IH), the project owner and the asset owner in Albania, has commissioned DSmith Environment Ltd as consultant and lead assessor to undertake an official protocol assessment of the Devoll hydropower project.

This letter confirms that Statkraft and the Devoll HPP is fully supportive of this assessment and will cooperate and provide information as required by the assessment team, to allow a comprehensive evaluation of the Devoll HPP against HSAP criteria.

Yours sincerely,
for Statkraft AS

SVP Tron Engebrethsen
Head of SE Europe and IH Asset Management

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Appendix B: Verbal Evidence

Ref	Interviewee(s)	Position(s)	Organization / Community	Date	Location	Lead Interviewer	Additional Interviewer(s)	Interviewee Type
1	Drilon Llesaj	HSE Officer	Banje Power Plant	21-Nov-16	Banje Power Plant	Doug Smith	Joerg Hartmann	Internal
2	Mr. Debrova, Holim Liapushi	Head of Village, member of village council	Village / Irrigation System	21-Nov-16	Shushice	Doug Smith	Elisa Xiao	Communities/PAH
3	Lorene Bejko	Member	National Council of Archaeology	21-Nov-16	Tirana Downtown	Elisa Xiao		National authorities
4	Viola Puci, Rigela Gegprifti	Communications Manager, SHRAM	DHP/Statkraft	21-Nov-16	Tirana / ABA	Elisa Xiao		Internal
5	Erjon Zegoli	Land Access	DHP/Statkraft	21-Nov-16	Tirana / ABA	Elisa Xiao		Internal
6	Arben Kamami	Deputy Prefect	Elbasan Prefecture	21-Nov-16	Elbasan Town	Elisa Xiao		Local authorities
7	Altin Toska, Jetmir Loroshi, Vassar Shermadh	Mayor, Water resources, Business	Cerrik	21-Nov-16	Cerrik Town	Elisa Xiao		Local authorities
8	Saimir Duraj	Procurement Manager	DHP/Statkraft	21-Nov-16	Tirana / ABA	Joerg Hartmann		Internal
9	Ilir Bejta	Deputy Minister	Ministry of Energy and Industry	21-Nov-16	Tirana / Downtown	Joerg Hartmann	Doug Smith	National authorities
10	Olav Ivar Dalen	Deputy Project Director	DHP/Statkraft	21-Nov-16	Tirana / ABA	Joerg Hartmann	Doug Smith	Internal
11	TBC	Director	National Committee of Large Dam	21-Nov-16	Tirana / Downtown	Joerg Hartmann	Doug Smith	National authorities
12	Labourers at a tunnel entrance in Moglice	Labourers	LIMAK / ALSTOM	21-Nov-16	Moglice Field	Joerg Hartmann		Contractor
13	Mark Gill	Site Manager	MMD	21-Nov-16	Banje / Camp	Joerg Hartmann		Contractor
14	Marissa Duran, Simon Sottsas, Pål Hoberg	ESM Team	DHP/Statkraft	22-Nov-16	Tirana	Doug Smith	Joerg Hartmann, Elisa Xiao	Internal presentation

Ref	Interviewee(s)	Position(s)	Organization / Community	Date	Location	Lead Interviewer	Additional Interviewer(s)	Interviewee Type
15	Hans Bolme, Agim Lazareni, Astrid Elisabeth Løken	Senior O&M Manager, Hydrologist, Head of O&M Turkey and Albania	DHP/Statkraft	22-Nov-16	Banje / Site Office	Doug Smith	Joerg Hartmann	Internal
16	Simon Sottsas, Ditjon Fejzo, and Pål Hoberg, including reservoir boat tour and Gramsh water quality laboratory	ESM Monitoirng Officer, ESM team	DHP/Statkraft	22-Nov-16	Gramsh Site Office	Doug Smith		Internal
17	Bashkim Carciu, Asslan Carciu, Kudret Carciu	Drize Elders, Buffer House, PAH	Village	22-Nov-16	Drize	Elisa Xiao		Communities/PAH
18	Luljeta Dollani, Shkelqim Hoxha	Mayor, Chairman of Council	Gramsh Municipality	22-Nov-16	Gramsh Town	Elisa Xiao		Local authorities
19	Shaqir Avdiu	Curator	Gramsh Museum	22-Nov-16	Gramsh Town	Elisa Xiao		Local authorities
20	Elenita Roshi, Safeko Muha	Social Manager, Officer	DHP/Statkraft	22-Nov-16	Gramsh Site Office	Elisa Xiao		Internal
21	Luanda Deka	Finance Manager	DHP/Statkraft	22-Nov-16	Tirana / ABA	Joerg Hartmann		Internal
22	Local contractor	Local contractor	DHP/Statkraft	22-Nov-16	Gramsh Site Office	Joerg Hartmann		Contractor
23	Leonard Toci	Local Procurement Officer	DHP/Statkraft	22-Nov-16	Gramsh Site Office	Joerg Hartmann		Internal
24	Oryest Haruni	Contractor Doctor	DHP/Statkraft	22-Nov-16	Moglice Site Office	Joerg Hartmann	Elisa Xiao	Contractor
25	Wayne Warr	HSE Manager, Moglicë	DHP/Statkraft	23-Nov-16	Moglice Site Office	Doug Smith	Joerg Hartmann	Internal
26	Gentian Alickolli, Enkeleyda Vingani	Deputy Mayor, Town Planning Officer	Maliq Town	23-Nov-16	Maliq Town, potential resettlement site	Doug Smith	Elisa Xiao	Local authorities
27	Arlinda Ibrahimillari	Technical Director	UKKO, Korce WWTP	23-Nov-16	Korce	Doug Smith		Local stakeholders
28	Arben Dullelari	Moglice Administrator	Village	23-Nov-16	Moglice	Elisa Xiao		Local authorities
29	Afrim Beqiraj	Former Head of Commune	Village	23-Nov-16	Moglice	Elisa Xiao		PAH
30	Mersin Dulellari	Head of Village	Village	23-Nov-16	Lumaj	Elisa Xiao		Communities/PAH

Ref	Interviewee(s)	Position(s)	Organization / Community	Date	Location	Lead Interviewer	Additional Interviewer(s)	Interviewee Type
31	Jani Xhemollari, Haole Xhemollari	Head of Village, PAH	Village	23-Nov-16	Nikollare	Elisa Xiao	Doug Smith	Communities/PAH
32	William Burstrom	Project Director	DHP/Statkraft	23-Nov-16	Moglice Camp	Joerg Hartmann		Internal
33	Doctor	Moglice Camp Doctor	DHP/Statkraft	23-Nov-16	Moglice Camp	Joerg Hartmann		Contractor
34	ESM Monitoring Staff	ESM Monitoring Staff	DHP	23-Nov-16	Gramsh Site Office	Joerg Hartmann		Internal
35	Siri Stokseth	R&D Manager, Representative of Project Owner	Statkraft	24-Nov-16	Moglice Site Office - Lillaker videoconference	Doug Smith		Internal
36	Raymond Massey	HSE Manager, LAJV, Moglicë	LAJV	24-Nov-16	Moglice Site Office	Doug Smith	Joerg Hartmann	Contractor
37	Pål Hoberg	IH/ESG	Statkraft	24-Nov-16	Banje to Tirana in-car discussions	Doug Smith		Internal
38	Ferdinand Alimema	Construction Manager - Roads	DHP/Statkraft	24-Nov-16	Moglice Site Office	Doug Smith		Internal
39	Anri Lushnjari, Kliton Nenaj, Ali Gohodar	DHP ESM Construction team, Contract Adviser of Archimed, Gramsh Municipality Director of Territorial Planning	DHP / Gramsh WWTP contract adviser / Gramsh municipality	24-Nov-16	Gramsh WWTP	Doug Smith		Local stakeholders
40	Niko Zega	Forestry Expert	DHP/Statkraft	24-Nov-16	Parcel 38 of the reforestaion programme	Doug Smith		Internal
42	Armando Qefa, Artan Figu, Elenita Roshi	Resettlement Officers	DHP/Statkraft	24-Nov-16	Gramsh Site Office	Elisa Xiao		Internal
43	Leonard Murati, Eoluarol Liapuslu, Muhorrem Avdiu	Head of Trashovice Village, PAH	Village	24-Nov-16	Trashovice (SS)	Elisa Xiao		Communities/PAH
44	Xhelol Lika	PAH	Village	24-Nov-16	Gjupe Koder	Elisa Xiao		Communities/PAH
45	Jemine Muha	PAH	Village	24-Nov-16	Dushk	Elisa Xiao		Communities/PAH
46	Teuta Cela	Director	Drize School	24-Nov-16	Gramsh Town	Elisa Xiao		Local authorities
47	Tajar Bici / Water supply	Director / ESM Team	Water Supply Enterprise	24-Nov-16	Gramsh Field	Elisa Xiao		Communities/PAH

