



Request for Proposals

Design and realization of museological exhibits for the Buna River Protected Landscape and the Shebenik-Jabllanicë National Park visitor centres in Albania

This RfP is issued in the framework of the IUCN ECARO project “Institutional Support to the Albanian Ministry of Environment, Forest and Water Administration for Sustainable Biodiversity Conservation and Use in Protected Areas and the Management of Waste”.

Issue Date: 29 January 2016

Closing Date and Time: 19 February 2016 at 12 am local time.

IUCN Contact:

Tomasz Pezold
Programme Officer
IUCN ECARO
Tel: +381 11 22 72 411
Fax: +381 11 22 72 531
Tomasz.pezold@iucn.org

PART 1 – INSTRUCTIONS TO PROPOSERS AND PROPOSAL CONDITIONS

1.1. About IUCN

IUCN, International Union for Conservation of Nature, helps the world find pragmatic solutions to our most pressing environment and development challenges.

IUCN's work focuses on valuing and conserving nature, ensuring effective and equitable governance of its use, and deploying nature-based solutions to global challenges in climate, food and development. IUCN supports scientific research, manages field projects all over the world, and brings governments, NGOs, the UN and companies together to develop policy, laws and best practice.

IUCN is the world's oldest and largest global environmental organization, with more than 1,200 government and NGO Members and almost 11,000 volunteer experts in some 160 countries. IUCN's work is supported by over 1,000 staff in 45 offices and hundreds of partners in public, NGO and private sectors around the world.

1.2. Summary of the Requirement

IUCN invites you to submit a Proposal for the design and realization of museological exhibits for the Buna River Protected Landscape and the Shebenik-Jabllanicë National Park visitor centres. Further details of the Requirement are described in Part 2 of this Request for Proposals (RfP).

1.3. The procurement process

The following key dates apply to this RfP:

RfP Issue Date	29 January 2016
Confirmation of Intention to Bid (optional)	n/a
RfP Closing Date and Time	19 February 2016 at 12 am local time
Estimated Contract Award Date	1 March 2016

1.4. Conditions

By participating in this RfP, Proposers accept to be bound by the conditions set out in this RfP. In particular, Proposers acknowledge that:

- it is unacceptable to give or offer any gift or consideration to an employee of IUCN as a reward or inducement in relation to the awarding of a contract and that such action will give IUCN the right to exclude a Proposer from the procurement process; and
- any price fixing or collusion with other legal entities in relation to this RfP give IUCN the right to exclude the Proposer(s) from the procurement process and may constitute an offence.

By issuing this RfP, IUCN is not bound in any way to enter into any contractual or other arrangement with any Proposer. IUCN reserves the right to terminate the procurement process at any time prior to contract award.

IUCN is under no obligation to accept the lowest priced Proposal or any Proposal and reserves the right to reject any Proposal which is incomplete, conditional or not complying with the RfP documents.

It is the Proposer's responsibility to ensure that any consortium member, sub-contractor and adviser also abides by these conditions.

1.5. Queries and questions during the RfP period

Proposers are to direct any queries and questions regarding the RfP content or process to the IUCN Contact indicated above. No other IUCN personnel are to be contacted in relation to this RfP unless directed to do so by the IUCN Contact. IUCN reserves the right to disqualify and reject Proposals from Proposers that do not comply with this requirement. All questions should be submitted in writing to the nominated email address.

Proposers may submit their queries relating to this RfP no later than 9 February 2016 at 12 am local time. Any queries should clearly reference any appropriate paragraph in the RfP and, to the extent possible, should be aggregated rather than sent individually. As far as is reasonably possible, IUCN will respond to all questions submitted before the deadline.

IUCN reserves the right to issue the responses to any questions to all Proposers unless the Proposer asking the question expressly requests, at the time the question is posed, for it to be kept confidential. If IUCN considers the contents of the question and/or the answer not to be confidential, it will inform the Proposer, who will then have the opportunity to withdraw the question.

Any attempt by a Proposer or their appointed advisers inappropriately to influence the contract award process in any way will result in the Proposal being disqualified. Any direct or indirect canvassing by a Proposer or their appointed advisers in relation to this procurement or any attempt to obtain information from any of the employees or agents of IUCN concerning another Proposer may result in disqualification at the discretion of IUCN.

1.6. Amendments to RfP documents

IUCN may amend the RfP documents by issuing notices to that effect to all Proposers and may extend the RfP closing date and time if deemed appropriate.

1.7. Proposers' due diligence

IUCN has taken all reasonable care to ensure that this RfP is accurate; however IUCN gives no representation or warranty as to the accuracy or sufficiency of the contained information. Proposers are required to inform themselves fully of all conditions, risks and other circumstances relating to the proposed Contract prior to submitting a Proposal. Proposed prices shall be deemed to cover the cost of complying with all the conditions of the RfP and of all things necessary for the due and proper performance and completion of the proposed Contract.

1.8. Costs of preparing Proposals

All costs relating to the preparation and submission of a Proposal are the sole responsibility of the Proposer. IUCN shall not pay any Proposer, wholly or in part, for their Proposal.

1.9. Confidentiality

Except as required for the preparation of a Proposal, Proposers must not, without IUCN's prior written consent, disclose to any third party any of the contents of the RfP documents. Proposers must ensure that their employees, consultants and agents also are bound and comply with this condition of confidentiality.

1.10. Proposal lodgement methods and requirements

Proposers must submit 1 copy of their Proposal to IUCN no later than 12 am on 19 February 2016. Interested applicants are requested to submit their technical and financial proposals containing:

- The declaration form in Annexe 1 duly compiled and signed.
- A table listing a maximum of 10 projects executed commenced after January 1st 2010 and relevant to the services being procured. This table shall provide details of the executed projects as follows:
 - Name of Project.
 - Location of the Project.
 - Client(s).
 - Value of the project.
 - Duration.
 - Brief description of the project.
- Multimedia material illustrating a selection of the exhibits executed. Large sized multimedia can be made accessible through web links.
- The two preliminary designs for the two exhibits, prepared building upon information contained in the documents in Annexe 2. These will include:
 - A short description of the two exhibits rationale and structure.
 - The positioning of each element of the exhibit (e.g. displays, dioramas, models, videos etc.) on visitors centres plans available in Annexe 3.
 - A narrative description of each of the above elements.
 - Illustrations of some of the proposed elements (e.g. renderings, pictures of similar materials and panels structure and graphic layout).
- A lump-sum financial offer.

The said Applications must be submitted through a single pdf file e-mailed to Tomasz.pezold@iucn.org. The subject heading of the email shall be "Design and realization of exhibits for the Buna River Protected Landscape and the Shebenik-Jabllanicë National Park visitor centres, in Albania - [Proposer Name]".

Electronic copies are to be submitted in PDF. Proposals must be prepared in English, according to the instructions illustrated in Part 3 of this RfP.

1.11. Late Proposals

Proposers are responsible for submitting their Proposals prior to the RfP closing date and time (see section 1.10) in accordance with the acceptable lodgement requirements described in Clause 13. There will be no allowance made by IUCN for any delays in transmission of the Proposal from Proposer to IUCN. Any Proposal received by IUCN later than the stipulated RfP closing date and time will not be considered.

1.12. Incomplete Proposals

IUCN shall have the right to disqualify any Proposal that is incomplete. IUCN shall also have the right to disqualify Proposals at any stage in the process if it becomes aware of any omission or misrepresentation in response to any question.

1.13. Withdrawals and Changes to the Proposal

Proposals may be withdrawn or changed at any time prior to the RfP closing date and time by written notice to IUCN. No changes or withdrawals will be accepted after the RfP closing date and time.

1.14. Partial and Alternative Proposals

Proposals must be for the entire Requirement.

Proposers must submit one Proposal that complies with the Requirement. Alternative proposals will not be accepted.

1.15. Validity of Proposals

Proposals submitted in response to this RfP are to remain valid for a period of 90 calendar days from the RfP closing date.

1.16. Eligibility

IUCN shall have the right to exclude Proposers from taking part in this procurement procedure if they or persons having powers of representation, decision-making or control over them:

- a) are not registered on the professional or trade register of the State in which they are established;
- b) have been convicted of failing to comply with environmental regulatory requirements or other legal requirements relating to sustainability and environmental protection;
- c) are bankrupt or being wound up, are having their affairs administered by the courts, have entered into an arrangement with creditors, have suspended business activities, are the subject of proceedings concerning those matters, or are in any analogous situation arising from a similar procedure provided for in national legislation or regulations;
- d) have been convicted of an offence concerning their professional conduct by a judgment of a competent authority which has the force of res judicata;
- e) have been found guilty of grave professional misconduct;
- f) are not in compliance with their obligations relating to the payment of social security contributions or the payment of taxes in accordance with the legal provisions of the country in which they are established or with those of Switzerland or those of the country where the contract is to be performed;
- g) have been the subject of a judgment which has the force of res judicata for fraud, corruption, involvement in a criminal organisation, money laundering or any other illegal activity.

1.17. *Evaluation of Proposals*

The evaluation of proposals shall be carried out exclusively with regards to the evaluation criteria and their relative weights specified in part 3 of this RfP.

1.18. *Acceptance of Proposals*

A Proposal will not be considered accepted by IUCN unless and until IUCN has signed a Contract or sent a 'Notice of Award' or Purchase Order in writing to the successful Proposer.

PART 2 – THE REQUIREMENT

Design and realization of exhibits for the Buna River Protected Landscape and the Shebenik-Jabllanicë National Park visitor centres, in Albania.

2.1. BACKGROUND

IUCN ECARO, the International Union for Conservation of Nature in South East Europe, is implementing a protected areas management project in Albania. The project is supported by the Government of Italy through DGCS, the DG for Development Cooperation of the Italian Ministry of Foreign Affairs. The Project, "Institutional Support to the Albanian Ministry of Environment (MoE) for Sustainable Biodiversity Conservation and Use in Protected Areas ", enhances the Ministry's capacity in addressing this important governmental national and sub-national priority. More specifically, this Project is improving the capacities of MoE in planning and managing protected areas and in implementing concrete actions on the ground.

This Project is supporting the MoE in the realization of the foregoing objectives by developing and implementing a systemic and replicable model to plan and manage protected areas. As agreed with counterparts, the project will work at both central and local level, training and working with MoE officials in Tirana and with the regional and local staff responsible of the management of two pilot protected areas, namely the "Buna River and surrounding wetlands protected landscape" and the "Shebenik-Jabllanicë National Park".

The project includes the realization of exhibits for the Buna River Protected Landscape and the Shebenik-Jabllanicë National Park visitor centres.

2.2. TASKS

- A) Design of the two visitors' centres exhibits.
- B) Prepare and install the exhibits elements, such as displays, dioramas, models, videos, panels.
- C) Train the visitors' centres operators for illustrating the exhibition itinerary and maintain/manage it.

2.3. OUTPUTS

- 1) The fully functional visitor's centre exhibit for the Buna River Protected Landscape; all audio materials and texts must be in both English and Albanian.
- 2) The fully functional visitor's centre exhibit for the Shebenik-Jabllanicë National Park; all audio materials and texts must be in both English and Albanian.

Proposers are required to prepare all texts and audio materials in English. Translations of texts into Albanian will be under the responsibility of IUCN.

2.4. TIME FRAMEWORK

The two exhibits will be completed and handed over by the selected Proposer no later than 3 months after the signature of the contract.

PART 3 – THE EVALUATION MODEL

Proposals will be evaluated according to the following approach and using exclusively the information provided in the Proposals:

Services

Evaluation Criteria	Max points obtainable
The Proposer's experience relevant to the assignment	15
Relevance and quality of the submitted selection of multimedia material from previously executed exhibits	35
Quality of the proposed designs for the two exhibits, in terms of, inter alia : <ul style="list-style-type: none"> - Effectiveness of the overall exhibits in illustrating the values and services of the two protected areas ecosystems. - communicative effectiveness and innovative contents of the exhibits' elements - durability and management and maintenance easiness of the exhibits' items 	40
Total Obtainable Points	90

A Proposal that scores 'zero' in any of the Evaluation Criteria will be rejected and therefore not be considered further.

Price

Lump-sum financial offer. Maximum points obtainable: 10 points

The adequacy of the offered lump-sum price (abnormally low) will be preliminarily evaluated: all Proposals which offer corresponds to a lump sum fee lower than 50% of the highest offer of all Proposals that have not been rejected under the Services evaluation illustrated above, will be rejected as abnormally low. The evaluation committee also reserves the right to assess the admissibility of any other offer that, on the basis of specific elements, appears abnormally low.

A Price Score (PS) is assigned to all remaining Proposals (not rejected as abnormally low) by applying the following formula:

$$PS = 10 \times LP/PP$$

where:

PS is the Price Score of the offer under evaluation;

10 is the maximum score in points obtainable in the Price evaluation;

LP is the lowest price offered by all Proposals in the Price evaluation;

PP is the price offered through the Proposal under evaluation.

Total Score

The contract will be awarded to the Proposal which has obtained the highest total score that being the sum of score points obtained in the Services and Price evaluations.

PART 4 – INFORMATION TO BE PROVIDED BY PROPOSERS

By participating in this RfP, Proposers are indicating their acceptance to be bound by the conditions set out in this RfP.

This Part details all the information Proposers are required to provide to IUCN. Submitted information will be used in the evaluation of Proposals. Proposers are discouraged from sending additional information, such as sales brochures, that are not specifically requested.

4.1. Declaration

Please read and sign the Declaration in **Annexe 1** and include this in your proposal.

4.2. Service Proposal

Proposers must state clearly and explicitly that they accept and can meet the ToR and other requirements in Part 2 of this RfP.

The Service Proposal must include the following elements:

- The declaration form in Annexe 1 duly compiled and signed.
- A table listing a maximum of 10 projects executed commenced after January 1st 2010 and relevant to the services being procured. This table shall provide details of the executed projects as follows:
 - Name of Project.
 - Location of the Project.
 - Client(s).
 - Value of the project.
 - Duration.
 - Brief description of the project.
- Multimedia material illustrating a selection of the exhibits executed. Large sized multimedia can be made accessible through web links.
- The two preliminary designs for the two exhibits, prepared building upon information contained in the documents in Annexe 2. These will include:
 - A short description of the two exhibits rationale and structure.
 - The positioning of each element of the exhibit (e.g. displays, dioramas, models, videos etc.) on visitors centres plans available in Annexe 3.
 - A narrative description of each of the above elements.
 - Illustrations of some of the proposed elements (e.g. renderings, pictures of similar materials and panels structure and graphic layout).
- A lump-sum financial offer.

4.3. Pricing information

This clause sets out the information necessary for Proposers to furnish rates and prices as consideration for delivering the Requirement under any resultant Contract.

Prices include all costs

Submitted rates and prices are deemed to include all costs, insurances, taxes, fees, expenses, liabilities, obligations, risk and other things necessary for the performance of the Requirement. Any charge not stated in the Proposal as being additional, will not be allowed as a charge against any transaction under any resultant Contract.

Applicable Goods and Services Taxes

Proposal rates and prices shall be exclusive of Value Added Tax.

Currency of proposed rates and prices

Unless otherwise indicated, all rates and prices submitted by Proposers shall be in Euro.

Rates and Prices

Budget ceiling for the execution of this assignment is 90.000 Euro.

PART 5 – PROPOSED CONTRACT

Attached is the draft proposed Contract for the “Design and realization of exhibits for the Buna River Protected Landscape and the Shebenik-Jabllanicë National Park visitor centres in Albania”. Proposers acknowledge that this is a draft contract and, as such, may be changed by IUCN prior to final Contract signature.

PART 6 – DEFINITIONS

For the purposes of this Request for Proposal (RfP) the following definitions apply:

Contract	Means any contract or other legal commitment that results from this Request for Proposals.
Contractor	Means the entity that forms a Contract with IUCN for provision of the Requirement.
Instructions	Means the instructions and conditions set out in Part 1 of this Request for Proposals.
IUCN	Means IUCN, International Union for Conservation of Nature and Natural Resources.
IUCN Contact	Means the person IUCN has nominated to be used exclusively for contact regarding this Request for Proposals and the Contract.
Proposal	Means a written offer submitted in response to this Request for Proposals.
Proposer	Means an entity that submits, or is invited to submit, a Proposal in response to this Request for Proposals.
Requirement	Means the supply to be made by the Contractor to IUCN in accordance with Part 2 of the RfP.
RfP	Request for Proposals

PROPOSER'S DECLARATION

To be completed and signed by the Proposer
(one from each consortium partner, in the case of a consortium).

Contract for the provision of services for the: **“Design and realization of museological exhibits for the Buna River Protected Landscape and the Shebenik-Jabllanicë National Park visitor centres in Albania”**

1 ORGANISATIONAL INFORMATION

Name/registered name*:	
Previous names / registered names (if different):	
Current trading name:	
Previous trading names (if different):	
Registered number:	
Year of registration:	
Country of registration:	
Address / registered address:	
Telephone:	
Fax:	
E-mail:	
Web-site:	

* In the case of a consortium, please also state the agreed name of the consortium

2 CONTACT POINT

Name*:	
Position:	
Telephone Number:	
Email Address:	
Address:	

3 HOLDING OR PARENT COMPANY

If applicable, please provide details of any holding or parent company of the Proposer.

Name/registered name*:	
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Previous names / registered names (if different):	
Current trading name:	
Previous trading names (if different):	
Registered number:	
Year of registration:	
Country of registration:	
Address / registered address:	

4 STATEMENT

I, the undersigned, being the authorised signatory of the above Proposer (including all consortium partners, in the case of a consortium), hereby declare that we have examined and accept without reserve or restriction the entire contents of the Request for Proposals (RfP) for the services referred to above.

I further declare that we:

- are not in any of the situations excluding us from participating in contracts, as set out in point 1.16 of the Request for Proposals;
- agree to abide by the highest ethical standards and, in particular, declare that we do not have any potential conflict of interest in connection with the contract; a conflict of interest could arise in particular as a result of economic interests, political or national affinities, family or emotional ties, or any other relevant connection or shared interest;
- will inform IUCN, without delay, of any situation considered a conflict of interest or which could give rise to a conflict of interest;
- will inform IUCN immediately if there is any change in the above circumstances at any stage during the tender procedure or during the implementation of the contract;
- have not made and will not make any offer of any type whatsoever from which an advantage can be derived under the contract;
- have not granted and will not grant, have not sought and will not seek, have not attempted and will not attempt to obtain, and have not accepted and will not accept any advantage, financial or in kind, to or from any party whatsoever, constituting an illegal practice or involving corruption, either directly or indirectly, as an incentive or reward relating to award of the contract; and
- fully recognise and accept that any inaccurate or incomplete information deliberately provided in this tender may result in our exclusion from this and other contracts with IUCN.