Ref	Interviewee(s)	Position(s)	Organization / Community	Date	Location	Lead Interviewer	Additional Interviewer(s)	Interviewee Type
48	Romodan Boloshi	PAH	Village	24-Nov-16	Querret	Elisa Xiao		Communities/PAH
49	Skesuoler D Xhika, Mehdi Xhika	PAH	Village	24-Nov-16	Shponj	Elisa Xiao		Communities/PAH
50	DHP Community Liasion, Alban Avdiu	CL Team	DHP/Statkraft	24-Nov-16	Gramsh Site Office	Elisa Xiao		Internal
51	TBC	President of the Chamber	American Chamber of Commerce	24-Nov-16	Tirana Downtown	Joerg Hartmann		International
52	Rezart Cela	Market	Statkraft	24-Nov-16	Tirana / ABA	Joerg Hartmann		Internal
53	Tom Kristian Larsen	Country Manager	DHP/Statkraft	24-Nov-16	Tirana / ABA	Joerg Hartmann		Internal
54	TBC	Elbasan Labour Inspectorate	Labor Inspectorate	24-Nov-16	Tirana downtown	Joerg Hartmann		National Authorities
55	Rigela Gegprifti	Senior HR and Admin Manager	DHP/Statkraft	24-Nov-16	Tirana / ABA	Joerg Hartmann		Internal
56	Etleda Kaja	Head of Legal - Albania	DHP/Statkraft	24-Nov-16	Tirana / ABA	Joerg Hartmann		Internal
57	Ronald Storhammer	Senior Finance Manager	DHP/Statkraft	24-Nov-16	Tirana / ABA	Joerg Hartmann		Internal
58	Jeremy Sapeira	Senior Project Controls and Risk Manager	DHP/Statkraft	25-Nov-16	Tirana / ABA	Doug Smith		Internal
59	Marissa Duran	Senior ESM Manager	DHP/Statkraft	25-Nov-16	Tirana / ABA	Doug Smith		Internal
60	Fatbardh Sallaku	Dean, Faculty of Agriculture and Environment	Agricultural University of Tirana	25-Nov-16	Tirana / AUT	Doug Smith		Contractor
61	Marissa Duran	Senior E&S Manager	DHP/Statkraft	25-Nov-16	Tirana / ABA	Elisa Xiao		Internal
62	Jeremy Sapeira	Senior Project Controls and Risk Manager	DHP/Statkraft	25-Nov-16	Tirana / ABA	Joerg Hartmann		Internal
63	Marissa Duran	Senior ESM Manager	DHP/Statkraft	25-Nov-16	Gramsh Site Office	Joerg Hartmann		Internal
64	Jan Arild Berget	VP Head of HSE, International Hydropower	Statkraft	03-Jan-17	Skype videoconference	Doug Smith	Joerg Hartmann	Internal

Ref	Interviewee(s)	Position(s)	Organization / Community	Date	Location	Lead Interviewer	Additional Interviewer(s)	Interviewee Type
65	Stephen Sparkes, Pål Hoberg	Head of Social and Environmental Development (International Hydropower), ESM - International Hydropower	Statkraft	05-Jan-17	Skype videoconference	Doug Smith		Internal
66	Wenche Lund Øyno, Olav Hølland	VP Business Support and Development, VP International Hydro	Statkraft	06-Jan-17	Skype videoconference	Joerg Hartmann	Doug Smith	Internal
67	John Lindtjørn			09-Jan-17	Skype videoconference	Joerg Hartmann		Internal
68	Heidi Platou			09-Jan-17	Skype videoconference	Joerg Hartmann		Internal

Appendix C: Documentary Evidence

Ref	Name	Author/Organisation	Date/Year	Keywords	Document Types	Classification	Language
1	Group Operating Model.pdf	Statkraft	2016	I-2	Governing document	Internal	English
2	Statkraft Code of Conduct.pdf	Statkraft	2016	I-2	Governing document	Internal	English
3	CR and HSE policy.pdf	Statkraft	2014	I-12; I-2	Governing document	Open	English
4	Leagal and compliance policy.pdf	Statkraft	2016	I-2	Governing document	Internal	English
5	Capital allocation, investmensts and projects policy.pdf	Statkraft	2012	I-2	Governing document	Internal	English
6	Stage Gate Model requirement.pdf	Statkraft	2016	I-2	Governing document	Internal	English
7	Supplier Code of Conduct.pdf	Statkraft	2016	I-2; I-8	Governing document	Open	English
8	Procurement governance requirement.pdf	Statkraft	2014	I-8	Governing document	Internal	English
9	DHP-HSE-R-01_00 HSE Program-Signed.pdf	DHP	2014	I-12; I-18; I-4; I-5	Plan and program	Internal	English
10	DHP-HSE-R-03_00 Work at Heights Procedure.pdf	DHP	2014	I-8	Procedure / instruction	Internal	English
11	DHP-HSE-R-08_00 Cranes; Lifting Operations, Lifting Equipment and Lifting Accessories.pdf	DHP	2014	I-12	Procedure / instruction	Internal	English
12	DHP-HSE-R-14_00 Fire Prevention and Protection.pdf	DHP	2014	I-12	Procedure / instruction	Internal	English
13	DHP-HSE-R-16_00 Permit to Work Procedures.pdf	DHP	2014	I-12	Procedure / instructio	Internal	English

Ref	Name	Author/Organisation	Date/Year	Keywords	Document Types	Classification	Language
					n		
14	DHP-HSE-R-17_00 Working Near and over Water.pdf	DHP	2014	I-12	Procedure / instruction	Internal	English
15	DHP-HSE-S-01_07 DHP Emergency Response Plan.pdf	DHP	2014	I-12; I-5	Plan and program	Internal	English
16	DHP-HSE-S-02_03 DHP Emergency Response Plan - Contact information updated.pdf	DHP	2016	I-12; I-5	Plan and program	Internal	English
17	DHP-HSE-S-03_00 Emergency Plan Pandemic Situation.pdf	DHP	2015	I-12; I-5	Plan and program	Internal	English
18	DHP-HSE-S-05_00 Evacuation Management Plan for Albania.pdf	DHP	2014	I-12; I-5	Plan and program	Internal	English
19	DHP-HSE-S-11_00 Banja HPP Emergency Response Plan - Bridging Document.pdf	DHP	2016	I-12; I-5	Plan and program	Internal	English
20	DHP-HSE-S-12_00 DHP Banja HPP Emergency Evacuation Plan - Impounding Phase.pdf	DHP	2016	I-12; I-5	Plan and program	Internal	English
21	DHP-HSE-S-13_00 Notification and Investigation of HSE Incident.pdf	DHP	2015	I-12	Procedure / instruction	Internal	English
22	DHP-HSE-S-15_00 Moglice HPP Emergency Response Plan - Bridging Document.pdf	DHP	2016	I-5	Plan and program	Internal	English
23	DHP-HSE-S-18_00 Ozone Depleting Substances ODS.pdf	DHP	2015	I-12	Procedure / instruction	Internal	English
24	DHP-HSE-S-25_00 Substance Misuse at Work Guidelines.pdf	DHP	2015	I-12	Procedure / instruction	Internal	English
25	DHP-HSE-S-40_00 Control of Noise and Vibration.pdf	DHP	2015	I-12; I-18	Procedure / instruction	Internal	English
26	DHP-HSE-S-43_00 HSE Indicators and Reporting.pdf	DHP	2015	I-2	Procedure / instructio	Internal	English