We offer to provide the services requested in the RfP on the basis of the following documents, which are submitted as specified in the RfP:

- Proposer's Declaration (this document)
- Service Proposal
- Financial Proposal

This Proposal is subject to acceptance within the validity period stipulated in the RfP (point 1.15).

<Signature of authorised representative of the Proposer>

< Name and position of authorised representative of the Proposer >

Request for Proposals

Design and realization of museological exhibits for the
Shebenik-Jabllanicë National Park and the Buna River
Protected Landscape visitor centres, in Albania

ANNEXE 2

Shebenik-Jabllanicë
National Park and
Buna River Protected Landscape
background information

Shebenik-Jabllanicë National Park

PART 1: DESCRIPTION OF THE AREA

This section provides summary background information concerning the location and context of the SJNP, the prevailing regulatory and institutional framework and an overview of the system to be managed.

1.1 Location and Context

Location and Boundaries. The location and boundaries of the SJNP are outlined in DCM No. 640, date 21.05.2008. The Park comprises an irregular strip of land some 30 km long in the north-south direction and 3-12 km wide in the east-west direction, with a total area of 33,928 ha. This is situated between the Macedonia border (to the east); to the north, the road via Stebleve to Librazhd; then from Librazhd southeast to Prenjasi; and from Prenjasi back to the Macedonia border. The coordinates of the central point of the park are: 24,4° Lon and 41,2° Lat.

Local Administration. The bulk of the SJNP is situated within Librazhd District of the Elbasan Region, whilst the northern portion forms part of Bulqizës District of the Dibër Region. It includes parts of seven communes: Trebisht and Stebleve in Bulqizës District and Lunik, Librazhd Qender, Hotolisht, Qukes and Rrajcë within Librazhd District.

Details were obtained for six of the seven constituent communes, excluding Trebisht Commune to the extreme north. Collectively these six communes have a total registered population of 46,258 people, comprising of 11,626 families settled in 51 villages; and cover a total area of 76,989 ha, including 6,996 ha of cultivated land, 11,641ha of agricultural land and 16,746 ha of communal forest land (Tables 3 and 4). Disaggregated data concerning villages, populations and the different types of land included within the SJNP were not obtained.

Table 3. Summary details for six of the seven communes that contribute to the SJNP.

Commune	Number of villages	Number of families	Population	Cultivated land (ha)	Agricultural land (ha)	Communal forest land (ha)	Total land (ha)
Stebleve	7	534	2102	406	1276	1800	11884
Lunik	7	869	4180	718	1249	2470	10841
L. Qender	12	2833	11354	1904	3028	4637	17531
Hotolisht	8	1932	7104	909	1465	3688	17610
Qukes	11	2829	10879	1832	2881	N/A	12388
Rrajcë	7	2629	10639	1227	1742	4151	6735
TOTAL	51	11626	46258	6996	11641	16746	76989

Table 4. List of villages for six of the seven communes that contribute to the SJNP.

Commune	Villages
Stebleve	Borova, Llanga, Moglica, Prodani, Sebishti, Stebleva and Zabzuni
Lunik	Dranovice, Kosharisht, Kostenje, Letem, Lunik, Prevalle and Zgosht
Librazhd Qender	Arrez, Babje, Dorez, Dragostunje, Gizavesh, Kuturman, Librazhd-Katund, Librazhd-Qender, Marinaj, Qarrishte, Spathar and Togež

Hotolisht	Buzgare, Dardhe, Hotolisht, Kokreve, Vehcan, Vulcan, and Xhyra
Qukes	Berzheshite, Dritaj, Fanje, Gurre, Karkavec, Menik, Pishkash, Pishkash-Veri, Qukes-Shkumbin, Qukes Skenderbej and Skroske
Rrajcë	Bardhaj, Katjec, Kotodesh, Rrajcë, Skenderbej, Sutaj and Urake

Neighbouring Areas. The neighbouring areas comprise the remaining portions of the seven constituent communes and, to the east, the adjacent portion of Macedonia.

Regional Context. Librazhd, the district centre, is a small town situated 80 km east of Tirana, and 21 km east of Elbasan (the regional centre) along the national and international highway linking Tirana to Skopje. From Librazhd it is some 43 km to Prrenjas, the second largest town in the district. Historically, mining for minerals such as chromium ore and iron-nickel ores has been a key economic activity for the district. However, since the 1990's many of the mines have closed, due to an inability to meet modern European environmental and health and safety standards, badly affecting life in Librazhd and the Elbasan Region. The largest industry for example, was the steel factory at Elbasan. This was developed and operated by the state during the communist period, but now operates at only a very limited capacity processing recycled metal. There is also a cement factory in Elbasan. A new road from Tirana via an extended tunnel to Elbasan has been constructed and is currently being completed. This will significantly reduce the distance and time to Elbasan and, together with the current upgrading of the Librazhd to Stebleve road, will greatly improve access from Tirana to the Park, and thus opportunities for tourism and other economic activities within the Park.

Relation to National Ecological Network. The SJNP is one of 798 existing protected areas in Albania. Most of these comprise nature monuments of limited extent (n = 750). There are 55 more extensive protected areas covering a total area of 435,795 ha. The SJNP is one of 14 National Parks, but accounts for 18% of the total area of national parks, and 8% of the overall extent of protected areas in Albania. Within the Elbasan Region there are a further six protected areas (Dardhe-Xhyre, Kuturman, Polis, Qafe-Bushi, Sopot and Stravaj), all of which are managed nature reserves, the combined extent of which is 5,245 ha. Other than Qafe-Bushi (500 ha) the remainder are all located within Librazhd District.

The SJNP occupies a strategic position and potentially provides important linkages to the Pogradec Protected Landscape to the south; to the east to the protected area network in Macedonia; to the north to the recently proclaimed Korab-Koritnik Managed Nature Reserve; and to the west to a contiguous complex of protected areas in central Albania comprising Mali i Dajtit National Park, Qafe Shtame National Park and M. Gropa-Bizë-Martanesh Protected Landscape.

The northern part of the Park drains to the north into the Drin River, while the remaining bulk drains to the east via the Shkumbini River. The Shkumbini runs past Librazhd and Elbasan before entering the Adriatic Sea at Karavasta Bay. The Karavasta Lagoon is an important wetland and bird area and has been designated as a National Park and Ramsar Site.

Contribution to International Ecological Networks. The SJNP has been identified as one of 45 Important Plant Areas (IPA) and as one of 25 potential Emerald Sites within Albania (Table 5). The adjacent Jablanica portion of Macedonia has also been identified as an IPA, as a core area for the Macedonia National Ecological Network, and as a priority area for expansion of the existing protected area network in Macedonia. In future the SJNP is thus likely to form part of a much larger transboundary protected area. SJNP will also contribute to the developing Balkan Regional Ecological Network (BREN), to the European Greenbelt and to the Pan European Ecological Network (PEEN). It also contributes to global priority conservation areas as recognised by WWF (Global 200 Ecoregions) and CEPF (Hotspots and Key Biodiversity Areas).

Table 5. Contribution of SJNP to international ecological networks.

International Network	Notes
Important Plant Areas (IPAs)	Global network developed by Plant Life International. SJNP is one of 45 IPAs identified for Albania (AL08 - Rrajcë - Shebenik - Jabllanicë)
Emerald Network/Natura 2000 Network	European networks; Natura2000 covers member states of the European Union and the Emerald Network countries that are outside of the European Union. SJNP is one of 25 potential emerald sites identified for Albania (AL0000022 - National Park Rrajce-Shebenik / Parku Kombetar Shebenik-Jabllanicë; 25,000 ha)
Transboundary Conservation Area	Adjacent Jablanica portion of Macedonia has been identified as an IPA, as a core area for the Macedonia National Ecological Network, and as a priority area for expansion of the existing protected area network in Macedonia
Balkan Regional Ecological Network (BREN)	SJNP forms part of the developing Balkan Regional Ecological Network
European Greenbelt	European network along the route of the former iron curtain, coordinated by European Green Belt Association. The SJNP forms part of the Balkan and European Greenbelt.
WWF Global 200 Ecoregions	Global network. SJNP contributes to two of the Global 200 Priority Ecoregions identified by WWF, namely: Ecoregion 123 (Mediterranean Forests, Woodlands and Scrub) and Ecoregion 180 (Balkan Rivers and Streams Freshwater)
CEPF global hotspots and Key Biodiversity Areas (KBAs)	Global network. Albania forms part of the Southwest Balkans Corridor which was identified as one of six priority corridors within the priority Mediterranean Basin Hotspot

1.2 Regulatory and Institutional Framework

1.2.1 Legal Status

The establishment, management and use of protected areas in Albania is governed by Law no. 8906, dated 6.6.2002 for Protected Areas, and as subsequently amended by Law No. 9868 dated 4.02.2008. The SJNP was established under this law through DCM No. 640, dated 21.05.2008. This decree defines the status, location, area and boundaries of the Park; defines a simple pattern of zonation for the Park and corresponding levels of protection for each zone; allocates responsibility for management of the Park to the MoE; and requires the MoE in collaboration with other stakeholders to develop a draft management plan within one year of establishment of the Park. Motivations for establishment of the SJNP are not provided.

Details of the four prescribed management zones, comprising core, sustainable use, recreational and traditional use zones, are provided in Table 6.

National Parks within Albania are generally afforded Level 2 protection and on this basis are formally equated to IUCN Category II of protected areas. However, according to IUCN at least 75% of the extent of the protected area should be managed as a “National Park”. For the SJNP only 56% is designated as Levels 1 and 2 of protection, with a wider range of uses being permitted for the remainder.

Table 6. Designated management zones for the SJNP.

Zone	Level of Protection	Area (ha)	% of Total Area	Cumulative %
Core	Level 1	14,046	41	41
Sustainable use	Level 2	5,253	15	56
Recreation	Level 3	2,209	7	63
Traditional use	Level 4	12,420	37	100
Total		33,298	100	

1.2.2 Policies and Legislation

Lists of national strategies and plans of direct relevance for development and management of the SJNP are listed in Table 7.

Table 7. International regional and sub-regional agreements, national strategies, laws and bye laws and local plans relevant to management of the SJNP.

Agreements, Policies, Strategies, Legislation, Plans
INTERNATIONAL AGREEMENTS
The protection of world cultural and natural heritage (UNESCO)
International trade in endangered species of wild fauna (CITES)
Conservation of migratory species of wild animals (BONN), including bats and African/Eurasian migratory water birds (AEWA)
Convention on Biological Diversity (CBD)
United Nations Framework Convention on Climate Change (UNFCCC)
United Nations Convention to Combat Desertification (UNCCD)
REGIONAL AND SUB-REGIONAL AGREEMENTS
European Convention for the Protection of the Archaeological Heritage
The Conservation of European Wildlife and Natural Habitats (Bern)
Environmental Impact Assessment in a Transboundary Context
Convention on the Protection and Use of Transboundary Waters and International Lakes
European Landscape Convention
ALBANIA NATIONAL STRATEGIES
National Biodiversity Strategy 2015-2020 (at January 2015 still at the CoM for approval)
Energy (2002)
Forests and pastures (2004)
The second national environmental strategy (2006)
Wetlands (2006)
Environmental cross-cutting strategy (2007)
Agriculture and food (2007)
Intersectoral rural development (2007)
Transport (2008)
Tourism (2008)
Development and integration (2008)
Waste management (2011), and
Water supply and sewerage services (2011)
ALBANIA IMPORTANT LEGISLATION
Water resources, No. 8093 (1996)
The privatization of local hydropower plants, No. 8527 (amended) (1999)
Protected areas, No. 8906 (2002), amended
Environmental protection, No. 10431 of June 2011
Power sector, No. 9072 (2003)
Protection of transboundary lakes, No 9103 (2003)

Agreements, Policies, Strategies, Legislation, Plans
Forest and forestry services, No 9385 (2005) [According to Law on Forests and Forestry Service (No. 9385) of 2005, local government bodies are responsible for drafting forest management plans; establishing technical and administrative bodies to conduct forest inventories; and creating plans to fund investment in forests].
Biodiversity protection, No. 9587 (2006), amended
Protection of the environment from transboundary effects, No. 9700 (2007)
Irrigation and drainage, No. 9860 (2008)
International trade of endangered species of wild fauna and flora, No. 9867 (2008), amended
Protection of the environment from transboundary effects, No. 9700 (2007)
Protection of wild fauna, No. 10006 (2008)
Territory planning, No. 10119 (2009)
Public health, No. 10138 (2009)
Hunting, No. 10253 (2010)
Mining, No. 10304 (2010)
Environmental impact assessment, No. 10440 (2011)
Environmental permitting, No. 10448 (2011)
Integrated waste management, No. 10463 (2011)
ALBANIA BY-LAWS
The transfer of the communal forests and pastures under use and administration (1996)
List of Activities with an Environmental Impact for which an Environmental Permit is Needed, No. 805 (2003)
Functioning of Environmental Inspectorate, No. 24 (2004)
Public Participation in the Environmental Decision-making, No. 994 (2008)
Rules and Procedures for Drafting and Implementing the National Monitoring Programme, No. 1189 (2009)
Organization and Functioning of the Regional Environmental Agencies, No. 2 (2010)
Allocation of Inspection Functions and Technical Functions of Environmental Impact Assessment, Permits and Environmental Monitoring in the Regional Environmental Agencies, No. 139 (2011)
LOCAL PLANS
Elbasan Tourism Action Plan (2009)
Strategic Plan 2012-2016 for the Region of Elbasan (Draft, 2012)
Forest management plan for Rrajcë (1982)
Forest management plan for Qarrishte (2001)
Forest management plan for Stebleve-Letem (2003)

1.2.3 Stakeholders

Key stakeholders for the SJNP include central government, particularly the Biodiversity Directorate of the MoE; the National Agency for Protected Areas of Albania (NAPA); Elbasan regional authorities, the University of Aleksander Xhuvani; the Shkumbini Water Basin Agency; Librazhd District authorities; Municipal and Commune authorities, CBOs and NGOs and the private sector, as shown in Table 8.

Table 8. Stakeholders relevant to the management of the SJNP.

Level	Location	Stakeholders
Central government	Tirana	MoE (Directorate of Biodiversity and Protected Areas)
Central level and Regions	Tirana	NAPA, central office RAPA, regional offices
Elbasan regional authorities	Elbasan	Regional Council Regional Development Office Regional Environmental Agency Regional Agriculture Directorate

Regional supporting institutions	Elbasan	Shkumbini Water Basin Agency University of Aleksander Xhuvani
Librazhd district authorities	Librazhd	District Forest Services Directorate District Agriculture Directorate District Education Directorate District Health Directorate
Local Administration		Librazhd Municipality Administrations of each of the participant Communes
CBOs – District	Librazhd	Librazhd Hunters Association Women Society / Association The Society of Communal Forest Society “Lilium Albanicum”
CBOs - Commune/Village	Qarishta	Society Qarishta
	Fushe Studa	Society Aurora
NGOs - National	Tirana	PPNEA World Vision – Librazhd Branch NGO for a Healthier Albania
NGOs – Local	Librazhd	Dorez
Private sector	Librazhd	Hydropower operators Mine operators Tourism operators Farmers/herders Non-timber forest products collectors

1.2.4 Governance and Management Framework

Key institutions with direct roles in the management of the SJNP include the MoE, through its Directorate of Biodiversity (DB), the NAPA, the newly established SJNP Management Committee, and the Communes.

MoE. In 2005, the competencies for protected areas were transferred to MoE, as being more relevant for nature protection issues. Protected areas are currently among the responsibilities of MoE’s General Directorate of Environmental Policies, namely its two technical directorates, the Directorate of Biodiversity and Protected Areas (DBPA) and the Directorate of Protection and Administration of Forests (DFP).

NAPA. Created in February 2015, the National Agency for Protected Areas did still not exist during the time of the preparation of this plan. Since its establishment the NAPA is responsible for the administration and management of protected areas, which is achieved through its executing agencies, the 12 Regional Administrations for Protected Areas (RAPA). Each regional administration has one director and it is structured in two sections: management and monitoring. The management section consists of a number of experts (2-4) responsible for addressing all management issues related to all the protected areas within the region. The monitoring section consists of a number of rangers assigned to different PA within that region. NAPA has 20 staff working in Tirana and about 204 working at the regional level.

Directorate of Biodiversity and Protected Areas. The DBPA is responsible for the protection of natural habitats and ecosystems, protected areas and nature monuments, and for conservation of wild fauna and flora species. The DBPA comprises two thematic sectors, the Sector for Protected Areas and the Sector of Biodiversity. The total number of staff of the DBPA is seven, comprising the Director and three specialists in either sector. The role of the DBPA is limited to drafting legislation related to the protected areas and policies towards the development and strengthening of the national ecological network; developing the Emerald network and Ramsar site networks; and identifying IBAs and IPAs as well as potential Special Areas of Conservation (SACs) and Special Protection Areas (SPAs).

SJ Management Committee. Pursuant to the 2005 Government Decision on Protected Areas Committees, all protected areas in categories II and IV should have a local management committee, as a mechanism to facilitate the participation of local stakeholders, such as local government representatives, communities, landowners, NGOs and entrepreneurs, in site planning and management. This has recently been affected for the SJNP with the appointment of a management board in March 2013.

Communes. Regulation No. 308, concerning the Transfer of Forests and Pastures in Use to Communes (1996), initiated a process of forest ownership reform from state to communes and decentralization to community-based forestry management. Later, the Law on Forests and Forestry Services of 2005 expanded on this process, addressing more specifically forest land tenure and forest use rights, including community-based forest management and the establishment of forest governance bodies. The protection and development of local forests, pastures and natural resources of local character is also mentioned in Law No. 8652 of 2000 on Decentralization as being an exclusive function of the Commune/Municipality. Based on this framework, there are three kinds of forest tenure: state, local government and private.

Local use rights are granted for a period of 10 years (renewable) and require a management plan to be jointly prepared by the RFSD and the Commune. The Commune is responsible for managing local community use of the forest in a manner that is consistent with the management plan. In some areas, village based Forest User Associations are organized and have subordinate rights of use for activities such as grazing and harvesting firewood and herbal plants, as negotiated. These are grouped under a regional federation and represented at the national level by the National Association of Communal Forest and Pastures (NACFP). These bottom-up initiatives institutionalize community forestry, represent the interests of local stakeholders and have a countervailing role in dealings with government structures.

The process of transferring forests to communes is however still partial, in practice there are many shortcomings. Not all communes have registered their forest areas; Forest Users Associations are in place in some areas but not everywhere; communes complain of a lack of clear responsibilities on forest management, particularly whether the commune or the DFSD has primary authority regarding use of forest resources; and revenues from the use of forest resources are limited, partly due to the extent of uncontrolled informal and illegal activities, such that communes lack the necessary funds to implement their mandate to manage forest areas, with the result that this responsibility is only a burden.