Ref	Name	Author/Organisation	Date/Year	Keywords	Document Types	Classification	Language
					n		
27	DHP-PCQ-R-01_01 DHP Handbook Construction Phase.pdf	DHP	2014	I-1; I-12; I-2; I-4; I-6; I-8	Governing document	Internal	English
28	DHP-PCQ-R-02_02 Moglice Project Handbook-Signed.pdf	DHP	2015	I-1; I-12; I-2; I-4; I-6; I-8	Governing document	Internal	English
29	DHP-PCQ-R-03_01 Risk Management Process-Signed.pdf	DHP	2015	I-2; I-4	Governing document	Internal	English
30	DHP-PCQ-R-04_02 DHP Work Break Down Structure(WBS)-Signed.pdf	DHP	2015	I-2; I-4; I-7	Plan and program	Internal	English
31	DHP-PCQ-R-06_00 Document Management Procedure-Signed.pdf	DHP	25.05.2015	I-2	Procedure / instruction	Internal	English
32	DHP-PCQ-R-07_01 Replacement Roads Project Handbook-Signed.pdf	DHP	31.12.2015	I-12; I-2; I-4; I-5; I-8	Governing document	Internal	English
33	DHP-PCQ-R-08_00 Overall QMS Audit Plan-Signed.pdf	DHP	28.05.2015	I-2	Plan and program	Internal	English
34	DHP-PCQ-R-09_00 Non-Conformance Management Procedure-Signed.pdf	DHP	02.05.2015	I-2	Procedure / instruction	Internal	English
35	DHP-PCQ-R-14_00 Asset Handover to GoA agencies procedure-Signed.pdf	DHP	28.08.2016	I-2	Report	Internal	English
36	DHP-Hazard ID Register Devoll Hydropower Project.pdf	DHP	01.03.2014	I-12	Report	Internal	English
37	DHP-Project Handbook HPP Banja (OE) Rev.F.pdf	DHP	01.01.2015	I-12; I-2	Governing document	Internal	English
38	DHP-Project Quality Plan HPP Banja (OE) Rev. G.pdf	DHP	01.05.2015	I-2	Plan and program	Internal	English
39	DHP-20161001_Project Charter Moglice - SIGNED.pdf	DHP	01.10.2016	I-4	Plan and program	Internal	English
40	DHP-PCQ-R-10_00 IPC Check Approval Procedure.pdf	DHP	30.10.2015	I-8	Procedure / instruction	Internal	English
41	DHP-Civil Works Banja and Moglice.pdf	DHP	2013	I-12; I-4; I-5; I-8	Agreement	Internal	English
42	LSD_M01	DHP	2016	I-1; I-3; I-7; I-9	Governing	Internal	English

Ref	Name	Author/Organisation	Date/Year	Keywords	Document Types	Classification	Language
	ESM_F_LSD1_LS_TA_Monitoring_Form_Template_English.pdf				document		
43	LSD_M02 ESM_F_LSD1_LS_Livestock_Monitoring_Form_Template_English.pdf	DHP	2016	I-1; I-3; I-7; I-9	Governing document	Internal	English
44	LSD_M03 ESM_F_LSD1_Plantation_Monitoring_Form_Template_English.pdf	DHP	2016	I-1; I-3; I-7; I-9	Governing document	Internal	English
45	LSD_M07 Annual socioeconomic survey.pdf	DHP	2016	I-1; I-3; I-7; I-9	Governing document	Internal	English
46	ESIA_Report_Executive_Summary_English_September_2011.pdf	Norconsult	2011	I-1; I-10; I-13; I-14; I-15; I-16; I-17; I-18; I-3; I-7; I-9	Report	Open	English
47	Banje_SEI_Questionaire_English.pdf	DHP	2012	I-1; I-3; I-7; I-9	Governing document	Internal	English
48	Policy_and_Entitlement_Matrix_English_May_2012.pdf	DHP	2012	I-1; I-3; I-7; I-9	Plan and program	Open	English
49	ESMP.pdf	DHP	2013	I-1; I-10; I-13; I-14; I-15; I-16; I-17; I-18; I-3; I-7; I-9	Plan and program	Open	English
50	Grievance_Redress_Mechanism_Leaflet_Eng_September_2013.pdf	DHP	2013	I-1; I-3; I-7; I-9	Plan and program	Open	English
51	AIP 2014 DHP ESM.pdf	DHP	2014	I-1; I-10; I-13; I-14; I-15; I-16; I-17; I-18; I-3; I-7; I-9	Plan and program	Internal	English
52	AIP 2015 DHP ESM.pdf	DHP	2015	I-1; I-10; I-13; I-14; I-15; I-16; I-17; I-18; I-3; I-7; I-9	Plan and program	Internal	English
53	AIP 2016 DHP ESM.pdf	DHP	2016	I-1; I-10; I-13; I-14; I-15; I-16; I-17; I-18; I-3; I-7; I-9	Plan and program	Internal	English
54	ESM_RAP_RR_BS_Final.pdf	DHP	31.01.2016	I-1; I-3; I-7; I-9	Plan and program	Internal	English

Ref	Name	Author/Organisation	Date/Year	Keywords	Document Types	Classification	Language
55	Draft -Devoll GHG pre-impoundment data report SINTEF Energi - confidential.pdf	Sintef	06.06.2016	I-19	Report	Confidential	English
56	IH RnD updates july 2016 Siri n allv3.pptx	Statkraft	01.08.2016	I-16; I-17	Presentation	Internal	English
57	Sedimentation for sustainable hydropower - Paper_Omelan-et-al-ISRS-2016_Final.pdf	NTNU, Leibniz University, Statkraft	2016	I-16	Report	Internal	English
58	RD sediment Deformation Devoll Catchment 2015 Historical_analysis_Albania - Sattelite - Globesar.pdf	Globesar	30.11.2015	I-16	Report	Internal	English
59	RD sediment - presentation Estimation of Sediment Related costs_Summary.pdf	Multiconsult	2016	I-16	Presentation	Open	English
60	ENERGIX2014_ SediPASS_FINAL.pdf	NTNU /Energix	2014	I-16; R&D	Memo	Internal	English
61	EnergiX2014_ SediPASS-final-NFR.pdf	NTNU /Energix	2014	I-16	Memo	Internal	English
62	ISRS-2016-Guerrero et al-final.pdf	The Hydraulic Engineering Laboratory,Statkraft, NTNU	2015	I-16	Memo	Internal	English
63	Memo RD Main Project Future Sediment Handling Strategies May2014 for IH mngm.docx	Statkraft	2014	I-16	Memo	Internal	English
64	Paper Massimo sept 2016Memoria n. 11-0017_Guerrero et al_Poster_Idra16.pdf	University of Bologna, NTNU, Statkraft	01.09.2016	I-16	Presentation	Internal	English
65	A Info IH May2014 RD strategy 2014-2018 final.pptx	Statkraft	2013	I-16	Memo	Internal	English
66	Application sheet ghg RD Project_Dec 15 2015.docx	Statkraft	2015	I-17	Agreement	Internal	English
67	B Pres RD Geo april2014b.pptx	Statkraft	01.04.2014	I-16; I-5	Presentation	Internal	English
68	Draft DHP-Banja reservoir monitoring program Draft V02 (2).docx	DHP	01.09.2016	I-16	Memo	Internal	English
69	Draft updated 2016 RD strategy hydropower_20160630.pptx	Statkraft	2016	R&D	Presentation	Internal	English
70	Minutes 2nd meeting 2016 RnD IH 15th aug 2016.docx	Statkraft	2016	R&D	Memo	Internal	English
71	Statkraft RnD and HYTEC.pptx	Statkraft	2016	I-5; R&D	Presentation	Internal	English
72	v2Project Charter - Geo - 2016.doc	Statkraft	2016	I-16; R&D	Memo	Internal	English
73	Fjala e Kryeministrit_EN - Edi Rama Banja Opening.pdf	Albanian Ministry	2016	I-1	Presentation	Open	English
74	Emendo registrations 2014-2016, nnonconformity system.pdf	Statkraft	15.12.2016	I-2; I-3	Report	Internal	English
75	Drainage water to tailrace_env incidence_Banja.pdf	Statkraft	14.11.2016	I-3	Report	Internal	English

Ref	Name	Author/Organisation	Date/Year	Keywords	Document Types	Classification	Language
76	Landslide at Banja site_env incidence_Banja.pdf	Statkraft O&M team	14.11.2016	I-3	Report	Internal	English
77	Eco Flow_env incidence_Banja.pdf	Statkraft	06.10.2016	I-3	Report	Internal	English
78	OM handbook - envrionmental inspections.jpg	Statkraft	21.11.2016	I-3	Governing Document	Internal	English
79	Infrastructure safety and emergency response - meeting with local authorities 14.12.2016 - agenda.msg	DHP	2016	I-6	Minutes of meeting	Internal	English
80	Emergency Response Plan Banja 1126924_2_1.pdf	Statkraft	01.11.2016	I-6	Plan and program	Internal	English
81	Organisation Banja O-M 2016 1145150_1_0.pdf	Statkraft	2016	I-12	Presentation	Internal	English
82	Main_Document_Operation plan for BANJA HPP.docx_ENG_FINAL.pdf	Statkraft	14.07.2016	I-3	Plan and program	Internal	English
83	Annex_Overview of licenses.pdf	Statkraft	2016	I-12	Plan and program	Internal	English
84	Annex_Description of positions O-M staff_ENG.pdf	Statkraft	2016	I-12	Procedure / instruction	Internal	English
85	Annex_Training Plan for O-M team.pdf	Statkraft	15.07.2016	I-12	Plan and program	Internal	English
86	Simulation inflow Banja.pdf	Statkraft	2016	I-20	Report	Internal	English
87	CEO's HSE award winner and BA winners.pdf	Statkraft	2016	I-1	Presentation	Internal	English
88	Shemsit adit investigation report final revision 1.pdf	Statkraft	2015	I-12; I-2	Report	Confidential	English
89	people and power_3_2016_EN.pdf	Statkraft	2016	I-1	Presentation	Open	English
90	DHP-GRM-2015-0227_20151109_Drize_Lindor_Çarçiu_Grievance_Appeal.pdf	DHP	09.11.2015	I-1	Memo	Confidential	English
91	Devoll_Hydropower_ESMP_Brochure_Disclosure_Eng.pdf	DHP	2014	I-1	Memo	Internal	English
92	Key_Entitlement_Resettlement_Information.pdf	DHP	2012	I-1	Guideline	Internal	English
93	DHP_20111124_Meeting_in_Moglice_Commune_Sustainable_Natural_resources_usage_in_Moglice_area.pdf	DHP	23.11.2011	I-1	Memo	Internal	English

Ref	Name	Author/Organisation	Date/Year	Keywords	Document Types	Classification	Language
94	Business_Ethics seminar info.pdf	Statkraft (& Norwegian Embassy)	15.06.2016	I-1	Memo	Open	English
95	Albania_Risk_Assessment_Report_Final and prevention plan 2017.pdf	Statkraft	2016	I-2	Report	Confidential	English
96	Main ESIA - Envi Baseline.pdf	Norconsult	2011	I-3	Report	Internal	English
97	Environmental_Permit_Obtained.pdf	Ministry	20.10.2011	I-3	Memo	Internal	English
98	List of Procedures.pdf	DHP	2016	I-2; I-3	Memo	Internal	English
99	Risk_register_sample.pdf	DHP	2016	I-3	Report	Internal	English
100	ESM_QPRs_2014Q1-2016Q2.pdf	DHP	2014	I-3	Report	Internal	English
101	Executive_Summary_SEA_Proposal_English.pdf	Norconsult	01.02.2010	I-3	Report	Internal	English
102	GHG Devoll Albania 2016 -SINTEF-deliverables_results_conclusions.pdf	Sintef	2016	I-3	Report	Internal	English
103	Company_Policy_Sustainability_Policy_signed_V10.pdf	DHP	07.10.2009	I-3	Governing Document	Internal	English
104	I-03_11_DHP-PCQ-R-09_00 Non-Conformance Management Procedure-Signed.pdf	DHP	02.05.2015	I-3	Procedure / instruction	Internal	English
105	ESIA final report, appendix V, Project and Roads Public Hearings.pdf	Norconsult	01.09.2011	I-3	Report	Internal	English
106	Dambreak Report 1_2_2011.pdf	Norconsult	2016	I-5	Report	Confidential	English
107	Dimensioning floods main river - rev 2011-03-28.pdf	Norconsult	2011	I-5	Report	Internal	English
108	Flood_Scenario_Sample.pdf	DHP	2016	I-5	Map	Internal	English
109	Minutes of Banja Dam Safety Meeting (Filter) rev 3.pdf	Mott Mc Donald	2014	I-5	Minutes of meeting	Internal	English
110	C-0813 Compressive streght concrete, example measurement report.pdf	DHP / Limak	2016	I-5	Report	Internal	English
111	Albania_Energy_Market_Environment_4docs.pdf	Energy Community Secretariat	2016	I-6	Report	Open	English
112	Project costs allocated by communes.pdf	DHP	2016	I-7	Report	Confidential	English
113	IDHP_20161213_SD_Report_Banja.pdf	DHP	2016	I-7	Report	Internal	English
114	SAQ _ Aleta _ Summary of answers.pdf	ALTEA&Geostudio	2015	I-8	Report	Confidential	English