1.3 Park's ecological and socio-economic system

This section provides a descriptive overview of the ecological and socio-economic systems which characterizes the SJNP. This is presented in the form of text and summary diagrams showing the main components of the overall ecosystem and ecosystem services as well as principal interlinkages

1.3.1 Overview

The area of Shebenik-Jabllanicë ranges in elevation from 300 to 2200 m above sea level. Being located to the interior of the country the area has a Continental rather than Mediterranean climate. The mean annual temperature is 13.4 °C, and annual precipitation is about 1,360 mm per year.

Three types of land units are identified: rangeland (natural areas), aquatic environments and artificial habitats. The rangelands are divided into six components: three types of forests; shrublands and dwarf shrubs; grasslands; and landslides and badlands. The three main forest types are deciduous thermophilous forests (oak forests dominated by *Quercus frainetto* and *Quercus cerris* or by *Quercus petraea* and forests dominated by *Carpinus orientalis* or *Platanus orientalis*), Coniferous forests (mainly dominated by *Pinus nigra*, *Pinus peuce* and *Abies alba*), and deciduous mesophilous forests (beech forests dominated by *Fagus sylvatica*). The oak forests occupy the lower lying areas and the beech and coniferous forests the higher areas (Map 8). The grasslands are predominantly found at high altitudes above the tree line.

The main aquatic environments comprise groundwater (springs) and surface waters in the forms of lakes, streams and scattered bogs. There are a number of natural alpine lakes as well as some artificial lakes and ponds which have been constructed for purposes of irrigation (lakes) and fish production (ponds). Numerous streams originate within the SJNP, and drain mainly to the east to the Shkumbini River. The extreme northern portion forms part of the headwaters of the Black Drin.

The principal modified lands include settlements/villages (buildings), crop lands (agricultural lands), roads and hydropower schemes. There are also a number of cultural “hot spots”.

Plant communities and habitats. The diversity of geological substrata (mainly alluvial sediments, calcareous and ultramaphic igneous rocks) and of geomorphological features, combined with the large altitudinal gradient and on-going traditional human activities are the main factors that affect the presence and distribution of plant communities and species within the SJNP. Altogether a total of 65 vegetation types have been identified and mapped. Among them 24 have been considered of particular importance for conservation based on two criteria: correspondence with habitats listed in the Habitat Directive 92/43/CEE (hereinafter H.D.) or significantly high species richness.

In the basal belt of the SJNP (300-1000m) three main vegetation series can be found: the riparian vegetation along the narrow valleys on alluvial sediments, the termophilous deciduous forests, with successional related grasslands and shrublands, on conglomerates and sandstones, and those on igneous rocks.

Riparian vegetation covers a small area and is scattered within the SJNP, generally located in deep undisturbed gorges. We found only few little fragments of *Platanus orientalis* woodlands (Type 19) along some tributaries of Shkumbini River, while along its course, just outside the border of the Park, they are widespread and larger. These woodlands colonise poorly stabilised alluvial deposits of large rivers, gravel or boulder deposits of permanent or temporary torrents, spring basins, and, particularly, the bottom of steep, shady gorges. They have been included in the H.D. habitat “92C0- *Platanus orientalis* and *Liquidambar orientalis* woods” that has been identified for Greece, southern Balkans, Sicily and several Aegean islands.

The other riverine vegetation found in the SJNP is a thicket growing on streams’ gravels of with an alpine, summer high, flow regime dominated by *Salix elaeagnos* and/or *S. purpurea* (H.D.: 3240-Alpine rivers and their ligneous vegetation with *Salix elaeagnos*), that is widespread in the Alpine and Balkan valleys.

The termophilous deciduous forests that develop in the basal belt on conglomerate and sandstone rocks are the sub-continental thermo-xerophilous *Quercus frainetto*-*Q. cerris* forests and woodlands (Types 20 and 21) and the *Carpinus orientalis* forests and woodlands (Types 8 and 9). The first one has been classified as the H.D. habitat “91M0 Pannonian-Balkan turkey oak- sessile oak forests”, described for the Pannonic hills and plains of the western and southern Romania, northern Balkans and Greece and supra-Mediterranean Anatolia. This habitat is generally distributed between 300-700m in the SJNP. The *Carpinus orientalis* forests are located on the escarpments of the conglomerate or calcareous hills where the steep slopes or the anthropic disturbance cause soil degradation and dryer conditions. The two types of forests are located in the most densely inhabited area, and they are often degraded due to overexploitation. This is the main cause of soil erosion, due to the decrease in tree cover, and the consequent spread of landslides in this area (Type 13).

The grasslands in serial contact with these forests are generally a complex mosaic of meadows of *Molinio-Arrhenatheretea*, on the deeper and more humid soil (Type 14), and dryer steppic pastures of *Festuco-Brometea* (Type 15), both intensely grazed. The only exceptions are the plant communities mowed for collecting hay, which, as in Fusha e Studës plain, could have a significant floristic richness.

On the igneous substrata, in contact with the higher mountain and sub-alpine belts, we have a different type of termophilous deciduous forests and woodlands characterised by *Quercus petraea* (Types 22 and 23), which are in a better conservation status. They are widespread in the eastern and southern Balkans in

sites with deep and slightly acid soil. These forests have been intensively and largely cut in the SJNP and substituted by *Buxus sempervirens* and/or *Juniperus oxycedrus* communities (Type 6).

In this area, outcrops of serpentine rocks can also be found. Soils derived from serpentine rocks are toxic to many plants, because of the high levels of nickel, chromium, and cobalt; growth of many plants is also inhibited by low levels of potassium and phosphorus and a low ratio of calcium/magnesium. Restoring forest vegetation on this poor and toxic soil is very difficult, and previous attempts have failed. Furthermore secondary vegetation hosts a very distinctive flora, with specialised, slow-growing species often with limited distribution as *Alyssum bertolonii*, *Festucopsis serpentine*, *Euphorbia spinosa* and *Sedum serpentine*.

The mountain belt (1000-1800m) is dominated by the *Fagus sylvatica* forests and related grassland and shrubland communities. Beech forests are very widespread in Europe. Those present in Shebenik (Types 10, 11 and 12) correspond to the habitat “91K0-Illyrian *Fagus sylvatica* forests (Aremonio-Fagion)”, described for the Dinarides, with outliers and irradiations in the south-eastern Alps, the south-western Carpathians and in the mid-Pannonic hills, where they are considered an important centre of species diversity. Noteworthy is the pristine *Fagus sylvatica* forest that grows along the Bushtrices Valley, in the southern part of the SJNP. It hosts monumental trees of impressive size and has great floristic richness and has been proposed as a world heritage site of UNESCO.

At the fringes of beech forests, on deep and rich soils, interesting communities can develop dominated by *Geranium sylvaticum* and/or *Geum rivale* (6430-Hydrophilous tall herb fringe communities of plains and of the mountain to alpine levels). Within the beech forests small and scattered stands of the rare and endemic *Pinus peuce* can be found (“95A0 - High oro-Mediterranean pine forests”). Differently from beech that can grow on various geological substrata, *Pinus peuce* woodlands (Type 17) can be found only on serpentine or other ultramaphic igneous rocks.

In the highest altitudinal belt (1800-2250m), above the tree line, two different land units, one on limestone and the other on igneous rocks can be found. On igneous rock, in the core of the SJNP, around the highest peaks of Shebenik, the landscape is dominated by a mosaic of *Sesleria coerulans* grasslands (“62D0-Oro-Moesian acidophilous grasslands”) with dwarf shrub heaths of *Erica carnea* (“4060-Alpine and Boreal heaths”) along the steeper and stony slopes, and *Nardus stricta* communities in more flat areas with a deeper and more humid soil (Type 2). Embedded in this dominant matrix there are others important localized habitats: mesophilous serpentine habitats along the slopes with *Festucopsis serpentine*, *Bornmuellera baldaccii*, *Genista hassertiana*, and rare and scattered wetland habitats (“7230-Alkaline fens”) near fens or little bogs, with *Carex* sp.pl., *Pinguicula balcanica* and *Nartheciumscardicum*.

Calcareous grassland vegetation is dominated by *Festuca paniculata* or *Bromus erectus* communities (“6210-Semi-natural dry grasslands and scrubland facies on calcareous substrates (*Festuco-Brometalia*)”) with the presence of interesting small communities with *Astragalus sirinicus* (4090-Endemic oro-Mediterranean heaths with gorse), and *Stipa* spp.(Type 3) often occurring together with the shrublands of “5130-*Juniperus communis* formations on heaths or calcareous grasslands”. On limestone peaks and ridges important chasmophytic communities (8210-Calcareous rocky slopes with chasmophytic vegetation) dominated by rare species such as *Saxifraga* spp., *Ramonda serbica*, *Potentilla apennina*, and *Moltkia petraea*, occur. Other important habitats are the plant communities scattered on the rare scree of the area (“8140-Eastern Mediterranean scree”).

Plant species of conservation interest (target plant species). The diversity of geological substrata, with very ancient rock formation, since Palaeozoic time, the location at the interface between different biogeographic region (Balkan mountains, Mediterranean region and the southern limit of continental Europe), the large altitudinal gradient and the persistence of rare Tertiary relicts in Balkan refugia during the Glacial eras determined also a rich and interesting flora. We identified 26 target plant species of particular conservation interest. Of these, 23 are included in the red data list for Albania, including one that is Critically Endangered, five that are Endangered and seven that are considered Vulnerable. Two species are listed on the red data list for Europe and five on the world red data list. Eight of the listed species are endemic or sub-endemic to Albania and a further seven species are Balkan endemics.

Fauna. The SJNP provide crucial habitat for numerous important animal species. Among the numerous mammal species, six are listed in Annex II of the Bern Convention requiring strict protection; fourteen other species are listed in the Red Book of Albanian fauna. Species of special conservation interest are: brown bear (*Ursus arctos*), wolf (*Canis lupus*), lynx (*Lynx lynx*), otter (*Lutra lutra*), wild cat (*Felis silvestris*), chamois (*Rupicapra rupicapra*), wood mouse (*Apodemus sylvaticus*) and lesser white-toothed shrew (*Crocidura suaveolens*).

The SJNP supports a diverse bird community due to its wide altitudinal range and impressive variety of habitat types. The first ornithological field survey ever conducted in the Park (over one week during June 2013), covered approximately 11% of the area and 16 habitat types. A total of 84 bird species were recorded of which 67 % are listed in Annex II of the Bern Convention ("Strictly protected fauna species"). Particularly high bird diversities were found in mixed traditional farmland, dry calcareous grasslands with *Juniperus communis* shrublands and alpine pastures, which also harboured the highest number of specialist species. Primary forests could also be included in this category, but these could only be marginally surveyed due to their scarcity. Lowest species richness was found in one of the most abundant habitats of the Park, secondary *Fagus sylvatica* forests, where generalist species such as Chaffinch, Blackcap and Chiffchaff dominate. The most notable specialist species recorded during the one-week survey were Golden Eagle, Hobby, Rock Partridge, Nightjar, Rock Thrush, White-backed Woodpecker and Black Woodpecker, Wryneck, Hoopoe, Sombre Tit, Cirl Bunting, Black-headed Bunting and Corn Bunting. It is essential to note the importance of the still widely practiced traditional agriculture methods, not only for their very high bird diversity (in a European context), but also for a remarkably high abundance of species such as the Red-backed Shrike, Skylark, Corn Bunting, Cuckoo and Cirl Bunting. Within and around the villages big flocks of House Sparrows and Tree Sparrows are of particular interest as they are both declining severely across Europe. It is highly expected that further surveys will report many more bird species, especially the most threatened and scarce ones which are also the most difficult to confirm.

Haixhiu (1998) recorded 10 species of reptiles in the SJNP Park, we collected opportunistic observations of 14 species (field surveys 2013), and IUCN reference 15 species. Eight species of amphibians are reported in the web site "Balcanica.info - Amphibians and Reptiles of the Balkans" (<http://en.balcanica.info/35-0>), five species were recorded in our field activities and ten amphibians are listed by IUCN Red List. A complete and standardized survey of the Park is needed in order to complete the check lists and the species distributions. Some of the rare species of herpetofauna are: *Testudo hermanni*, *Algyroides nigropunctatus*, *Coronella austriaca*, *Coluber jugularis*, *Coluber najadum* and *Natrix tessellata*. Four species of amphibians and 11 species of reptiles belong to the Bern Convention's.

Fourteen fish species have been recorded from the waters of the Shkumbini, Rrapun, Qarrishte and Bushtrice rivers. These include five species that are on the IUCN Red List: *Anguilla anguilla* (Critically Endangered), *Oxynoemacheilus pindus* (Vulnerable), *Barbus meridionalis* and *Rutilus rubilio* (both Near Threatened), (NT) and *Salmo trutta macrostigma* (DD). A single introduced species (*Pseudorasbora parva*) is reported in published literature.

Infrastructures. The small towns of Librazhd (population about 11,500) and Prrenjasi (population about 8,500) are the main urban areas in the vicinity of the Park. The principal road infrastructure skirts along the southern, eastern and northern borders of the Park from Prrenjasi to Librazhd to Stebleve. The portion from Librazhd to Prrenjasi is a good surfaced road, while the existing dirt track between Librazhd and Steblevë is currently in the process of being upgraded to tarmac. This will greatly improve access to the northern sector of the Park and ultimately to the Macedonian border. Elsewhere within the Park there are few roads, all of which comprise dirt roads and are in a very poor state. There is a railway line that follows the main road along the southern and eastern boundaries of the Park, linking Pogradec via Prrenjasi and Librazhd to Elbasan and beyond.

Socioeconomy. The Elbasan region is known to harbour chromite and iron-nickel resources. The nature of the chromium deposits lend themselves to small scale operations, including a number of mines that have previously operated within the Park. The nickel resources have potential to attract larger scales of investment. In addition to mines there is also quarrying of stone and collection of gravel from the Shkumbini River, particularly in the vicinity of Librazhd.

Private companies have already requested permission from communes and ministries for the construction of nine hydropower plants, out of which four are already under construction and two are already in operation.

The human population in the Park is relatively stable in number. Due to limited livelihood options there is a relatively high rate of out-migration, particularly of young people seeking work elsewhere, mainly outside of the country. Most families are engaged in traditional agricultural activities such as crop and livestock production. Other livelihood activities include forest based activities (timber and firewood), the collection of medicinal plants, tourism and fish production.

Agricultural activities and agricultural and livestock products are most important in the economy and social life of the communities. Agricultural land is under family ownership. The district used to have a nationally famous tobacco industry but this has now collapsed. Livestock and poultry numbers are increasing, through use of modern technology and means interlinked with traditional ones. Livestock breeding is dominated by goats and sheep, whilst *gjedhi* cattle play an important role in the flatter areas. It is estimated that the available pastures in the SJNP will not be able to sustainably maintain the present number of livestock in the area.

Forests and other biological resources make an important contribution to community welfare. The SJNP is rich in medicinal, aromatic and nutritional plants. These are mainly collected from the wild, but for some species production is augmented through cultivation. In some areas employment in the forestry sector and in the collection and treatment of medicinal and aromatic plants are essential economic activities. Wood and timber from natural forests are the primary energy source for cooking and heating and material for rural construction. The forest area also is used for harvesting of fodder and grazing of livestock.

Presently, there is little in the way of tourism activities, although this is beginning to change, for example through the construction of new tourism accommodation in Stebleve. This process can be expected to further increase once the tunnel between Tirana and Elbasan and upgrading of the Librazhd-Stebleve main access road have been completed.

Cultural features. The area has an extended history of settlement dating back to the Bronze and Iron Ages. During the Roman Occupation the Via Egnatia was constructed to link Rome with Constantinople. This route was of great importance for commerce and runs through the district, now being the route for the modern highway connecting Tirana with Skopje via Lake Ohrid. Following the Fall of Rome in 476CE the region fell under the power of the Eastern Roman Empire centred at Constantinople until the arrival of the Turks from about 1415 onwards. The local prince Gjergj Arianit Komneni fought alongside Skanderbeg, and was noted by Ottoman chroniclers for his ferocious resistance to the advances of the Turks. During the latter years of the Ottoman Empire, due to the harshness of the terrain and the talent for diplomacy and nepotism exercised by local leaders, the region came to achieve a significant degree of autonomy.

Cultural resources include caves, some with paintings on the walls; historical sites such as Skanderbeg's staircase and table; the Ethnographic Museum in Librazhd; and traditional skills relating to the carving of wood products, mill stones, and stone sculptures; the construction of stone houses, and the manufacture of wool blankets and traditional clothes (characterized in this area by bright colours).

1.3.2 Ecosystem Structure, Ecosystem Services and Economic Activities

Key structural components and inter-linkages of the Shebenik-Jabllanicë National Park ecological and socio-economic systems are shown in Figures 1.1 (main ecosystem), 1.2 (fauna), 1.3 (climate, land and water cycle) and 1.4 (economic system). These four diagrams represent a composite ecosystem model, as they are inter-linked through shared components (i.e. have the same name) that are represented in two or more diagrams. In the remainder of this document, when a specific reference is made to any of the ecosystem components identified in the above diagrams, the related text is highlighted as blue-underlined (e.g. [forests](#)).

The main components of the general ecosystem diagram (Figure 1.1) are:

- [climate](#),
- [land](#), comprising:
 - [rangeland](#) ([forests](#), [shrublands-dwarf shrubs](#), [landslides and badlands](#))
 - [aquatic environments](#) ([streams](#), [lakes](#))
 - [artificial land](#) ([roads](#), [agriculture land](#), [buildings](#), [hydropower](#))
- [fauna](#), comprising (Figure 1.2):
 - [wildlife](#)
 - [livestock](#)
- [fire](#)

together with [ecosystem services](#) in the form of:

- [regulating services](#)
 - [climate regulation](#) ([air quality regulation](#), [geological risk](#))
- [provisioning services](#) ([water use](#), [crops](#), [livestock products](#), [timber forest products](#), [non-timber forest products](#), [fish catch](#))
- [cultural services](#) ([tourism attractions](#)).

Key climate and water cycle components (Figure 1.3) include:

- [climate](#) ([temperature](#) and [rainfall](#));
- [water resources](#) in the form of [groundwater](#) ([springs](#)) and [surface waters](#) ([lakes](#) and [streams](#)); and
- [water use](#) in the form of [drinking water](#), [irrigation systems](#), [hydropower](#) and [aquaculture](#).

The main components of the economic system diagram (Figure 1.4) are:

- [agriculture, livestock breeding and agro-industry](#),
- [forest-related economic activities](#) ([timber forest products](#), [non-timber forest products](#)),
- [tourism](#),
- [fisheries and aquaculture](#),
- [building and construction](#), and
- [mining and quarrying](#).