Ref	Name	Author/Organisation	Date/Year	Keywords	Document Types	Classification	Language
115	SEI_Banje_Moglice_People_working_age.pdf	DHP	01.1.2014	I-8	Memo	Confidential	English
116	DHP-GRM-0008_0055.pdf	DHP	24.04.2013	I-9	Agreement	Confidential	English
117	ESM budget 2017 (sent 4).pdf	DHP	2017	I-9	Plan and program	Confidential	English
118	GRM_Report_September_2016_period_01.09.2016-31.pdf	DHP	07.10.2016	I-9	Report	Confidential	English
119	Final livelihood status report.pdf	Balliu_Skreli_Gjoka	2012	I-9	Report	Confidential	English
120	ESIA_authors appendix Q.pdf	Norconsult	01.09.2011	I-9	Memo	Internal	English
121	Sult_Commune_Mazrek_Village_Road_proposals.pdf	DHP	27.10.2014	I-9	External correspondence	Internal	English
122	Livelihood compensation strategy.pdf	Balliu Astrid	2012	I-9	Report	Confidential	English
123	LSD_HICS_Support_of_elderly_couple_HH_1736-07.pdf	DHP	07.03.2014	I-9	Memo	Confidential	Albanian
124	LSD_HICS_Support_of_widow_HH_1362-13.pdf	DHP	27.05.2015	I-9	Memo	Confidential	Albanian
125	LSD_HICS_Support_with_wheelchair_HH_1392-25.pdf	DHP	09.06.2016	I-9	Memo	Internal	Albanian
126	DHP-GRM-0073_0142_grievence registration.pdf	DHP	2013	I-10	Memo	Confidential	Albanian
127	HIC__Replacement_house_process_consultations_example_HH_3103-17.pdf	DHP	2014	I-10	Memo	Internal	English
128	HSE Sample Minutes of meeting Alb Eng.pdf	Limak	08.06.2016	I-12	Minutes of meeting	Internal	Albanian
129	DHP_20160701_Newsletter 30.pdf	DHP	07.07.2016	I-1; I-12	Memo	Internal	English
130	Contract Extract 4.pdf	DHP		I-13	Agreement	Internal	English
131	ASHA_DHP_Forwarding_Decision_16_on_Archaeol_Survey_territory_to_be_inundated_Banja_HPP.pdf	Ministry of Culture	2016	I-13	Memo	Internal	English
132	Abkons_DHP_Archeological_Summary_Report_Engl.pdf	abkons	2016	I-13	Report	Internal	English
133	TORs Devoll Biodiversity 2016.pdf	Statkraft	10.02.2016	I-15	Report	Internal	English
134	128424-RIGberg-WFR-017-Monitoring of Banja	Multiconsult	2016	I-16	Report	Internal	English

Ref	Name	Author/Organisation	Date/Year	Keywords	Document Types	Classification	Language
	abutments and reservoir_week.pdf						
135	WQ_Parameters_tests_2015Q3-2016Q2.pdf	Statkraft	2016	I-17	Report	Internal	English
136	Water results Limak.pdf	Ministry of Heath	25.05.2015	I-17	Report	Internal	English
137	Shared_Responsibility_Agreement_J01.pdf	Stakraft	2016	I-17	Agreement	Internal	English
138	VA-2013SA0040-0003 - Water Quality Testing_AUT.pdf	DHP	19.09.2016	I-17	Agreement	Internal	English
139	Moglice HPP Environmental Audit Corrective Actions 13-14.04.2016 and 16.09.pdf	DHP	2016	I-18; I-2; I-3	Report	Internal	English
140	Moglice Observation Tracker - 2016-with Pivot.pdf	DHP	2016	I-18; I-2	Report	Internal	English
141	Audit Report no.8 - MCCW Moglice Subcontract no.pdf	DHP	04.11.2016	I-18; I-2	Report	Internal	English
142	LAJV Agreements Hazardous Waste.pdf	LAJV	2015	I-18	Agreement	Internal	Albanian
143	CEO Award Banja Replacemnt Roads_intranet.pdf	Statkraft	2016	I-1	Presentation	Internal	English
144	Moglice Environmental Management Plan.pdf	Limak, DHP	10.03.2015	I-18	Procedure / instruction	Internal	English
145	SOP Trash-debris Banja.pdf	Statkraft	28.07.2016	I-18	Procedure / instruction	Internal	English
146	Map - Placement Signs Banje HPP reservoir.pdf	DHP	2016	I-19	Map	Internal	English
147	Public information campaign before Banje Reservoir filling.pdf	DHP	2016	I-1; I-19	Memo	Internal	English
148	2016Q3 Moglice DS Irrigation Assessment Report.pdf	DHP	01.10.2016	I-20	Report	Internal	English
149	Visual_material_spilling_assessment.pdf	DHP	2016	I-20	Image	Internal	English
150	Screenshots_Banje_reservoir_Simulator.pdf	Statkraft	2016	I-20	Image	Internal	English
151	DHP-COM-S-01_01 Communication and Stakeholder Management Plan.pdf	DHP	10.03.2015	I-1	Plan and program	Internal	English
152	Grievance_Redress_Mechanism_Leaflet_Eng_J01.pdf	DHP	01.09.2013	I-1	Presentation	Open	English
153	20161216RiskRegister.xls	DHP	2016	I-2	Report	Confidential	English

Ref	Name	Author/Organisation	Date/Year	Keywords	Document Types	Classification	Language
154	Devoll QRA Report - 7 September 2016.pdf	DHP	07.09.2016	I-2; I-4	Memo	Internal	English
155	Track Changes EasyRisk.docx	DHP	10.10.2016	I-3	Image	Internal	English
156	Audit 517-15 example handling of CA observation Contractors health and safety.pdf	Statkraft / CA	2015	I-12	Report	Confidential	English
157	State_Labour_Inspectoriate_Appeal_of_decision_on_penalty_to_DHP.pdf	GoA	2015	I-12	External correspondence	Internal	English
158	Overview_ILO_standards_Albania_V00.pdf	DHP	2016	I-12	Memo	Internal	English
159	LAJ-HSE.006.A - Waste Management Plan.pdf	Limak	09.09.2014	I-12	Plan and program	Internal	English
160	Employment_contract_sample_DHP.PDF	DHP	2016	I-12	Agreement	Internal	English
161	Variable Pay System - Bonus - Support Document.pdf	Statkraft	07.11.2012	I-12	Governing Document	Internal	English
162	Bonus_system_Layout_V00.pdf	DHP	12.02.2014	I-12	Specification	Internal	English
163	State_Labour_Inspectorate_issuance_decision_V00.pdf	GoA	19.01.2015	I-12	Memo	Internal	English
164	Health Life TempTotal Dissability Insurance Package.pdf	Sigal	2016	I-12	Memo	Internal	Albanian
165	Audit 497-14 observation Devoll owners engineer 2014.pdf	Statkraft / CA	2014	I-12	Report	Confidential	English
166	Audit 483-13 observation from CA-report HSE.pdf	Statkraft / CA	2013	I-12	Report	Confidential	English
167	Audit Report HSE Tunnelling activities at Moglice - version 20161003 (2).pdf	Statkraft	2016	I-12; I-2	Report	Internal	English
168	RD sediment Aspen Stokseth Jacobsen Banja dam ICOLD15 Final.pdf	SediCon, Statkraft	2015	I-16	Report	Open	English
169	RD sediment Novik et al (2015) Modelling and monitoring of reservoir sedimentation - HYDRO 2015.pdf	Multiconsult, NTNU, Statkraft	2015	I-16	Report	Open	English
170	Example - USAID invitation to cooperation waste and waste treatment.msg	DHP	15.05.2014	I-7	External correspondence	Internal	English
171	Example - rejection of the invitation cooperation The Norwegian Ministry of Climate and Environment - waste managment.msg	The Norwegian Ministry of Climate and Environment	23.01.2014	I-7	External correspondence	Internal	Norwegian
172	Statkraft-	WWF	17.12.2013	I-17	Minutes	Internal	English