Figure 1.1 - Main ecosystem

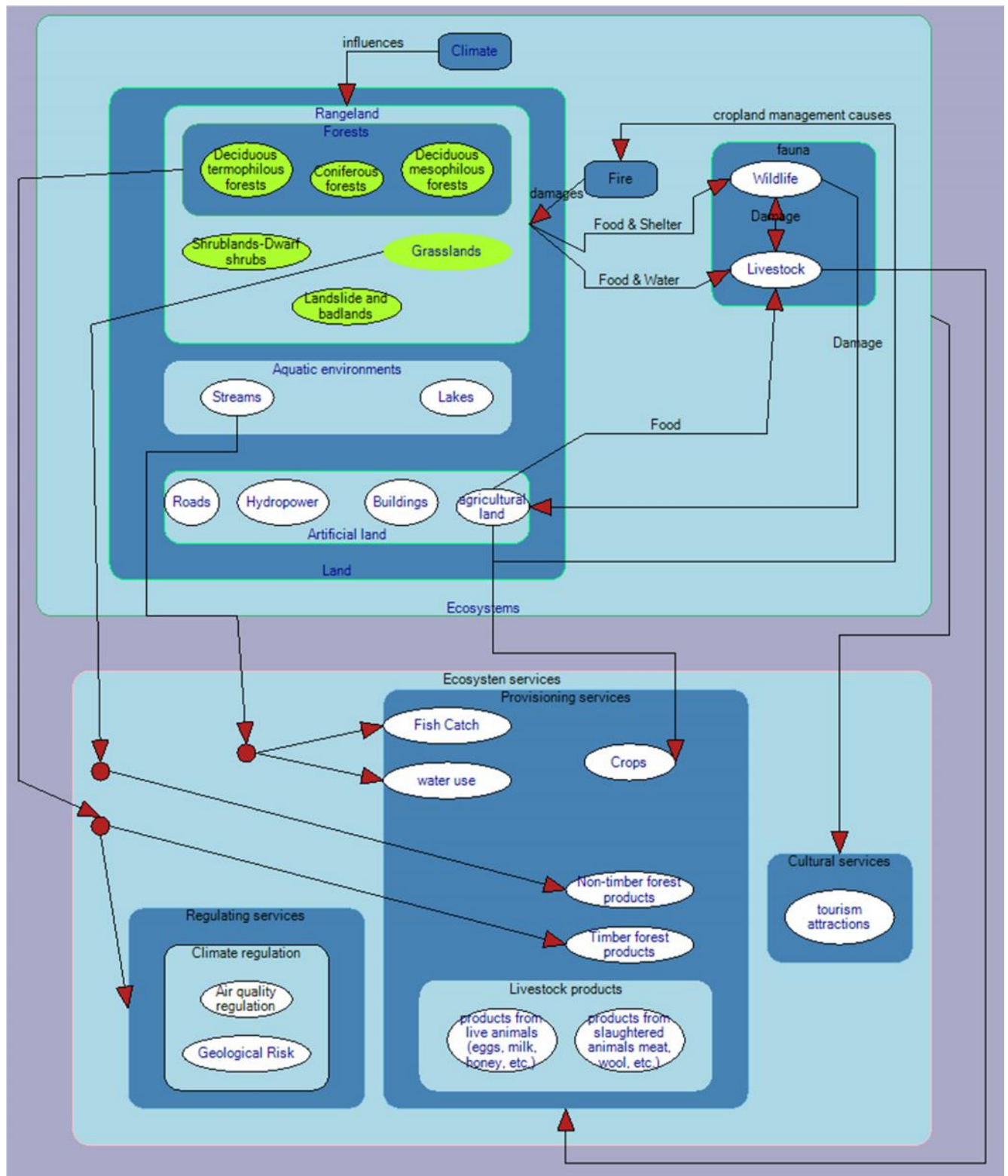


Figure 1.2 - Fauna

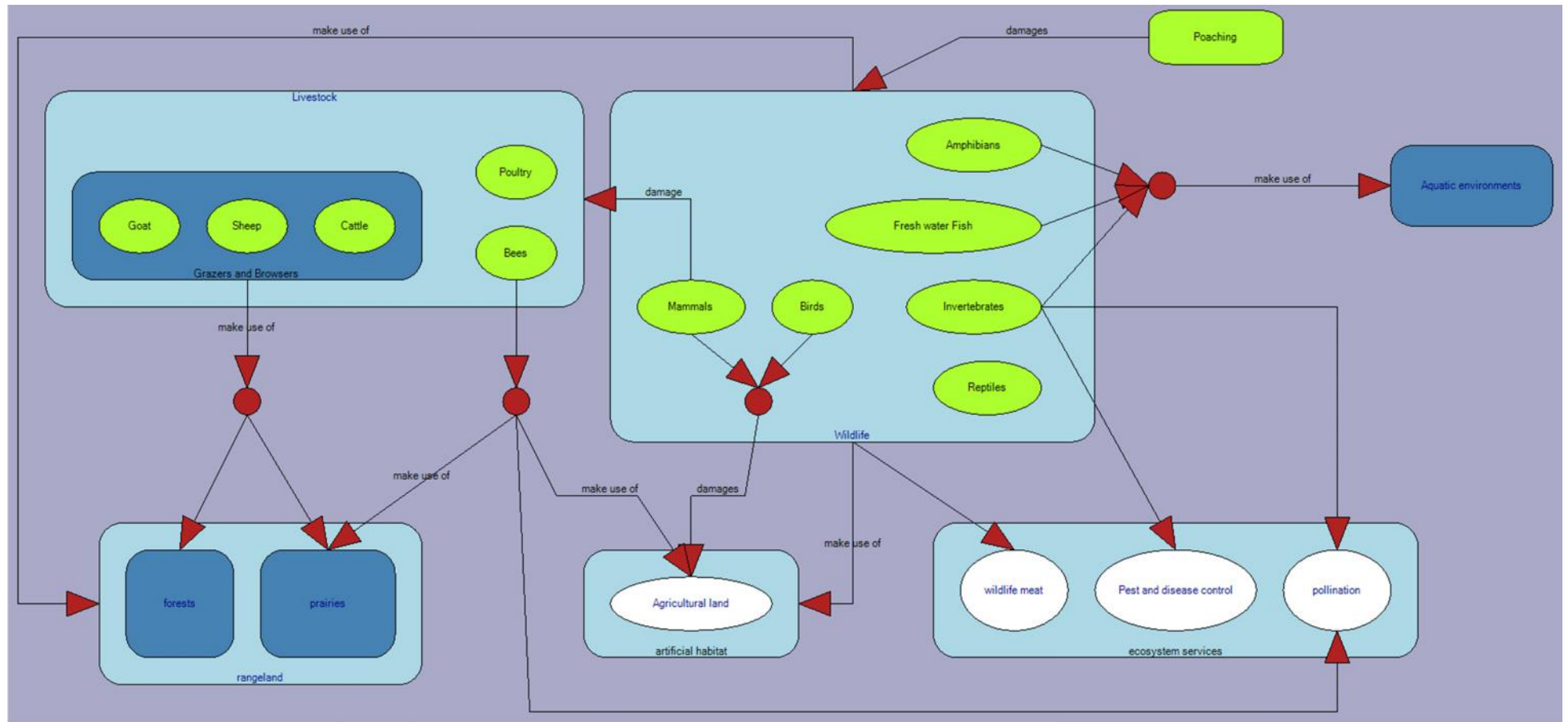


Figure 1.3 - Climate, land and water cycle

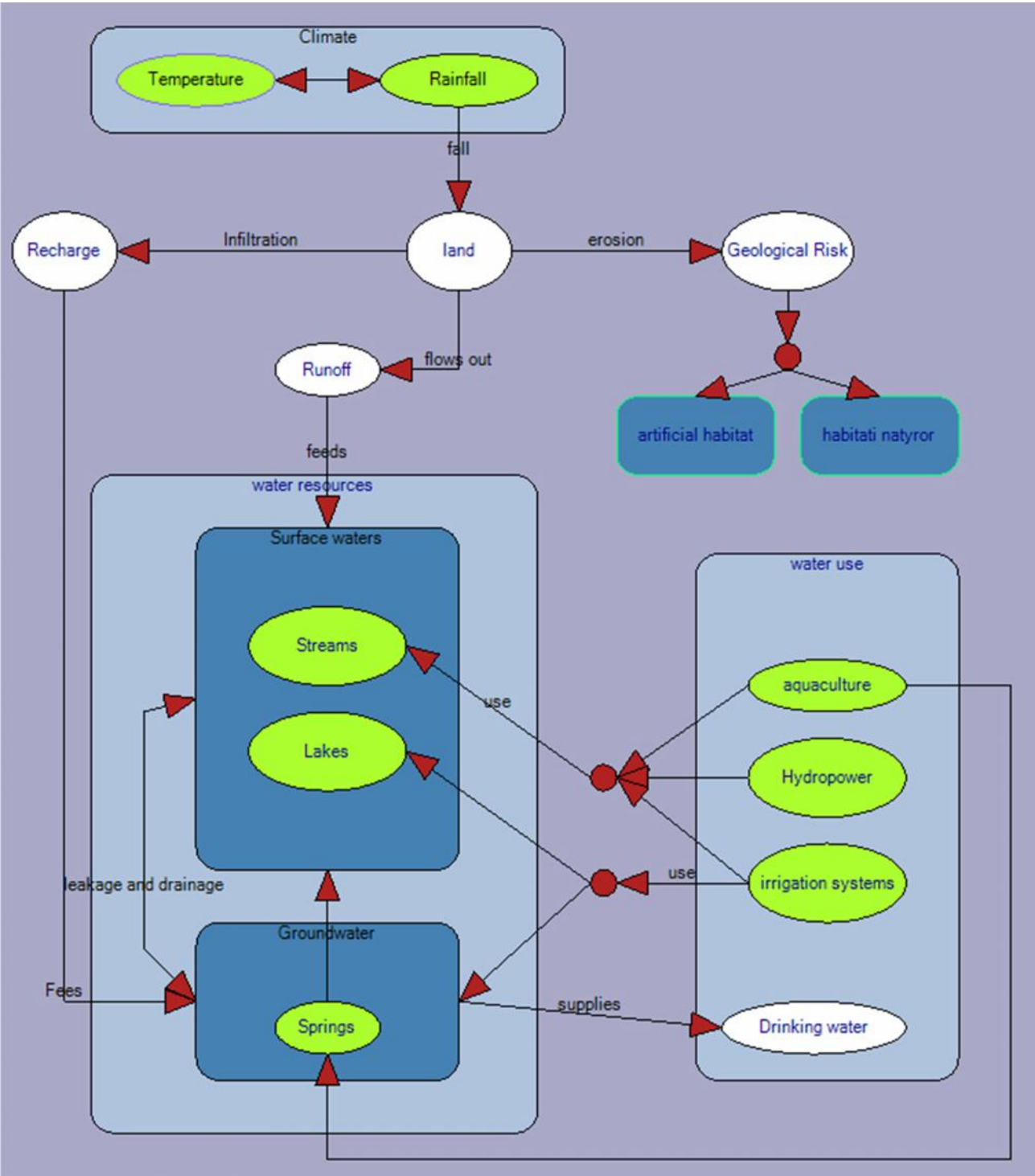
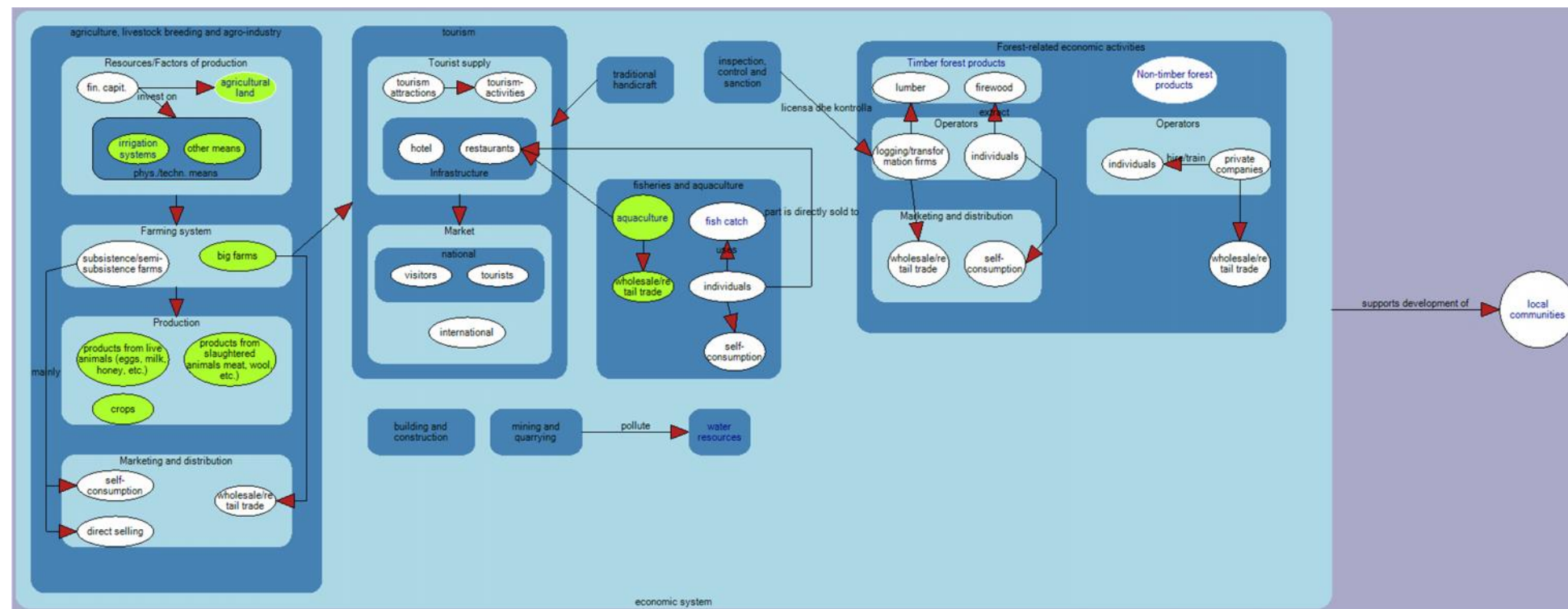


Figure 1.4 - Socio-economic system of the Shebenik-Jabllanicë National Park



PART 2: ASSESSMENT OF VALUES AND THREATS

This section identifies: the key features that must be protected in order to maintain the significance of the protected area (values); the factors that threaten these key values, assets and opportunities (threats); and the limitations and strengths of the current institutional framework. Values and threats are described in relation to the natural, socio-economic and cultural systems.

2.1 Assessment of Values

Natural System

Key values, assets and opportunities of the natural system ([aquatic environments](#), [grasslands](#), [shrublands-dwarf shrubs](#) and [forests](#)) include important habitats; high plant and animal diversity, and the occurrence of a high number of endemic and threatened plant and animal species. We consider important habitats to be those listed in the Habitat Directive 92/43/CEE (thus important for the conservation of biodiversity in Europe), those restricted to Albania or with limited distribution, rare or hosting important species.

Aquatic Environments. The SJNP comprises an important catchment area for the Shkumbini River, characterised by the presence of numerous alpine [lakes](#), [springs](#), [streams](#) and rivers. These [aquatic environments](#) provide essential habitat for a diversity of aquatic species ([wildlife](#)) including otters [mammals](#), and the endemic brown trout [fresh water fish](#). Scattered throughout the Park, mainly in the highest igneous central area, near fens and little bogs or at the edge of alpine streams, important wetland communities can be found (listed in Habitat Directive as “7230-Alkaline fens”), which host rare Balkan plant species with a localised distribution. *Ranunculus tricophyllus* community (3260-Water courses of plain to montane levels with the *Ranunculon fluitantis* and *Callitricho-Batrachion* vegetation) has been found only in the small Dragan lake.

The water resources are also important for local livelihoods: for primary purposes (especially springs, [drinking water](#)), for irrigation ([irrigation systems](#)), for [aquaculture](#), for [hydropower](#) developments, and as part of the attractiveness of the landscape and thus for [tourism](#) attractions.

Grasslands. In the basal altitudinal belt (400-1000 m) grasslands are generally disturbed by intense grazing, with not relevant biodiversity values except for the Fusha e Studës plains, where meadows with a huge floristic richness are found.

In the mountain and sub-alpine belt (1000-1800 m) the most important grassland communities are those which grow on toxic serpentine substratum. They form a complex mosaic with shrublands dominated by *Buxus sempervirens* and *Juniperus oxycedrus* created by wood harvesting, fire and grazing. This selective substratum hosts communities with a very distinctive Balkan flora characterised by specialised, slow-growing species often with limited distribution. Other important habitats are the steppic, calcareous, dry grasslands of *Festuco-Brometea* that generally grow in contact with *Juniperus communis* shrublands or *Fagus sylvatica* forests: they are listed in the Habitat Directive as “6210- Semi-natural dry grasslands and scrubland facies on calcareous substrates (*Festuco-Brometalia*)”. Among these grasslands, in stony and rocky substrata, on a very thin and dry soil, scattered *Astragalus sirinicus* communities can be found (4090-Endemic oro-Mediterranean heaths with gorse). On deeper and more rich soils, at the edge of *Fagus sylvatica* forests, others interesting communities, dominated by the rare *Geranium sylvaticum* and *Geum rivale* (6430-Hydrophilous tall herb fringe communities of plains and of the mountain to alpine levels), can be found.

Above the tree line (1800-2250 m) several important grassland communities can be found. On the igneous outcrops, in the core of the Park, the steep and stony slopes of the highest peaks are dominated by a mosaic of Balkan-Pannonian *Sesleria coerulans* grasslands and dwarf shrub heaths with *Erica carnea* (“4060-Alpine and Boreal heaths”), both rich in important species. The plateau is dominated by the *Nardus*

stricta grasslands, probably to be included in the habitat “6230-Species-rich *Nardus* grasslands, on siliceous substrates in mountain areas (and submountane areas, in Continental Europe)”.

These grasslands also provide essential habitat for a variety of animals ([wildlife](#)), including chamois ([mammals](#)) and raptors such as the golden eagle ([birds](#)). From a socio-economic perspective grasslands provide important pasture resources for [livestock](#) and are important areas for the collection of medicinal plants ([non-timber forest products](#)) such as *Thymus sp.*, *Gentiana lutea*, *Sideritis syriaca*, *Hypericum perforatum*, *Satureja montana* and *Origanum vulgare*.

Shrublands-dwarf shrubs. *Juniperus communis* shrublands of the basal and mountain belts, on limestone, are listed in the H.D. as “5130- *Juniperus communis* formations on heaths or calcareous grasslands”. In the highest sector of the Park, generally above the tree line, dwarf shrubs characterised by *Erica carnea* and *Genista hassertiana* (“4060-Alpine and Boreal heaths”) are found, and are rich in endemic or sub-endemic species.

Forests. Almost all typologies of forests can be classified as habitat of the Habitat Directive. The fragments of riparian vegetation dominated by *Platanus orientalis* that grows in the basal area (400-1000 m) are classified as “92C0- *Platanus orientalis* and *Liquidambar orientalis* woods”. The [deciduous termophilous forests](#) (Row 12) with *Quercus frainetto*-*Q. cerris*, on conglomerate and sandstone, and those with *Q. petraea*, on igneous rock, are described as “91M0 Pannonian-Balkan turkey oak- sessile oak forests”. These are important habitats often degraded by over exploitation that determines an open canopy which can contribute to soil erosion and the loss of nemoral species.

In the mountain and sub-alpine belt (1000-1800m) the vegetation is dominated by *Fagus sylvatica* forests listed as “91K0-Illyrian *Fagus sylvatica* forests (Aremonio-Fagion)”. Here, generally at higher altitude and on igneous substratum, the rare Balkan *Pinus peuce* forests (95A0- High oro-Mediterranean pine forests) can also be found.

Forests provide important habitat for a number of medium to large [mammals](#), including Balkan lynx, wolf and brown bear. Forests are also important sources of timber ([lumber](#)), [firewood](#) and a variety of [non-timber forest products](#) including berries and juniper; [deciduous termophilous forests](#) (oak forests) in particular are important as a source of winter fodder for [livestock](#) ; and forests play an important part in regulating water quality (e.g. through reducing the presence of heavy metals in run off) and flow regimes; reducing the risk of landslides through enhancing water infiltration and stabilizing the soil ([geological risk](#) ; reducing the extent of soil erosion; and serving as a carbon sink, thus reducing the risk of climate change; and serve as one of the key [tourism](#) attraction through contributing to the scenic beauty of the landscape.

High Species Diversity

The biodiversity of the SJNP is a complex and dynamic result of several factors: the wide altitudinal range (roughly from 300 to 2200 m), and the land use that, combined with large gradients of geological, topographical and climatic diversity, have determined the presence of 25 habitats capable of supporting a diverse array of plants and animals. The field data collection of 2013 focused on birds and the presence of large and medium sized mammals. Using 20 camera traps, we were able to collect presence data of 11 mammals out of all 20 previously recorded mammals. Iconic species, such as Brown Bear, Wolf and Wild Cat, were photographed in an unexpected high number of cameras, raising the question whether their abundance is possibly as remarkable as their presence. During the bird survey, 84 bird species were recorded inside the park, which shows that their abundance and diversity is positively influenced by the traditional farming and negatively influenced by woodland management. The high number of bird and mammal species and the variety of habitats strongly indicate that the diversity of other wildlife taxa, such as invertebrates, is also likely to be remarkable, and therefore the wildlife biodiversity of the Park is not only of national but also international importance.

Important plant species. The habitats listed above host a rich flora with several important plant species according to different criteria: endemic species or species with restricted distribution, threatened (listed in IUCN Red List of Albania, Europe or the World) or with economic value. Altogether, a total of 26 species of conservation interest have been identified. Based on the presence of threatened and endemic/restricted range plant species, overall species richness and the presence of nationally or regionally important habitats, the SJNP has been identified as one of 45 Important Plant Areas within the country.

In the small and scattered wetlands, including springs, bogs and alpine streams, important Balkan species with restricted distribution as *Pinguicula balcanica*, *Nartheciumscardicum* (Balkan endemic, Vulnerable A1b) and *Soldanella pindicola* can be found.

The serpentine communities growing in the mountain and alpine belt, on outcrops of this toxic and selective igneous rock, host a rare flora with important Balkan and threatened species as *Alyssum bertolonii* (Balkan endemic, Lower Risk cd), *Sedum serpentini* (Lower Risk nt) and, more rarely, *Festucopsis serpentini* (Endemic, Not Evaluated). At the same altitude, but on calcareous rocks, we found the steppic-dry grasslands of *Festuco-Brometea* which hosts some species collected as medicinal plants by local people, such as *Thymus spp.*, *Gentiana lutea*, *Sideritis syriaca*, *Hypericum perforatum*, *Satureja montana* and *Origanum vulgare*.

In the grasslands and dwarf-shrubs, above the tree line, on igneous rocks, other rare and threatened species with limited distribution can be found: *Alkanna scardica* (Sub-endemic, Lower Risk cd), *Anthyllis vulneraria* subsp. *bulgarica* (sub-endemic), *Bornmuellera baldacci* (Endangered A1b), *Genista hassertiana* (Sub-endemic, Near Endangered), *Gentiana lutea* (Endangered A1b), *Lilium albanicum* (Sub-endemic, Critically Endangered 1b) juveniles of *Pinus peuce* (Balkan endemic, Endangered A1b) and *Viola magellensis*. On limestone peaks and ridges chasmophytic communities, dominated by rare and threatened species such as *Moltkia petraea*, *Potentilla apennina* and *Ramonda serbica* (Balkan endemic, Vulnerable A1b) grow.

Important animal species. Important animal species include a number of iconic and threatened medium and large mammals such as the brown bear (*Ursus arctos*), the Endangered Balkan lynx (*Lynx lynx martinoi*), the Near Threatened otter (*Lutra lutra*) plus the wolf (*Canis lupus*), wild cat (*Felis silvestris*), roe deer (*Capreolus capreolus*) and chamois (*Rupicapra rupicapra*). The recorded high abundance of some species of birds, some of which are protected under focused programmes in other European countries due to declining populations, highlighted a very large amount of suitable habitat, for example, *Lanius collurio*, *Luscinia megarhyncho*, and *Serinus serinus* (all Bern Convention Category II). Other important animal species include raptors, such as the golden eagle (*Aquila chrysaetos*); the tortoise *Testudo hermanni* and the four-lined snake *Elaphe quatuorelineata* (both Near Threatened); and fish species such as *Anguilla anguilla* (Critically Endangered), *Oxynoemacheilus pindus* (Vulnerable) and *Barbus meridionalis* and *Rutilus rubilio* (both Near Threatened).

Socio-economic System

Socio-economic values of the Shebenik-Jabllanicë National Park are linked to the sustainable use of the services its ecosystem can provide. These include the provision of [water resources](#); the presence of a variety of potential [tourism attractions](#), related to both natural and cultural values of the Park; a traditional [farming system](#) with a good potential for eco-labelled high-quality niche products; the production of timber and a variety of non-timber forest products ([timber forest products](#) and [non-timber forest products](#)); as well as potential for fish production through [aquaculture](#).

Cultural System

The Park includes a number of historical sites, such as Scanderbeg's staircase and Scanderbeg's table, and cultural features, such as natural caves (e.g. "Glacier", "Christ's" and the "Eremit" caves), some of which have paintings on the walls. Other cultural values include the ancient village of Qutesi and the continued

existence of traditional skills relating to aspects such as the carving of wood products; the manufacture of stone items such as mill stones; construction of stone houses; the manufacture of traditional costumes and the performance of traditional dances. The Ethnographic Museum in Librazhd, although substantially damaged, represents an important local repository of cultural history and knowledge. An annual cultural fair is held in Stebleve. Cultural features are considered collectively as part of [tourism attractions](#).

2.2 Assessment of Threats

Natural System

Key direct threats to the natural system include modification and loss of habitat, overuse of resources, and pollution. No specific threats have been identified as to the presence of alien invasive species or, as yet, relating to climate change.

Threats to [water resources](#) include the diversion of [streams](#) and [springs](#) for [hydropower](#) development, which will impact directly on aquatic organisms ([amphibians](#); [fresh water fish](#), ; and [invertebrates](#)); and localized pollution resulting from the direct discharge of wastewater into [streams](#) and from mining activities ([mining and quarrying](#) -causing heavy metal pollution).

Other potential issues such as the siltation of water courses and pollution resulting from the dumping of solid waste were not identified as being a threat in this area.

Overharvesting and/or destructive harvesting of medicinal plants was identified as a threat to certain species associated with grassland communities, particularly the Albania endemic *Gentiana lutea* ([non-timber forest products](#)).

The main threat to [forests](#) is deforestation due to harvesting for fodder, timber and firewood ([forest-related economic activities](#)), particularly in [deciduous termophilous forests](#). [Fire](#) was considered to have previously contributed to deforestation of the sub-montane portion ([deciduous termophilous forests](#)), but currently is not considered to be a serious problem

Plant and animal species are primarily threatened by inappropriate forms of use and/or overuse of resources, for example, due to the diversion of [water resources](#) for [hydropower](#) ;overharvesting and destructive methods of collection of medicinal plants ([non-timber forest products](#)), harvesting of forest resources ([firewood](#) and [lumber](#))and [fire](#); illegal fishing practices ([fish catch](#)); hunting and poaching of wildlife ([wildlife meat](#)); and extraction of peat (used as fuel) from the small bogs scattered in the Park. No threats were identified relating to grazing by livestock, nor to other development activities such as the construction of [roads](#), [buildings](#) (including [infrastructure](#) for tourism, Row 46). However, it should be noted that no information was available concerning [roads](#) or [buildings](#) or tourist infrastructure.

According to local information and preliminary qualitative data [mining and quarrying](#) cause localized water heavy metal pollution in water bodies.

Socio-economic System

Broader constraints faced by local communities include poor socio-economic conditions; lack of local and regional employment opportunities; limited potential of livelihood options; poorly developed infrastructure and services (lack of safe water supplies; limited access to electricity; poor road access; poor access to education and health facilities), and difficulties in accessing finance and markets. People are thus forced to rely heavily on the use of natural resources, so providing pressure for damaging and unsustainable uses of resources.

Apart from threats relating to the unsustainable use of resources, such as over grazing by livestock; over harvesting of fodder, firewood and timber resources; damaging methods and unsustainable levels of

harvesting of plants; poaching of wildlife; damaging techniques and unsustainable levels of fish harvesting, the main threats to livelihoods concern limited access to financial resources and markets resulting in limited scale of economic activities. Tourism, in particular, represents a vital economic opportunity but one which can easily be eroded through uncontrolled and insensitive development that could rapidly reduce the attractiveness of the area to visitors. Sector specific threats include:

Water([water use](#)) – limited development of safe water supplies ([drinking water](#); the diversion of water from [streams](#) for [hydropower](#) projects); and pollution of [streams](#) due to the release of untreated wastewaters and [mining and quarrying](#).

Agriculture ([agriculture, livestock breeding and agro-industry](#)) – in addition to strong natural resource constraints for crop production (steep slopes, shallow and infertile soils, high rates of erosion), there are significant problems relating to access to credit ([financial capital](#);[farming systems](#), such as land fragmentation, limited scales of production and limited mechanization, and difficulties in accessing markets ([marketing and distribution](#)). Damage by wild bears to [crops](#) has been reported and predation of [livestock](#) by large [mammals](#) such as wolves was noted as a potential threat, but no quantitative data exists regarding these aspects.

[Forest-related economic activities](#) – previous impacts due to [fire](#) and deforestation relating to localised overuse of resources (such as medicinal plants ([non-timber forest products](#)), and fodder, firewood and timber resources.

[Tourism](#) – The small number of visitors represents the primary constraint to the tourism sector at present although the sector is perceived as having good potential ([market](#)). In particular the upgrading of the Tirana-Elbasan and the Librazhd- Stebleve roads will greatly improve access to the Park and is likely to be accompanied by a marked increase in visitors to the Park. Other potential threats include the loss of natural values ([tourism attractions](#)) through activities such as deforestation, hunting and poaching of wildlife and damaging methods and unsustainable levels of fish harvesting, as well as uncontrolled development of infrastructure ([roads](#), [construction](#), [mining and quarrying](#), [hydropower](#) and tourism [infrastructure](#)).

[Fisheries and aquaculture](#) – The main constraints to [aquaculture](#) are high costs of production, particularly the high cost of feed and poor access to markets ([wholesale/retail trade](#)), coupled with the widespread use of illegal fishing methods by [individuals](#).

Cultural System

No specific threats were noted as regards cultural values, although restoration of the ethnographic museum in Librazhd was recognised as providing an important opportunity towards the maintenance of local cultural values.

Buna River Protected Landscape

PART 1: DESCRIPTION OF THE AREA

This section provides summary background information concerning the location and context of the BRPL, the prevailing regulatory and institutional framework and an overview of the system to be managed.

1.1 Location and Context

Location and Boundaries. The location and boundaries of the BRPL are outlined in DCM No. 682, dated 02.11.2005. The Protected Landscape comprises an irregular block of land some 20 km long in the north-south direction and 6-15 km wide in the east-west direction, with a total area of 22,251ha. This is situated to the extreme northwest of Albania, against the border with Montenegro (to the west), and between Lake Shkodra (to the north) and the Adriatic Sea (to the south).

Local Administration. The bulk of the BRPL is situated within Shkodër District of the Shkodër Region, with a minor portion to the southeast forming part of the neighbouring Lezhe District of the Lezhe Region (Map 2). It includes parts of eight communes: [Rrethinat](#), [Ana e Malit](#), [Dajç](#), [Velipojë](#), [Bërdicë](#) and [Bushat](#) within [Shkodër](#) District, plus small parts of [Balldren i Ri](#) and [Shëngjin](#) Communes in [Lezhë](#) District. Collectively these eight communes cover a total area of 49,294 ha (or 493 km²), and have a total population (2011) of 68,128 people, settled in 74 villages (Table 2).

Table 2. Summary details for the eight communes that contribute to the BRPL.

Commune	District	Number of villages	Population 2011	Total land (ha)
Rrethinat	Shkodër	10	21,199	5,561
Ana e Malit	Shkodër	10	3,858	4,880
Dajç	Shkodër	11	3,885	5,282
Velipojë	Shkodër	10	5,031	7,221
Bërdicë	Shkodër	6	5,773	3,747
Bushat	Shkodër	14	14,149	8,164
Balldren i Ri	Lezhë	8	6,142	7,730
Shëngjin	Lezhë	5	8,091	6,709
TOTAL		74	68,128	49,294

Neighbouring Areas. The neighbouring areas comprise: to the north and east, the remaining portions of Ana e Malit, [Bërdicë](#), [Bushat](#), [Balldren i Ri](#) and [Shëngjin](#) (plus [Shkodër](#)) Communes; to the south the Adriatic sea, and to the west the adjacent portion of Montenegro.

Regional Context. Shkodër is the principal city in the north of Albania. Founded in the 4th Century BC it is one of the oldest and most historic places in Albania, as well as an important economic and cultural centre. Through the ages it has retained its status as a major city in the Western Balkans due to its strategic positioning close to the Adriatic Sea and Italian ports, combined with land routes to other important cities

and towns in the region. Within Albania, Shkodër is located 35 km north of Shëngjin Port, 80 km North of Rinas International Airport, 90 km North of Tirana and 110 km North of Durres Port and, in the region, it is 60 km to Podgorica (Montenegro) and 260 km to Pristina (Kosovo). Regional integration is recognized as being essential to future economic development of this broader area. In addition to being a regional commercial centre, Shkodër is also an important university town.

Surrounded by mountains, Shkodër is located on the shores of Lake Shkodra, the largest lake in the western Balkans, at the junction of the Drin and Buna Rivers. Lake Shkodra straddles the boundary between Albania and Montenegro, and together with the contiguous BRPL, is recognised as an important transboundary conservation area. In addition to agricultural livelihoods, there is a growing tourism industry based on the scenic combination of mountains, lake and sea, combined with the rich historical and cultural resources of the area, including a growing culinary reputation. The nearby popular coastal destination of [Velipojë](#) is the closest coastal access for much of Kosovo.

Relation to National Ecological Network. The BRPL is one of 798 existing protected areas in Albania. Most of these comprise nature monuments of limited extent (n = 750). There are 55 more extensive protected areas covering a total area of 435,795 ha. The BRPL is one of five Protected Landscapes. It accounts for 5% the overall extent of protected areas in Albania.

Within the Shkodër and Lezhë Regions there are a further six protected areas: Thethi National Park (2,630 ha) and the Bjeshka e Oroshit Protected Area with Multiple Use (4,745 ha) in the mountainous interior and, in the coastal lowlands, Lake Shkodër (26,535 ha), Kune-Vain-Tale (4,393 ha), Berzanë (880 ha) and Patok-Fushëkuqe- Ishem (5,001 ha) Managed Natural Reserves. Lake Shkodra Managed Nature Reserve is the largest of these, and together with the adjacent portion of Montenegro and the BRPL forms part of a much larger transboundary conservation area. The BRPL together with the Kune-Vain-Tale and Patok-Fushëkuqe-Ishem Managed Natural Reserves form part of a network of reserves situated in the coastal wetlands of Albania.

Contribution to International Ecological Networks. The BRPL has been identified as one of 45 Important Plant Areas (IPA); one of 25 potential Emerald Sites; one of 15 Important Bird Areas (IBAs); and forms part of one of three designated Ramsar sites within Albania (Table 3). It forms part of a much larger contiguous transboundary conservation area that includes the adjacent Lake Shkodra Managed Natural Reserve (26,535 ha) in Albania and the Skadar Lake National Park (40,000 ha) of Montenegro. The BRPL will also contribute to the developing Balkan Regional Ecological Network (BREN), to the European Greenbelt and to the Pan European Ecological Network (PEEN). It also contributes to global priority conservation areas as recognised by WWF (Global 200 Ecoregions) and CEPF (Hotspots and Key Biodiversity Areas).

Table 3. Contribution of BRPL to international ecological networks.