Ref	Name	Author/Organisation	Date/Year	Keywords	Document Types	Classification	Language
	WWF_Meeting_Rome_Minutes_latest_draft.pdf				of meeting		
173	WWF position paper on Devoll Hydropower Project.msg	WWF	13.04.2015	I-17	Memo	Internal	English
174	Vendimi Nr. 16, date 30.03.pdf	Ministry of culture	30.03.2016	I-13	Agreement	Internal	Albanian
175	TOR Terrestrial Biodiversity 2016.pdf	DHP	09.02.2016	I-15	Procedure / instruction	Internal	English
176	Main ESIA.pdf	Norconsult	23.11.2011	1-19; I-13; I-15; I-16; I-17; I-20; I-3; I-9	Report	Confidential	English
177	Table of Content- Environmental Permit Application.pdf	DHP	2012	I-3	Memo	Internal	English
178	Environmental permit new act approval.pdf	Ministry of Environment, forests and water administration	29.02.2012	I-3	Agreement	Internal	Albanian
179	Environmental_permit_eng_translation.pdf	Ministry of Environment, forests and water administration	27.02.2012	I-3	Agreement	Internal	English
180	Pishaj_Commune_Drize_Village_Exchange_of_Correspondence_and_Meetings_Resettlement_Program.pdf	DHP	2015	I-10	Memo	Internal	English
181	Gap Analysis IFC PS5 Drize Village Households.pdf	DHP	2017	I-10	Memo	Internal	English
182	Shkrese percjellese.pdf	Ministry of culture	04.04.2016	I-13	Agreement	Internal	Albanian
183	HYDRO SUCTION VALVES Moglice.pdf	DHP	2015	I-16	Technical Document	Internal	English
184	Dam outlet structures Moglice - D-DHP-AFC-05.02-2602-02-0013_D00 (2).pdf	DHP, AF Consult	20.10.2015	I-16	Technical Document	Internal	English
185	Dam outlet structures Moglice -D-DHP-AFC-05.02-2602-02-0014_D01.pdf	DHP, AF Consult	27.01.2016	I-16	Technical Document	Internal	English
186	Contract Agreement Volume 2 - Conditions of Contract	DHP	2013	I-3, I-12, I-18	Agreement	Internal	English
187	Contract Agreement Volume 3 / Appendix D Administrative Requirements	DHP	2013	I-3, I-12, I-18	Agreement	Internal	English
188	Contract Agreement Volume 3 / Appendix D1 Specification for Contractors HSE Program	DHP	2013	I-3, I-12, I-18	Agreement	Internal	English
189	Contract Agreement Volume 3 / Appendix D2 Environmental Management and Action Plan	DHP	2013	I-3, I-12, I-18	Agreement	Internal	English
190	Monthly Report October 2016	DHP	2016	I-3, I-18	Report	Internal	English

Ref	Name	Author/Organisation	Date/Year	Keywords	Document Types	Classification	Language
191	Expected time for initial filling of the reservoirs	DHP	April 2015	I-19	Report	Internal	English
192	Concession Agreement - Execution Version	DHP / MoEI	2008	I-2, I-10	Agreement	Internal	English
193	Concession Agreement - 1st Supplement	DHP / MoEI	2010	I-2, I-10	Agreement	Internal	English
194	Concession Agreement - 2nd Supplement	DHP / MoEI	2013	I-2, I-10	Agreement	Internal	English
195	Concession Agreement - 3rd Supplement	DHP / MoEI	2014	I-2, I-10	Agreement	Internal	English
196	Dambreak analysis including maps	Norconsult	2016	I-8	Report	Internal	English
197	DHP-ESM-R-11 Community Evacuation and Relocation Plan: Lower Zgjupe	DHP	2016	I-8, I-19	Report	Internal	English
198	DHP-HSE-S-07 Evacuation Plan for Banje	DHP	2016	I-8, I-19	Report	Internal	English
199	Inundation maps downstream Banje	Norconsult	2016	I-8, I-20	Report	Internal	English
200	Fifth National Report of Albania to the UN Convention on Biological Diversity	MoEFWA	2014	I-15	Report	External	English
201	Document of Strategic Policies for the Protection of Biodiversity in Albania	MoEFWA	2015	I-15	Report	External	English
202	Albania Invasive Species - financed by the World Bank under a project "Biodiversity Enabling Activity II Related to the Assessment of Capacity Building Needs to Address the Priorities of Albania's Biodiversity Strategy and Action Plan"	Alfred Mullaj, Anila Paparisto	2007	I-15	Report	External	English
203	Albania Environmental Services Project - Integrated Pest Management Plan	World Bank	2013	I-15	Report	External	English
204	ESIA Draft Report Executive Summary - South Shore Road	DHP	2014	I-3	Report	Open	English
205	ESIA Draft Report Executive Summary - Banje-Gramsh Road	DHP	2014	I-3	Report	Open	English
206	Albania Electricity Market Opening too Slow - Statkraft	ICIS	2014	I-6	Website Article	External	English
207	Impairments drag Norway power firm Statkraft into Q3 loss	Reuters	2016	I-6	Website Article	External	English
208	Sluggish liberalisation harms investment in Albanian electricity market	ICIS	2014	I-6	Website Article	External	English
209	Invitation for expression of interest_Prequalification Afforestation Project	DHP	2015	I-8	DHP website	Open	English

Ref	Name	Author/Organisation	Date/Year	Keywords	Document Types	Classification	Language
210	Code of Labor	Government of Albania	1995	I-12	Law	External	
211	DHP-COM-S-02 Communication with Media-Instruction	DHP	2016	I-1	Plan and program	Internal	English
212	Livelihood Support and Development Implementation Manual	DHP	2016	I-9, I-10	Plan and program	Internal	English
213	Gramsh (a paper in World Archeology Magzine #79)	Richard Hodges	2016	I-13	Journal article	Open	English
214	Banje Reservoir Impoundment Leaflet	DHP	2016	I-1	Memo	Open	Albanian
215	Devoll Project Briefing Leaflet	DHP	2013	I-1	Memo	Open	Albanian
216	Employment Leaflet	DHP	2014	I-1	Memo	Open	English
217	DHP-ESM-S-18 Environment and Social Management Quarterly Progress Report 2016 Q3	Statkraft; Prepared by ESM Management	30.10.2016	I-12, I-2			English
218	Request for Quotation: Construction of Potable Water system_ Shushice, Drize and Cerruje: Evaluation Report	DHP; Signatures by Lushnjari, A; By, O.; Duraj, S.; Dalen, O.I.	06.12.2013	I-8			English
219	DHP-FIN-S-02 Procurement Instruction	DHP; Prepared by DS	05.01.2016	I-8			English
220	Procurement Strategy for Potable Water System: Framsh	DHP; Owner is Head of FP - Procurement	06.11.2014	I-8			English
221	Invitation for Expression of Interest/ Prequalification for Security Services	DHP	n.d.	I-8			English
222	Procurement Report/ Competition Waiver; Procurement for the Resettlement Process (Cows)	DHP Leonard Toci	07.01.2016	I-8			English
223	Offer for Cows with attachments Certifikatë Regjistrimi; Komente; Licencë; Kartë E Fermerit	TrisAlb shpk	n.d.	I-8			English
224	Request for Quotation: Heiffer (Heavy pregnant cow)	Devoll Hydropower; Leonard Toci	16.10.2015	I-8			English
225	Minutes of Meeting; Civil Works	DHP - LAJV	11.11.2016	I-4			English
226	Minutes of Meeting; Commercial	DHP - LAJV	14.10.2016	I-4, I-6			English
227	Minutes of Meeting; Dam Area	DHP - LAJV	03.11.2016	I-4			English
228	Minutes of Meeting; Underground Structures	DHP - LAJV	06.09.2016	I-4			English
229	Minutes of Meeting; Quality Meeting	DHP - LAJV	08.11.2016	I-4			English
230	Minutes of Meeting; Devoll Hydropower Sh.A. and Contracting Authority/Ministry of Energy and Industry	DHP - MEI	07.03.2016	I-2, I-6			English
231	Independent Auditor's Report and Financial Statements as at and for the year ended December 31, 2015	Deloitte	02.29.2016	I-6			English