International Network	Notes
Important Plant Areas (IPAs)	Global network developed by Plantlife International. BRPL is one of 45 IPAs identified for Albania (AL02 - Skoda Lake and Buna River)
Emerald Network/Natura 2000 Network	European networks; Natura2000 covers member states of the European Union and the Emerald Network countries that are outside of the European Union. BRPL forms part of one of 25 potential emerald sites identified for Albania (AL0000021 - Protected Landscape of Buna river - Velipojë / Peizazhi i Mbrojtur i lumit te Bunes- Velipojë ; 25,000 ha)
Important Bird Areas (IBAs)	Global network developed by BirdLife International. BRPL includes one of 15 IBAs identified for Albania (AL013 – Velipojë)
Ramsar Sites	Global network of key sites for the conservation and sustainable use of wetlands. BRPL forms part of one of three designated Ramsar sites in Albania (an additional eight potential sites have been identified)

Transboundary Conservation Area	The BRPL forms part of a much larger transboundary conservation area that includes the adjacent Lake Shkodra Managed Natural Reserve (26,535 ha) in Albania and the Skadar Lake National Park (40,000 ha) of Montenegro.
Balkan Regional Ecological Network (BREN)	BRPL forms part of the developing Balkan Regional Ecological Network
European Greenbelt	European network along the route of the former iron curtain, coordinated by IUCN, EURONATUR and BUND. The BRPL forms part of the Balkan and European Greenbelt.
Pan European Ecological Network (PEEN)	Pan European network covering 55 countries and coordinated by ECNC with support from UNEP. BRPL forms part of PEEN.
WWF Global 200 Ecoregions	Global network. BRPL contributes to three of the Global 200 Priority Ecoregions identified by WWF, namely: Ecoregion 123 (Mediterranean Forests, Woodlands and Scrub); Ecoregion 180 (Balkan Rivers and Streams Freshwater) and Ecoregion 199 (Mediterranean Sea)
CEPF global hotspots and Key Biodiversity Areas (KBAs)	Global network. Albania forms part of the Southwest Balkans Corridor which was identified as one of six priority corridors within the priority Mediterranean Basin Hotspot

1.2 Regulatory and Institutional Framework

1.2.1 Legal Status

The establishment, management and use of protected areas in Albania is governed by Law no. 8906, dated 6.6.2002 for Protected Areas, and as subsequently amended by Law No. 9868 dated 4.02.2008. The BRPL was established under this law through DCM No. 682, dated 02.11.2005. This decree defines the status, location, area and boundaries of the Park; defines a simple pattern of zonation for the Park and corresponding levels of protection for each zone; allocates responsibility for management of the Park to the MoE; and requires the MoE in collaboration with other stakeholders to develop a draft management plan within one year of establishment of the Park. Motivations for establishment of the BRPL are not provided.

Details of the four prescribed management zones, comprising core, sustainable use, recreational and traditional use zones, are provided in Table 4. Given that the bulk of the area is zoned for traditional use (Level 4 protection), this best equates to IUCN Category VI – protected areas with sustainable use of natural resources.

Table 4. Designated management zones for the BRPL.

Zone (map units)	Level of Protection	Area (ha)	% of Total Area	Cumulative %
Core (1a + 1b + 1c)	Level 1	<u>4103</u> (2434+1296+376)		
Buffer / Sustainable use (2a + 2b)	Level 2	<u>6971</u> (12414+5735)		
Transition/Recreation (3)	Level 3	<u>266</u>		100%
Total		22,251	100%	100%

1.2.2 Policies and Legislation

Lists of national strategies and plans of direct relevance for development and management of the BRPL are listed in Table 5.

Table 5. International regional and sub-regional agreements, national strategies, laws and bye laws and local plans relevant to management of the BRPL.

Agreements, Policies, Strategies, Legislation, Plans
INTERNATIONAL AGREEMENTS
The protection of world cultural and natural heritage (UNESCO)
International trade in endangered species of wild fauna (CITES)
Conservation of migratory species of wild animals (BONN), including bats and African/Eurasian migratory waterbirds (AEWA)
Convention on Biological Diversity (CBD)
United Nations Framework Convention on Climate Change (UNFCCC)
United Nations Convention to Combat Desertification (UNCCD)
REGIONAL AND SUB-REGIONAL AGREEMENTS
European Convention for the Protection of the Archaeological Heritage
The Conservation of European Wildlife and Natural Habitats (Bern)
Environmental Impact Assessment in a Transboundary Context
Convention on the Protection and Use of Transboundary Waters and International Lakes
European Landscape Convention
ALBANIA NATIONAL STRATEGIES
Biodiversity (2000)
Energy (2002)
Forests and pastures (2004)
The second national environmental strategy (2006)
Wetlands (2006)
Environmental cross-cutting strategy (2007)
Agriculture and food (2007)
Intersectoral rural development (2007)
Transport (2008)
Tourism (2008)
Development and integration (2008)
Waste management (2011), and
Water supply and sewerage services (2011)
ALBANIA IMPORTANT LEGISLATION
Water resources, No. 8093 (1996)
The privatization of local hydropower plants, No. 8527 (amended) (1999)
Protected areas, No. 8906 (2002)
Environmental protection, No. 8934
Environmental impact assessment, No. 8990 (2003)
Power sector, No. 9072 (2003)
Protection of transboundary lakes, No 9103 (2003)
Forest and forestry services, No 9385 (2005)
Biodiversity protection, No. 9587 (2006)
Protection of the environment from transboundary effects, No. 9700 (2007)
Irrigation and drainage, No. 9860 (2008)
International trade of endangered species of wild fauna and flora, No. 9867 (2008)
Environmental protection, No. 9890 (2008)
Protection of wild fauna, No. 10006 (2008)
Territory planning, No. 10119 (2009)
Public health, No. 10138 (2009)
Hunting, No. 10253 (2010)
Mining, No. 10304 (2010)

Agreements, Policies, Strategies, Legislation, Plans
Environmental protection, No. 10431 (2011)
Environmental impact assessment, No. 10440 (2011)
Environmental permitting, No. 10448 (2011)
Integrated waste management, No. 10463 (2011)
ALBANIA BYE LAWS
The transfer of the communal forests and pastures under use and administration (1996)
List of Activities with an Environmental Impact for which an Environmental Permit is Needed, No. 805 (2003)
Functioning of Environmental Inspectorate, No. 24 (2004)
Public Participation in the Environmental Decision-making, No. 994 (2008)
Rules and Procedures for Drafting and Implementing the National Monitoring Programme, No. 1189 (2009)
Organization and Functioning of the Regional Environmental Agencies, No. 2 (2010)
Allocation of Inspection Functions and Technical Functions of Environmental Impact Assessment, Permits and Environmental Monitoring in the Regional Environmental Agencies, No. 139 (2011)
LOCAL PLANS
Local Environmental Action Plan (LEAP) for Shkodra (2005)
Strategy of Economic Development of Shkodra Municipality (2005)
Regional Development Plan for Shkodra – Lezha, 2005 – 2020 (2006)
Strategic Action Plan for Skadar/Shkodra Lake – Albania and Montenegro (2007)
Strategic Plan for Sustainable Tourism in Shkodra Region (2012-2020) (2012)
Velipojë Local Development Plan (2005)
Local Environmental Action Plan – Commune of Velipojë (2006)

1.2.3 Stakeholders

Key stakeholders for the BRPL include central government, particularly the Biodiversity Directorate of the MoE; the National Agency for Protected Areas of Albania (NAPA); Shkodër and Lezhë regional authorities, the University of Shkodra; the Drini – Buna Water Basin Agency; Shkodër and Lezhë District authorities; Municipal and Commune authorities, CBOs and NGOs and the private sector, as shown in Table 6.

Table 6. Stakeholders relevant to the management of the BRPL.

Level	Location	Stakeholders
Central government	Tirana	MoE (Directorate of Biodiversity and Protected Areas)
Central level and Regions	Tirana	NAPA, central office RAPA, regional offices
Regional authorities	Shkodër and Lezhë	Regional Council Regional Development Office Regional Environmental Agency Regional Agriculture Directorate
Regional supporting institutions	Shkodër	Drini – Buna Water Basin Agency University of Shkodra University of Tirana
District authorities	Shkodër and Lezhë	District Forest Services Directorate District Agriculture Directorate District Education Directorate District Health Directorate
Local Administration		Shkodër and Lezhë Municipalities Administrations of each of the participant Communes

CBOs – District	Shkodër	Fisheries Management Organization for Lake Shkodra Hunting Associations
CBOs - Commune/Village	Communes	Fishermens Associations Hunting Associations
NGOs – National	Tirana	INCA
Private sector	Shkodër and Lezhë	Tourism operators

1.2.4 Governance and Management Framework

Key institutions with direct roles in the management of the BRPL include the MoE, through its Directorate of Biodiversity (DB), the NAPA and the Communes.

MoE. In 2005, the competencies for protected areas were transferred to MoE, as being more relevant for nature protection issues. Protected areas are currently among the responsibilities of MoE's General Directorate of Environmental Policies, namely its two technical directorates, the Directorate of Biodiversity (DB) and the Directorate of Forests and Pastures (DFP).

NAPA. Created in February 2015, the National Agency for Protected Areas did still not exist during the time of the preparation of this plan. Since its establishment the NAPA is responsible for the administration and management of protected areas, which is achieved through its executing agencies, the 12 Regional Administrations for Protected Areas (RAPA). Each regional administration has one director and it is structured in two sections: management and monitoring. The management section consists of a number of experts (2-4) responsible for addressing all management issues related to all the protected areas within the region. The monitoring section consists of a number of rangers assigned to different PA within that region. NAPA has 20 staff working in Tirana and about 204 working at the regional level.

Directorate of Biodiversity. The DB is responsible for the protection of natural habitats and ecosystems, protected areas and nature monuments, and for conservation of wild fauna and flora species. The DB comprises two thematic sectors, the Sector for Protected Areas and National Parks and the Sector of Flora, Fauna and Soil. The total number of staff of the DB is seven, comprising the Director and three specialists in either sector. The role of the DB is limited to drafting legislation related to the protected areas and policies towards the development and strengthening of the national ecological network; developing the Emerald network and Ramsar site networks; and identifying IBAs and IPAs as well as potential Special Areas of Conservation (SACs) and Special Protection Areas (SPAs).

Communes. Much of the BRPL comprises settled land, including a large number of small farms. As such local residents have an important role to play in terms of management of the BRPL. This is realised through land use practices on individual properties, through local user associations and through local administration effected through each commune. In practice local user associations remain relatively poorly developed and weak, such that the commune authorities remain the dominant local stakeholders. Commune activities are generally geared towards livelihoods and economic development. In practice the process of decentralization of management of natural resources remains relatively limited and incomplete. Roles and responsibilities between local and state structures remain poorly defined, and communes typically lack the necessary resources to implement their mandate in terms of local management.

1.3 Park's ecological and socio-economic system

This section provides a descriptive overview of the ecological and socio-economic system which characterizes the BRPL. This is presented in the form of text and summary diagrams showing the main components of the overall ecosystem and ecosystem services as well as principal interlinkages.

1.3.1 Overview

Natural system

The BRPL includes the southern portion of the Buna River delta and associated floodplain and wetlands. The Buna River originates from the southeastern part of Lake Shkodra and discharges some 44 km downstream into the Adriatic Sea. Some 1.3 km downstream of Lake Shkodra, the Buna is joined by the Drin River, the largest catchment in Albania, resulting in a doubling of flow. This strong river flow has created one of the most important wetland systems in Albania providing important habitat for many animal and plant species. It serves as a compensating reservoir for the Buna floodplain, maintaining the water balance and reducing flooding. The sediments carried by the Buna have an important role for the morphology of the seashore and of the coastline, which is subject to strong coastal erosion in the [Velipojë](#) area. According to old descriptions (Reiser & Fuhrer, 1896; Kárpáti & Kárpáti, 1961; Kárpáti, 1962), the Buna delta was an impressive wilderness area. However, like other Mediterranean wetland areas, it has been strongly transformed during the last decades. Between 1947 and 1980 about 36 km² of agricultural lands were reclaimed or ameliorated from the marshy jungle, compared to only 2 km² of agricultural land that existed before then. In 1963 the Buna and Drin Rivers were artificially combined in order to help prevent flooding of the downstream Zadrima plain and the town Lezha. In the early 1970s a series of pump stations were installed, together with a system of drainage-irrigation canals, and in the 1980s three large dams were built along the Drin River for hydropower. These works have deeply changed the hydrogeological system and the land-use of the area. In general flooding and the amount of water in the Buna River have greatly decreased and much of the floodplain land has been converted to agricultural use. As in some other Albanian border regions, the area was under military protection till 1991, and due to this status, the area was effectively protected. In 1991 the status of the area changed and intense development of tourist infrastructure began along the coast of [Velipojë](#), and this process is still continuing.

Geology and Landform. The protected area includes three main land units:

- The alluvial plain composed of holocenec loams and turfs deposited by the Buna River (Fraseri *et al.*, 2006) with marshlands, alluvial and riverine forests and lagoons;
- A range of low carbontic hills comprising upper Cretaceous-Paleocene limestones and dolomites, and covered with arid Mediterranean vegetation. These hills run in southeast- northwest direction through the northern part of [Velipojë](#) Commune and the southern part of Dajç Commune, reaching a maximum altitude of 500 m at Black Peak (just to the north of Viluni Lagoon).
- A coastal holocenec dune system, composed of sands deposited by the Buna River, occurring as a narrow strip all along the coast.

Key natural features include:

- The Buna River, which flows through a well defined and fast flowing channel, in places with a narrow fringe of riverine forest, and which for much of the western part of the BRPL marks the border with Montenegro.
- The Buna Delta/[Velipojë](#) wetland area covering a triangle of land between the Buna river, the sea and the western extremity of [Velipojë](#) Village. This area supports a diverse mosaic of wetland habitats, including Petharia marsh and a sizeable portion of alluvial forest. Previously designated as a Managed Natural Area, this area now comprises the core conservation area of the BRPL and is mainly fenced to protect against high tourism pressures.
- The Buna floodplain – this covers the major part of the BRPL, and has now mostly been converted to agricultural land.
- Domni freshwater marsh, comprising a substantial reed-bed area situated along the road from Shkodër to [Velipojë](#), between the carbonitic hills at the junction of Dajç, Bushat and [Velipojë](#) Communes.
- Viluni lagoon, comprising a substantial body of open brackish water situated in [Velipojë](#) Commune some two km to the east of [Velipojë](#) Beach. It comprises the terminal portion of a former large wetland complex extending from Shkodër to the ocean and including the Pentari – Domni – Murteme - [Velipojë](#) wetlands. The lagoon also receives water from the sea to which it is connected by a canal some 500 m long and 30-40 m wide.

- The Carbonitic hills extending through the BRPL from the Buna River in the northeast to the southwestern corner of the reserve.
- [Velipojë](#) Beach, comprising a broad sandy beach extending some 6 km west from Viluni Lagoon to the mouth of the Buna River.
- Baks Rrjollë Beach, extending along the coast line to the east of Viluni Lagoon. Here the beach tends to be narrower and has the spectacular backdrop of the southern part of the Renci hills in the near background.

Climate. The climate is Mediterranean, characterized by dry-hot summers and mild-wet winters. The wind of murrilan, which is very characteristic of the area, makes the winters harsh; whereas in the summer the wind of Shiroku brings humidity. Mean annual rainfall is 1,075 mm (the highest in Albania), and the mean annual temperature is 15.3 °C. Precipitation is concentrated in the period from November to April (70-80% of annual total). In January the mean temperature is between 5 and 8 °C while in July it can range between 24 and 26 °C.

Water resources. In addition to the Buna River, the BRPL supports a great variety of surface wetland areas varying from seasonal to permanent and in nature from brackish to freshwater. The extent of wetlands has been greatly reduced through implementation of drainage measures in the 1970's. These canals and pump stations are still in place although many are now in poor condition. Development of upstream dams on the Drin river has greatly modified the flow regime and lead to a marked reduction of sediment load in the Buna River. Nevertheless, the BRPL remains prone to flooding, and in January 2010 most of the area, particularly to the north of the carbonitic hills, was submerged.

In terms of groundwater, the BRPL supports a multilayer aquifer confined to the alluvial sediments, which reach tens of metres in depth and are recharged by direct infiltration, hydrologically connected surface waters (Buna River and drainage channels) and from groundwater flow coming from the karstic formations.

There are concerns about increasing levels of pollution relating to upstream mining and industrial development in the Drin catchment; the release of untreated waste waters, particularly from Shkodër; high levels of solid wastes, again mainly from Shkodër; and due to increased use of agricultural chemicals, including pesticides. Solid wastes carried by the Buna River and deposited into the sea often wash up on [Velipojë](#) beach, creating a significant concern for tourism use. In addition, most sources of drinking water are derived from shallow wells that tap into the shallow aquifers which are the most prone to pollution. Only a few villages are supplied by authorized pumping stations that draw good quality water from deeper aquifers.

Vegetation communities. About 60% of the surface area of the BRPL has been converted to settlements and agricultural uses (fields, orchards, vineyards, pastures), particularly on the floodplain portion. Natural vegetation is largely confined to the remaining 40% of the area.

The vegetation of the BRPL has been described in a recent detailed study by De Sanctis et al. (2013). Within a limited area, the BRPL presents a high diversity of community types. This diversity is related not to the richness of the flora, which is not exceptional for a Mediterranean area, but to a complex mosaic of habitats related to subtle differences in the geology. Wetland and dry grassland vegetation are particularly diversified. Altogether 29 alliances and 49 associations were described, as follows:

- Sand dunes (5 associations)
- Wetlands (26 associations)
- Alluvial forests (5 associations)
- Vegetation of carbonitic hills (13 associations)

Three of these associations were described as new: *Clematido viticellae-Punicetum granatae* (low woodland on the lower parts of the carbonitic hills), *Medicago minimae-Aegilopetum triuncialis* (low

grassland on disturbed areas on the back dunes of the Rroja beach) and *Periploco-Alnetum* (alluvial woodland on the Buna delta).

In addition, 10 series were recognized, those of the alluvial plain related to the age of deposits of Buna in relationship to the advancement of the delta in the Holocene, and those of the carbonatic range to lithological differences in relationship with altitude (and therefore geological age).

Important plant species and habitats. A total of 10 target plant species of particular conservation interest were identified species with limited distribution, or threatened according to IUCN Red List criteria, or included in other international conventions. According to the red data list for Albania, four of these species are classified as Endangered, and the remaining six as Vulnerable. The latter includes *Salvia officinalis*, a shrub which is harvested for commercial purposes and which is threatened by over exploitation. Of these 10 species, nine are included in the red data list for Europe (three as Near Threatened, six as Least Concern) and six for the world (all Least Concern).

A total of 19 specific target vegetation communities of particular conservation interest were identified. These comprise all five alluvial forest types, eight wetland types, three sand dune types and, on the carbonitic hills one dry oak community and two shrubland communities.

Fauna

The BRPL supports a wide diversity of animal species and is particularly rich in aquatic species. The fauna includes a large number of species that are of global, regional or national conservation concern.

Mammals. The most common mammal species within the BRPL include: *Lepus capensis* (common hare), *Vulpes vulpes* (Red Fox), *Canis aureus* (Golden Jackal), *Meles meles* (European Badger), *Mustela nivalis* (Least Weasel) and *Sus scrofa* (Wild Boar) (Beqiraj, 2006). Euronatur (2006) record the presence of 22 mammal species including *Canis aureus* (Golden Jackal), *Ursus arctos* (Brown Bear) and, in the Buna River, Buna delta and adjacent sea, *Tursiops truncatus* (Bottlenose Dolphin), and the globally threatened European Otter (*Lutra lutra*). In addition to habitat loss and fragmentation, mammal species are probably threatened by high levels of hunting.

Birds. The BRPL supports a rich bird community, particularly of waterbirds. Euronatur (2006) recorded the presence of 238 bird species. These included 114 breeding birds (status: breeding confirmed and probably breeding) and 16 species possibly breeding in the area. In addition 52 species are classified as regular and 51 as occasional passage migrants or winter visitors. Together with a number of species of conservation concern, the presence of high numbers of wintering waterbirds was one of the motivations for declaring the BRPL and Lake Shkodra as a Ramsar site. High and uncontrolled levels of hunting remain a major concern for bird populations within the BRPL.

Reptiles. – Euronatur (2006) record the presence of 19 reptile species within the BRPL, all of which are included on the IUCN red data list of 2009: four as Near Threatened, 10 as Least Concern and five as Not Evaluated.

Amphibians. Euronatur (2006) record the presence of 11 amphibian species all of which are on the IUCN red data list 2012, one as endangered and 10 as least concern. The collection of frogs to supply to restaurants was reported to be widespread.

Freshwater fish. Euronatur (2006) record the presence of 143 freshwater fish species (Lake Shkodra, Buna River, Buna Sea and Viluni Lagoon). This includes the Adriatic Sturgeon (*Acipenser sturio*) which is almost extinct. This high species diversity reflects the diverse habitat mosaic of the Buna Delta. The Buna River also links and integrates the fish communities of the Adriatic Sea with those of the inland Lake Skadar and the Drin River system. Thus although the fish community is dominated by species typical of temperate freshwaters, it also includes a number of species from colder waters that have entered the system for Lakes Ohrid and Prespa at the headwaters of the Drin River, as well as a number of marine species.

Beqiraj (2006) notes that the Buna is essential for the migration of 13 fish species from inland waters to the Adriatic Sea. Among migratory species, six are globally threatened, namely the European sea sturgeon (*Acipenser sturio*), the Adriatic sturgeon (*Acipenser naccarii*) and the Starry sturgeon (*Acipenser stellatus*), the Twaite shad (*Alosa fallax*), the River lamprey (*Lampetra fluviatilis*) and the Brook lamprey (*Lampetra planeri*).

Concerns were raised about detrimental impacts arising through the introduction of alien fish species, as well as declining fish populations due to overfishing and use of inappropriate fishing methods (including dynamite), and potential impacts due to increasing levels of pollution.

Invertebrates. Little data exists concerning the occurrence of invertebrates within the BRPL. Euronatur (2006) record the presence of 217 species from the Viluni lagoon and [Velipojë](#) wetlands. Beqiraj (2006) notes that mollusks are the best known groups, and that three globally threatened mollusk species have been recorded (*Unio elongates*, *Unio crassus* and *Microcondylaea compressa*). Local residents raised concerns as to apparent detrimental impacts to bee populations resulting through inappropriate use of agricultural pesticides. Beqiraj (2006) also notes that invertebrates are potentially very important bio indicators for the ecological status of the Protected Landscape.

Socioeconomic system

The main livelihood activities within the BRPL are crop and livestock production, including production of irrigated pastures for livestock. Tourism is also important to the local economy and, to a lesser extent fishing.

Agriculture. Ownership of land is highly fragmented and farm sizes are very small (mean size varies among Communes from 1.0 to 1.9 ha). Big farms, defined as being larger than 10 ha in extent, or with more than 8 cattle or 150 sheep or goats, account for less than 5% of farms within the BRPL. Access to credit is limited, hampering the ability of farmers to invest in machinery and irrigation equipment. Roughly half the cropping area is used for fodder production, with a wide variety of cereals, vegetables, fruits and olives being grown on the remainder. The livestock community is dominated by cows (about 13,000 within the BRPL), sheep (about 20,000) and goats (about 3,000), which provide transport, meat, milk and cheese. Given the small size of farm, and thus production, access to markets is limited, and most production is used for self consumption or for direct selling.

Tourism. The main tourism activity is summer beach tourism, with some 80,000 to 200,000 visitors per year. The bulk of the visitors come from Kosovo, and typically stay for only a short period (from a few days to two weeks). This type of high volume – low spending tourism results in high pressures to local resources, for example in terms of demand for services and the management of wastes (solid waste and wastewater). It is also a key driver for the ongoing uncontrolled urban development. The quality of tourism services is generally low. There are also some hunting tourists, mainly from Italy.

Fishing. Lake Shkodra is the main site of fishing within the area, but additional fishing is carried out within the BRPL in the Buna River, in the sea, and in the larger wetland areas, particularly Viluni Lagoon. Freshwater fish catches appear to be declining, probably due to unsustainable (and often illegal) methods of fishing including, for example, the use of dynamite. Local residents who fish in the sea suffer strong competition from larger fishing vessels launched from the nearby port of Shëngjin. One company previously was awarded a licence to produce mussels in Viluni Lagoon, but after the 2010 floods this was discontinued in favour of mullet and eel fishing instead. The fish catch is completely absorbed by the local market. Concerns have been raised about the possible dangers of pollution to fish quality.

Infrastructure. Most villages within the BRPL face significant problems in terms of infrastructure. Only a few settlements are served by authorized water pumping stations, such that the majority of residents rely on private shallow wells from which the quality of water is uncertain. There are no wastewater treatment

plants within the BRPL, and despite the presence of a recently constructed communal solid waste ground in Bushat, most communes continue without any formal system for the management of solid wastes.

1.3.2 Ecosystem Structure, Ecosystem Services and Economic Activities

Key structural components and inter-linkages of the ecosystem of the BRPL are shown in Figures 1 (main ecosystem), 2 (fauna), 3 (climate, land and water cycle), 4 (socio-economic system: agriculture and livestock sectors), 5 (socio-economic system: fisheries sector) and 6 (socio-economic system: tourism sector). These six diagrams represent a composite ecosystem model, as they are inter-linked through shared components (i.e. have the same name) that are represented in two or more diagrams. In the remainder of this document, when a specific reference is made to any of the ecosystem components identified in the above diagrams, the related text is highlighted as blue-underlined (e.g. [wetlands](#)).

The main components of the general ecosystem diagram (Figure 1) are:

- [landscape](#), comprising:
- [rangeland](#) ([grassland](#), [shrubland](#), [alluvial forest](#), [riverine forest](#), [dry oak forest](#), [wetlands](#) and [sand dunes](#)), and
- [transformed habitat](#) ([agricultural land](#) and [infrastructure](#)),

together with [ecosystem services](#) in the form of:

- [regulating services](#) ([water regulation](#) and [erosion regulation](#)),
- [provisioning services](#) ([non-timber forest products](#), [genetic resources](#), [livestock products](#), [fresh water fisheries](#), and [crops](#)) and
- [cultural services](#) ([attractions and activities](#)).

The [fauna](#) (Figure 2) comprise:

- [livestock](#) ([cattle](#), [sheep](#), [poultry](#), and [dogs and cats](#)) and
- [wildlife](#) ([mammals](#), [birds](#), [reptiles](#), [amphibians](#), [fresh water fish](#), and [invertebrates](#))

The main linkages regarding [fauna](#) ([livestock](#) and [wildlife](#)) are through:

- use of [rangeland](#) and [wetlands](#),
- use of and damage to [agricultural land](#),
- harvesting of wildlife ([wildlife harvesting](#)) and fish ([fresh water fisheries](#)) and
- [agri-production](#) ([pest and disease control](#) and [pollination](#) services).

Key climate, land and water cycle components (Figure 3) include:

- [climatic parameters](#) ([temperature](#) and [rainfall](#)),
- [land](#) and associated processes of [recharge](#), [runoff](#), [artificial drainage](#) and [coastal erosion](#),
- [water resources](#) in the form of [groundwater](#) and [surface water](#) ([river network](#), [lakes](#) and [sea](#)), and
- [water use](#) in the form of [drinking water](#) and use for [agriculture](#).

The main components of the socio-economic system diagrams (Figures 4-6) are:

- agriculture and livestock sectors: [resources/factors of production](#), [farming systems](#), [production \(primary and processed\)](#) and [marketing and distribution](#),
- fisheries sector: [fisheries system](#), [production](#) and [marketing and distribution](#) and the
- tourism sector: [tourism supply](#) ([attractions and activities](#), [tourism infrastructure](#), [tourism related services](#) and [ancillary activities](#)) and [market](#).