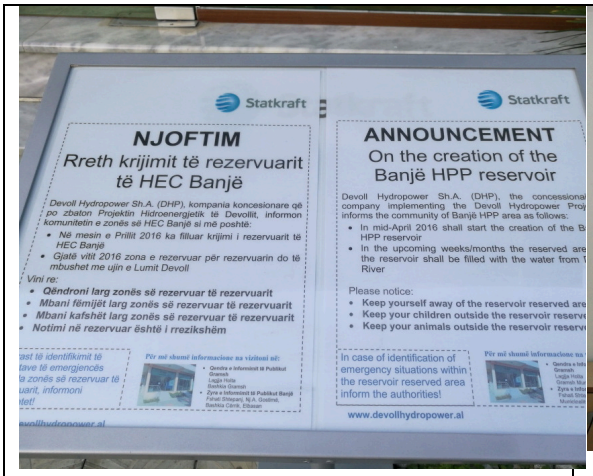
Ref	Name	Author/Organisation	Date/Year	Keywords	Document Types	Classification	Language
232	Representation by management	DHP (Tom Kristian Larsen, CEO and Ronald Storhammar, CFO)	29.02.2016	I-6			English
233	Request for exemption from VAT in Durres Customs	Olav Ivar Dalen, Zv Drejtor Projekti, Devoll Hydropower Sh.A.	17.11.2016	I-6, I-4, I-12			English
234	Memo: Assessment of Capital Structure for Devoll Hydropower SHA	Statkraft; Idland	30.3.2016	I-6			English
235	DHP-HRA-R-02 Employee Relations Termination Requirement Document	DHP; Prepared by SHRAM	03.07.2015	I-12			English
236	DHP-HRA-S-08 Recruitment Instruction	DHP; Prepared by SHRAM	07.11.2016	I-12			English
237	DHP-HR-P-001 Human Resources Policy	DHP; Prepared by SHRAM	07.11.2016	I-12			English
238	LAJV-CW-MS-011 Method Statement for Escape and Cable Tunnel Excavation and Support Works	LAJV; Prepared by EC	27.06.2015	I-4, I-12			English
239	Level 3 Investigation Report: Tunnel Accident - Shemsit Adit, Moglice Hydro Power Plant	Mr. Nikolas Garnett, Senior HSE Manager Devoll - Investigation Lead; Mr. Leif Inge Skogseth, Statkraft HSE Manager - L3 Investigation Specialist	30.05.2016	I-12			English
240	Example of a list of species planted in a reforestation plot	DHP	undated	I-15, I-16			English
241	Law No.4/2013 on removing from the national forest register, the area belonging to the parcels of forest economy that will be inundated by the lake of the HPPs Banje, Kokel and Moglice, which will be constructed on the Devoll River	Government of Albania	2013	I-16			English translation
242	I-1 DHP_20170123_Drize_Village_Authorities_Exchange_of_Correspondence_and_Meetings_Resettlement_Program.pdf						
243	I-1 DHP_20170127_Local_Stakeholders_Short_list_IHA_Population_Impacts.pdf						
244	I-1 DHP_20170127_Stakeholder_Meetings_List_Excerpt_Samples_2010-2016.pdf						
245	I-1 ESIA Disclosure.zip						
246	I-9 HIC__20150310_HH_1556-03-Bashkim Carciu.pdf						

Ref	Name	Author/Organisation	Date/Year	Keywords	Document Types	Classification	Language
247	I-9 HIC__20150310_HH_1556-06-Asllan Carciu.pdf						
248	I-9 HIC__20150310_HH_1556-11-Xhezmir Carciu.pdf						
249	I-9 HIC__20150319_HH_1556-07-Agron Carciu.pdf						
250	I-9 SCA_HH_1556-02-Kudret Carciu.pdf						
251	I-9 SCA_HH_1556-03-Bashkim Carciu.pdf						
252	DRAFT_DHP_20170216_Shared_Resp_Agreement_Drize_Houses-EN_and_AL.doc						
253	Ahmet Ali Parlak.pdf						
254	Annex_B_Labour_Inspectorate_Inspections_Authorisations.pdf						
255	Devoll HPP TRI-statistics and non-conformity reporting at group level_feb.2017.pdf						
256	DHP Monthly Report -February 2017 - HSE-RESULTS_extract.pdf						
257	Erild Çela.pdf						
258	Fatos Kula.pdf						
259	Florjan Piku.pdf						
260	I-18 13. ALSTOM_Group EHS Procedures (Revision G).pdf						
261	I-18 Devolli Waste.pdf						
262	I-18 Gramsh Sewage System and Solid Waste Management Study-Final Report.pdf						
263	I-18 Regulation on Sewage, Municipality of Gramsh.pdf						
264	I-18 InterLGU of Solid Waste Management for Gramsh, Kodovjat and Pishaj.pdf						
265	I-18 Municipality Council Decision on Sewage (AL)-Vendimi i Keshillit Bashkiak per Kanalizimet.pdf						
266	I-18 Municipality Council Decision on Urban Waste (AL)-Vendimi i Keshillit Bashkiak per Mbetjet urbane.pdf						
267	I-18 DHP-HSE-T-28_01 Waste Monitoring Checklist.pdf						

Ref	Name	Author/Organisation	Date/Year	Keywords	Document Types	Classification	Language
268	I-18 HSS - LEVEL 4 - WASTE MANAGEMENT OPTIONS.pdf						
269	I-18 P1-261-019_1- HSS-L4 rev 0 - WASTE MANAGEMENT PLAN-EUROTEOREMA_PREVE.pdf						
270	I-18 Waste Management Plan Rev B.pdf						
271	LAJ-HSE.005.A - Environmental Protection Plan (2).pdf						
272	LAJV documented improvements env. non-conformance.pdf						
273	Moglice HPP Environmental Audit Corrective Actions 16.09.2016.pdf						
274	Impounding Plan V3.1 March Final (English).pdf						
275	160602_sre_ERP_Drill_Banja_Scenario page 1.pdf						
276	160602_sre_ERP_Drill_Checklist.pdf						
277	AlbEx16-01_Emeregency Response Directive.pdf						
278	Evaluation report AlbEx 16-01 Banja first impounding-ermergency response exercise april 2016.pdf						
279	2016-02704 04_Annex_Water course management.docx 1087013_2_0.pdf 1094012_1_1.pdf						
280	05 Banja operating restrictions.msg						
281	Banja Reservoir Slope Monitoiring Program - charter signed tkl.pdf						
282	Compliance Audits Environmental 2015-2016.pdf						
283	Group Requirement - Envionmental Management - Reference table_Requirements_Sept 15 2014.xlsx						
284	Group requirement - Envionmental Management_08.01.2015.pdf						
285	Group requirement - Human rights management_23.09.pdf						
286	Mandate for the Corporate Audit_05.02.2015.pdf						
287	2017-03-06 CM presentation - Banja close out						

Ref	Name	Author/Organisation	Date/Year	Keywords	Document Types	Classification	Language
	report - Banja results (2).pdf						
288	LAJ-HSE.003.A - Security Management Plan.pdf						
289	Photographs- Security entrance control Moglicë.pdf						

Appendix D: Visual Evidence



1. Photo 1. I-1 Information Board in the front of Gramsh Information Office

Photo 2. I-1 Information Boards inside of Gramsh Information Office

Photo 3. I-1 Gramsh Information Office

Photo 4. I-1 Overview of Nikollare Village, the DHP Information Office is in the Centre

Photo 5. I-1 Project Plans presented in Gramsh Information Office

Photo 6. I-3 View of area at Banje remaining to be cleared and rehabilitated by LAJV; spillway in background

Photo 7. I-3 Area at Banje remaining to be cleared and rehabilitated by LAJV

Photo 8. I-3 Right abutment of Moblice, with diversion tunnel at bottom centre of picture

Photo 9. I-3 Approach to Moglice with batching plant on left, narrow gorge on right

Photo 10. I-3 Procedure used by Albstar at Gramsh wastewater treatment plant

Photo 11. I-3 Procedure in preceding photo showing employee signatures to acknowledge HSE procedures

Photo 12. I-3 View of new Banje turbine hall

Photo 13. I-5 Banjë spillway gates

Photo 14. I-5 Banjë spillway

Photo 15. I-5 DHP HSE manager with blasting sign on side of public highway

Photo 16. I-5 Entrance to Moglicë work site without access control

Photo 17. I-5 Public announcement in Gramsh for Banjë reservoir filling

Photo 18. I-5 Public traffic and animals mixing with construction traffic

Photo 19. I-5 Trash boom on Banjë reservoir

Photo 20. I-5 Well-protected explosives store

Photo 21. I-5 Work on Moglicë coffer dam.jpg

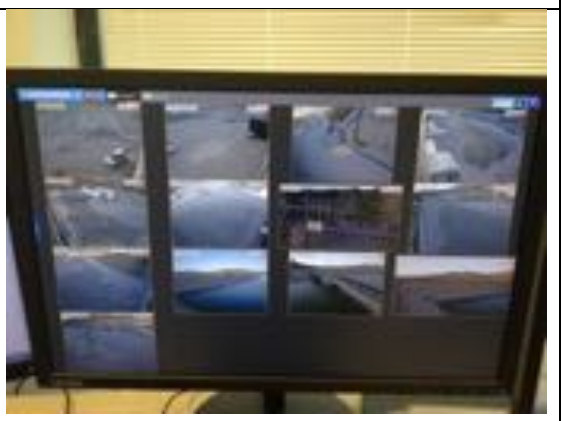


Photo 22. I-5 I-12 Security cameras Banjë power house

Photo 23. I-5 I-12 Security vehicle at access to Moglicë camp

Photo 24. I-7 Fields along Banje South Shore Road

Photo 25. I-7 New Water Supply for Cejure and Drize

Photo 26. I-7 Water Pipe and Foot Bridge to Ceruje

Photo 27. I-7 Example of a bridge crossing the reservoir, part of the north shore Banje-Gramsh replacement road

Photo 28. I-7 Close up of a bridge, part of the Banje-Gramsh replacement road

Photo 29. I-7 An irrigation channel, part of the rehabilitated irrigation scheme at Shushice

Photo 30. I-7 An irrigation channel, part of the rehabilitated irrigation scheme at Shushice

Photo 31. I-9 Affected Household and DHP LSD Manager

Photo 32. I-9 Agricultural Field in Trashovice Village, Concrete Poles Supported by DHP LSD

Photo 33. I-9 Drip Irrigation Pipe and Vine Trees Supported by DHP LSD in Trashovice Village

Photo 34. I-9 Fertiliser under the Olive Trees, Supported by DHP

Photo 35. I-9 Gramsh-Maliq Road under Construction

Photo 36. I-9 Olive Trees Supported by DHP LSD in Gjupe Koder Village

Photo 37. I-9 Overview of Drize Village

Photo 38. I-9 Project Affected Households and their Vegetable in Greenhouse Supported by DHP

	
Photo 39. I-9 Replacement Drize School	Photo 40. I-9 Sage Plantation Supported by DHP
	
Photo 41. I-9 Tomato Grown in the Greenhouse	Photo 42. I-9 Vegetables Grown in the Greenhouse
	
Photo 43. I-9 Village Path to Nikollare	

Photo 44. I-10 a Lumaj Villager and Her Barn

Photo 45. I-10 A New Agricultural Machine Bought by a Lumaj Villager

Photo 46. I-10 A replacement House in Gramsh

Photo 47. I-10 Animal Stalls in Nikollare.JPG

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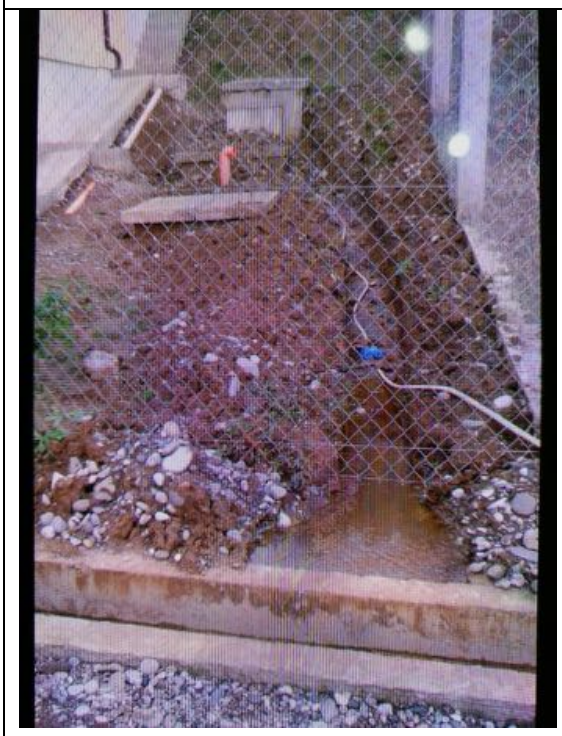

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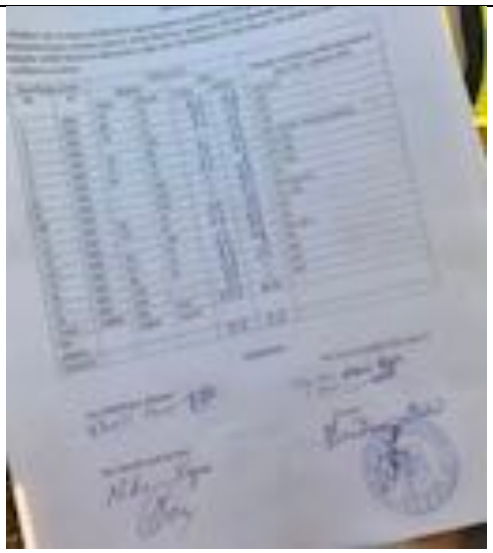

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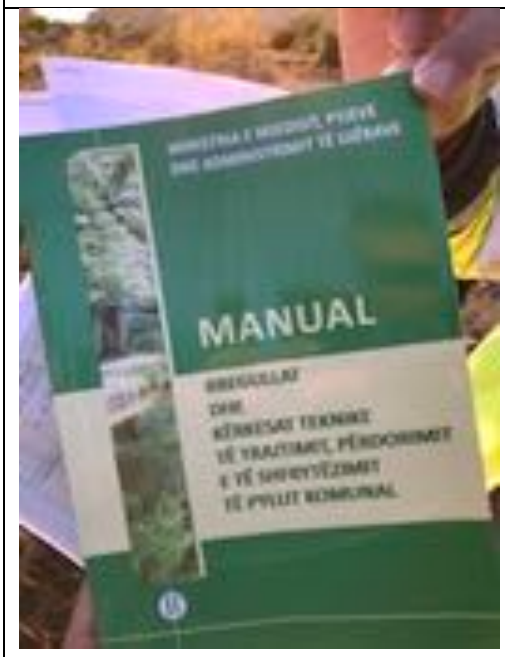

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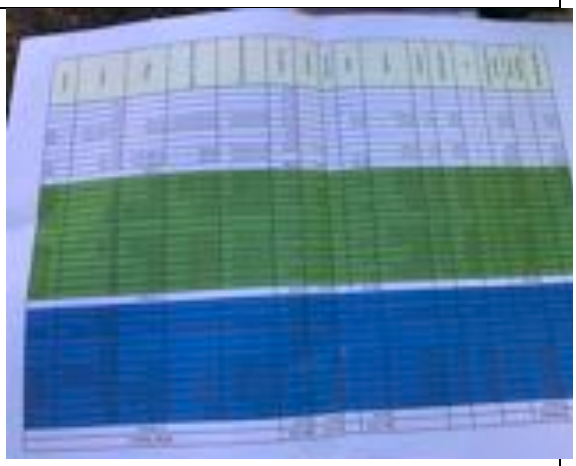

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