Figure 1 - Main ecosystem

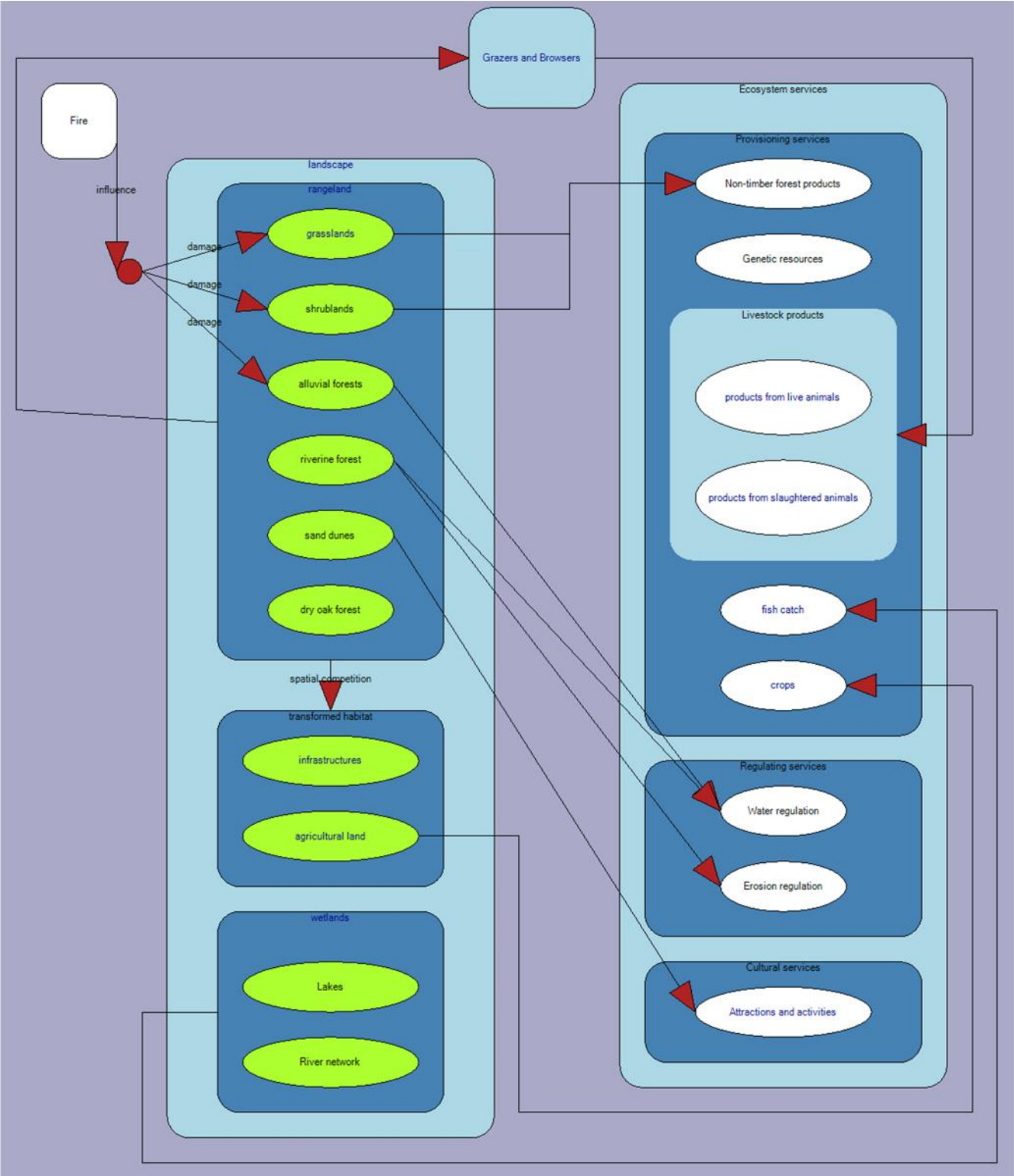


Figure 2 - Fauna

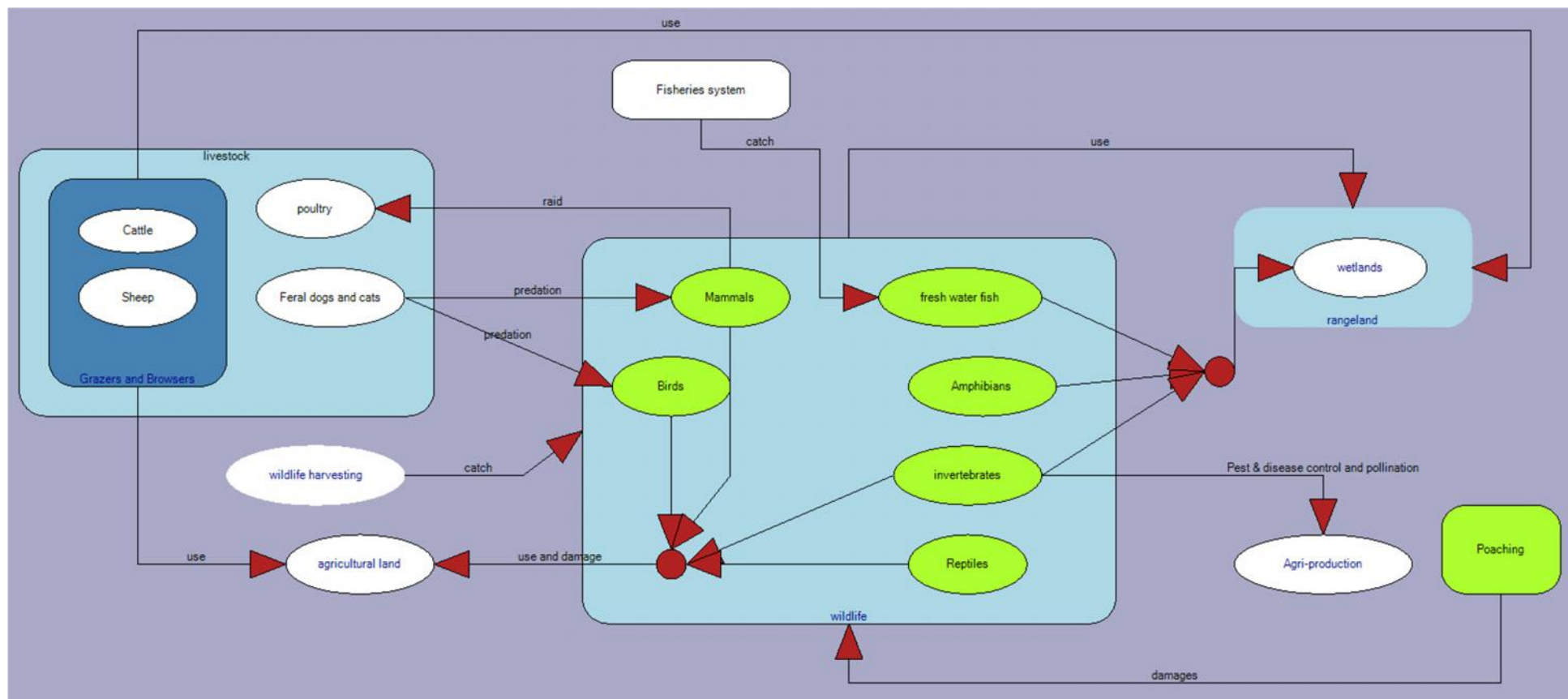


Figure 3 - Climate, land and water cycle

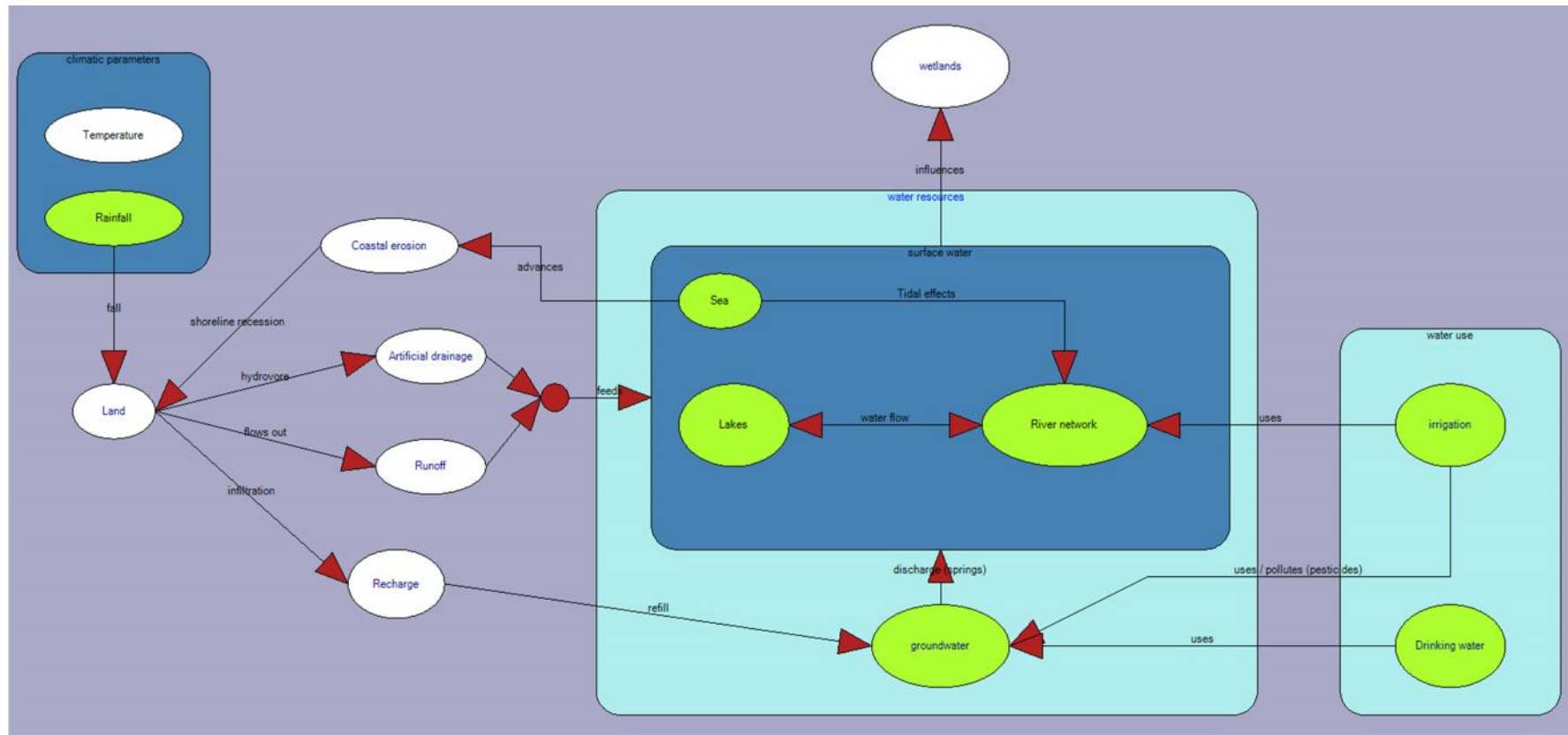


Figure 4 - Socio-economic system: agriculture and livestock sectors

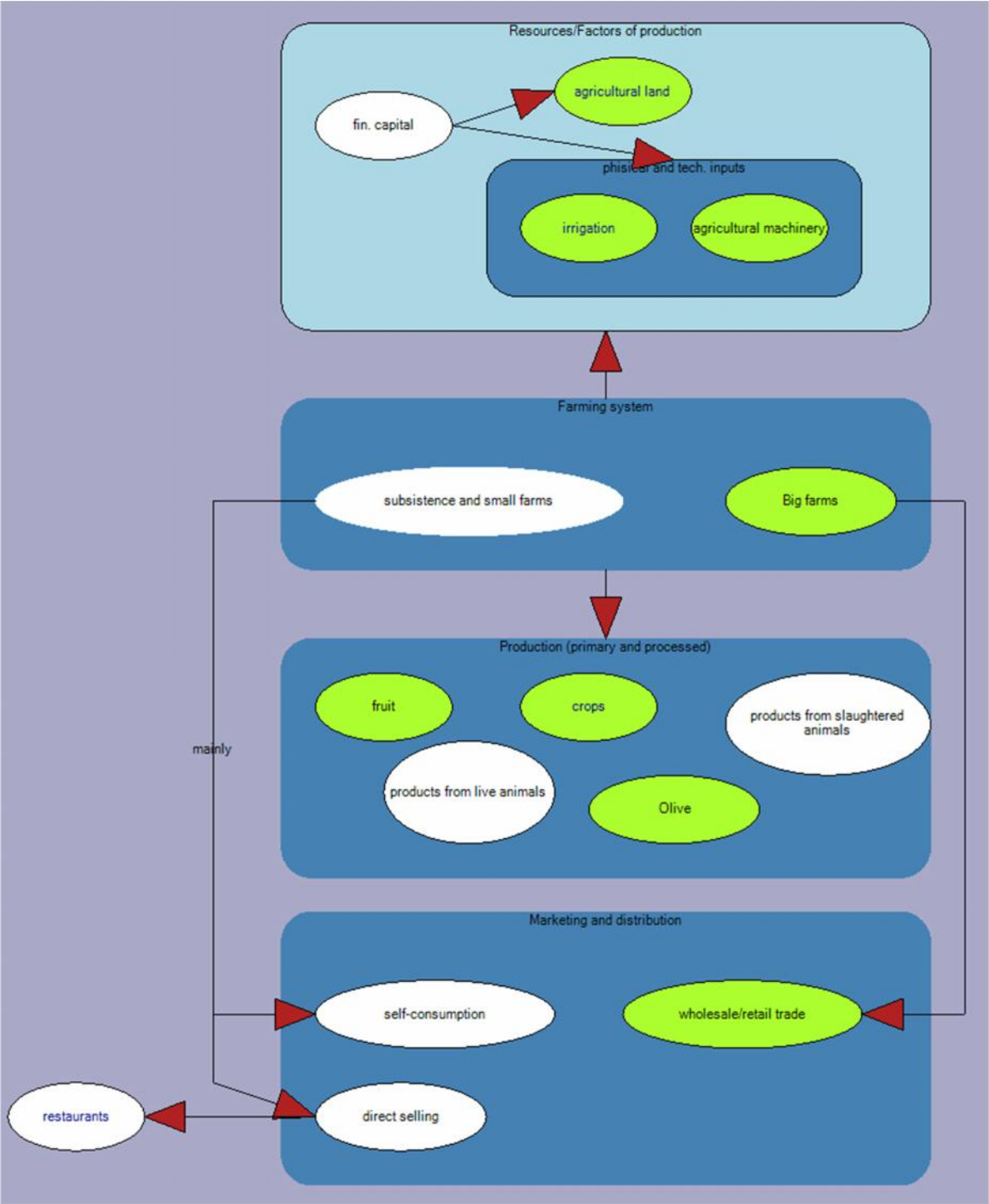


Figure 5 - Socio-economic system: fisheries sector

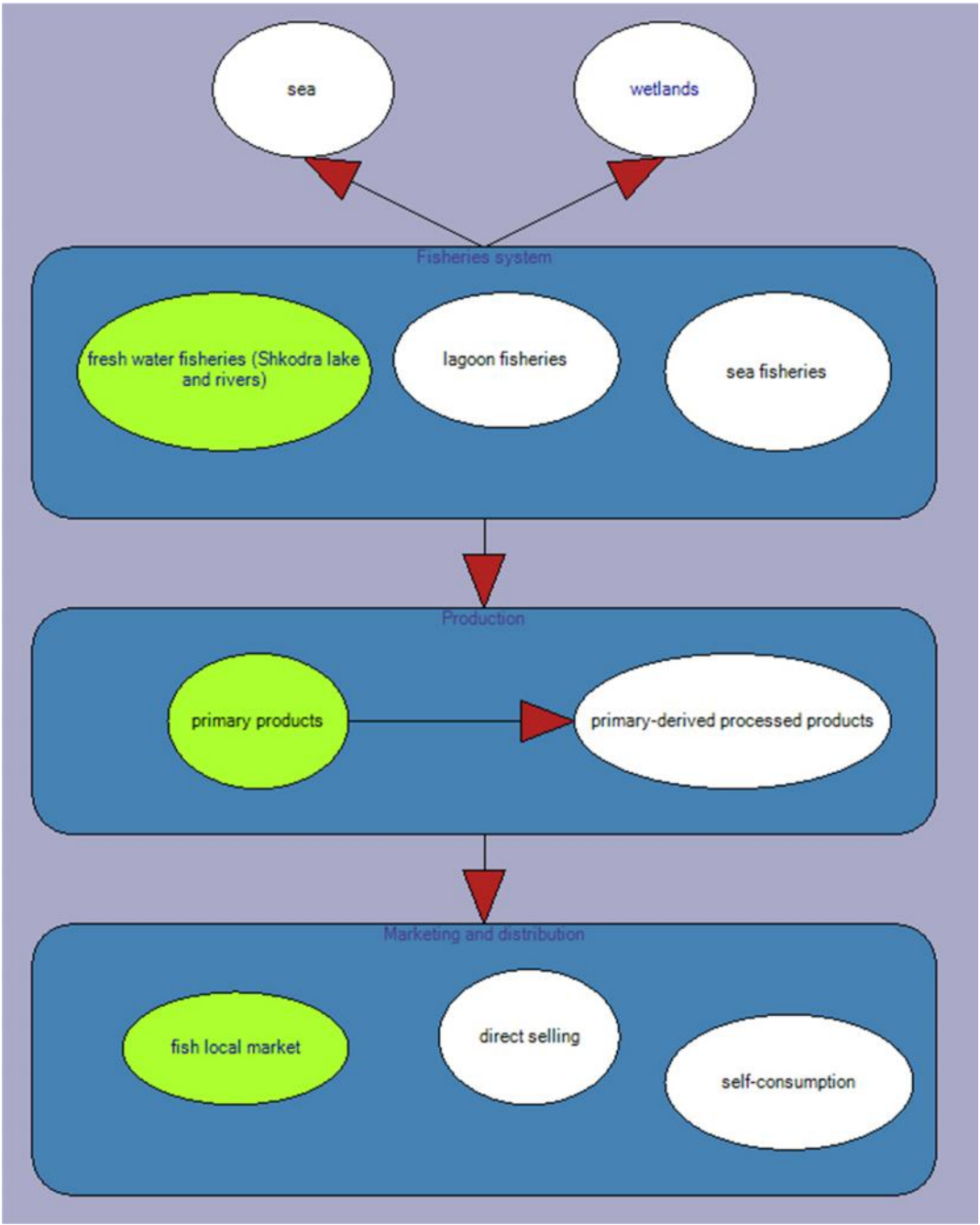
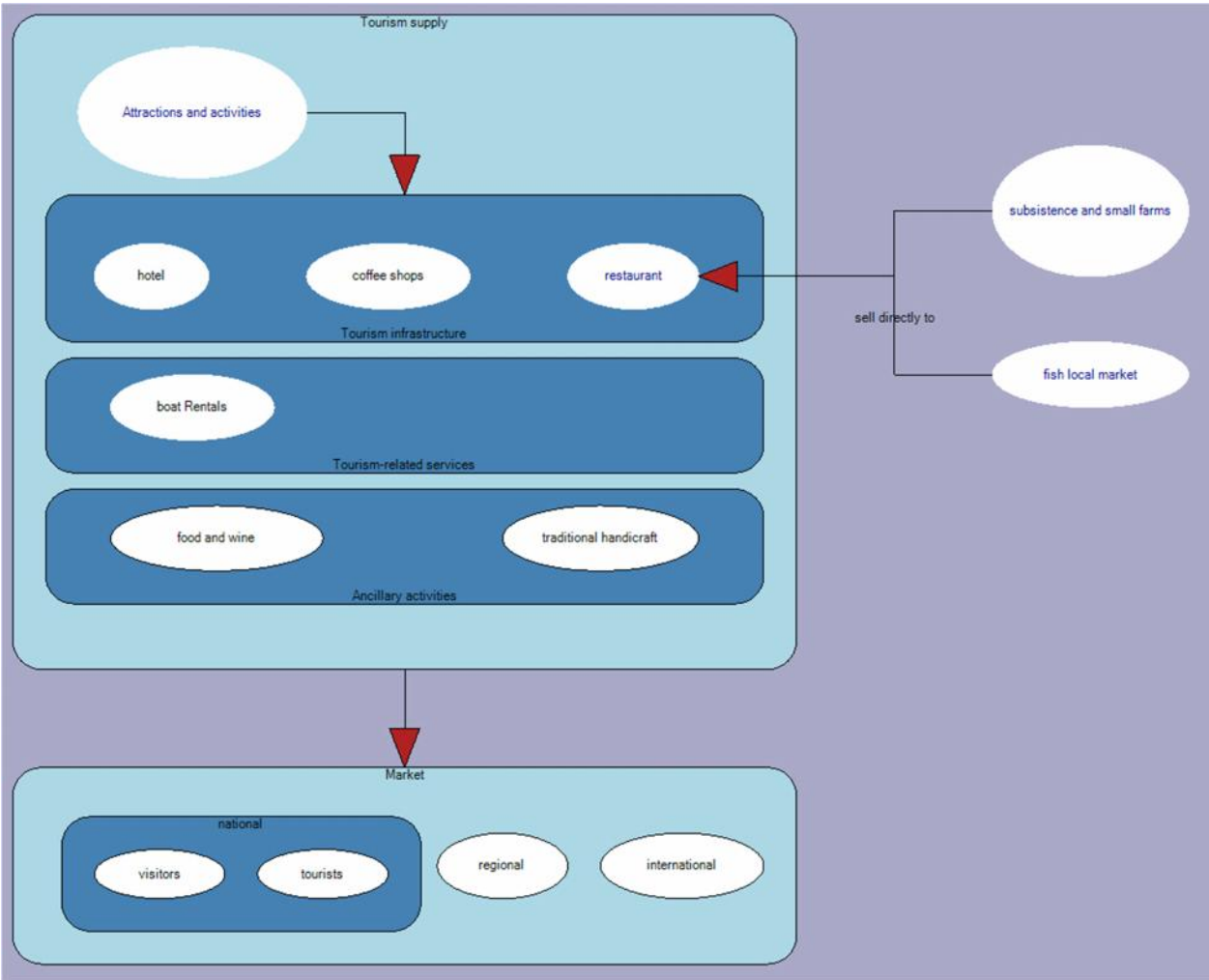


Figure 6 - Socio-economic system: tourism sector



PART 2: EVALUATION OF THE PROTECTED AREA

This section identifies the key features that must be protected in order to maintain the significance of the protected area (values), the factors that threaten these key values, assets and opportunities (threats), and the limitations and strengths of the current institutional framework. Values and threats are described in relation to the natural, socioeconomic and cultural systems.

2.1 Assessment of Values

Natural System

Key values, assets and opportunities of the natural system ([rangelands](#)) include important habitats; high plant and animal diversity, and the occurrence of a high number of endemic and threatened plant and animal species. We consider important habitats to be those listed in the Habitat Directive 92/43/CEE (thus important for the conservation of biodiversity in Europe), those restricted to Albania or with limited distribution, rare or hosting important species.

A total of 19 specific target vegetation communities of particular conservation interest were identified. These comprise all five alluvial forest types, eight wetland types, three sand dune types and, on the carbonitic hills one dry oak community and two shrubland communities.

Alluvial forests and riverine forests. The hygrophilous forests (three types of [Alluvial forest](#) and two types of [Riverine forest](#), which occur in aquatic environments in association with the Buna River and lagoons ([wetlands](#)), are particularly rich in endemic species (such as *Quercus robur* subsp. *scutariensis*), and include specific habitats listed in the Natura 2000 European network as being priority areas for conservation purposes. The alluvial and riverine forests provide habitat for a number of important terrestrial and avian animals ([mammals](#) and [birds](#); these forests also provide important regulatory services in the form of protection from wind, protection from soil erosion ([erosion regulation](#)) and control of water flows ([water regulation](#)). The [Velipojë](#) forest comprises a key conservation area and is included within the strictly protected core conservation area of the BRPL; it has been fenced in order to protect it from excessive levels of use by visitors ([tourism sector](#), [attractions and activities](#)).

Wetlands. The BRPL covers one of the largest and most important wetland systems in Albania. It includes a great variety of wetland habitats ([wetlands](#); [sea](#), [lakes](#) and [river network](#), ranging from flowing to still, permanent to seasonal water bodies of different depths and quality from fresh to brackish waters. Six of the 22 associations are listed in the Natura 2000 European network as being priority areas for conservation purposes. Wetland communities by nature tend to be restricted in distribution and extent, and within the BRPL the overall occurrence of wetlands has been greatly reduced through drainage and conversion to [agricultural land](#), particularly on the alluvial floodplain area. Nevertheless the remaining wetlands provide essential habitat for a wide variety of fauna, notably aquatic animals, including [mammals](#) and [birds](#) (particularly waterbirds and migratory birds), [reptiles](#), [amphibians](#), [fresh water fish](#) and [invertebrates](#). Key wetland areas include the Buna River and delta, Domni Marsh and Viluni Lagoon, and the [Velipojë](#) wetlands encapsulated within the core conservation area of the BRPL.

Wetland habitats are important areas for hunting ([wildlife harvesting](#)) and fishing ([freshwater fisheries](#), [lagoon fisheries](#) and [sea fisheries](#)), and play an essential role in terms of groundwater recharge ([groundwater](#)), with the majority of residents in the BRPL being dependent on shallow aquifers for drinking water supplies ([drinking water](#)).

Sand dunes. [Sand dunes](#) are restricted to a narrow strip along the coast. The three habitats identified are all listed in the Natura 2000 European network as being priority areas for conservation purposes. Apart from having a restricted distribution, sand dune communities are highly threatened by high levels of use by tourists (beach tourism, cleaning operations and trampling), and also by ongoing [coastal erosion](#) - probably

related to upstream dam development in the Drin basin which has reduced the level of sediment in the Buna River and thus discharge to the coastal area).

Dry oak forests and shrublands. [Dry oak forests](#) together with [shrublands](#) and dry [grassland](#) communities, within the BRPL are restricted to the carbonitic hill outcrops. Such vegetation, in general is recognized as being important for conservation purposes, and constitutes one of WWF's global 200 priority ecoregions (Ecoregion 123 - Mediterranean Forests, Woodlands and Scrub). Three of the identified constituent habitats (two shrubland communities and one dry oak forest type) are listed in the Natura 2000 European network as being priority areas for conservation purposes. These hilly area form important grazing areas for [livestock](#) and which, together with [fire](#), and [soil erosion](#), comprise key ecological factors concerning the maintenance of these habitats (Row 4). These hilly areas also support *Salvia officinalis* which is harvested for commercial purposes ([non-timber forest products](#)).

High Species Diversity. The species richness of the BRPL in general is not exceptional for a Mediterranean area. However, it does support a complex mosaic of habitat types, particularly in terms of wetlands, and is correspondingly particularly rich in terms of wetland plant (microalgae and aquatic macrophytes) and animal species: 143 fresh water fishes, 11 amphibians, 19 reptiles, 238 bird and 22 mammals species (and, although not well studies, probably of invertebrates too).

Important plant species.

A total of 10 target plant species of particular conservation interest were identified: *Quercus robur* from alluvial forests; *Butomus umbellatus*, *Hydrocharis morsus-ranae*, *Nymphaea alba* and *Trapa natans* from wetlands; *Pancratium maritimum* from sand dunes and, on the carbonitic hills, *Satureja Montana* from dry oak forests, and *Hypericum perforatum*, *Origanum vulgare*, *Salvia officinalis* from dry grassland communities. *Salvia officinalis* is harvested for commercial purposes ([non-timber forest products](#)), and is reported to be threatened by over harvesting.

Important animal species. Important animal species include the globally threatened European Otter (*Lutra lutra*); all 19 reptile and 11 amphibian species; six globally threatened fish species, namely the European sea sturgeon (*Acipenser sturio*), the Adriatic sturgeon (*Acipenser naccarii*) and the Starry sturgeon (*Acipenser stellatus*), the Twaite shad (*Alosa fallax*), the River lamprey (*Lampetra fluviatilis*) and the Brook lamprey (*Lampetra planeri*); the Dalmatian Pelican (*Pelecanus crispus*), and three globally threatened mollusk species (*Unio elongates*, *Unio crassus* and *Microcondylaea compressa*).

The BRPL is also important for migratory birds and fishes.

Socioeconomic System

Socio-economic values of the BRPL are linked to the sustainable use of the provisioning services its ecosystem can provide. These include the presence of [groundwater](#) and its use for drinking purposes and for irrigated agriculture ([drinking water](#) and [water use agriculture](#)); productive [agricultural land](#) enabling the production of crops, fodder and livestock ([production \(primary and processed\)](#)), the presence of attractive beaches that form the basis for a growing tourism sector ([attractions and activities](#)), fish resources that are exploited through [fresh water fisheries](#), [lagoon fisheries](#) and [sea fisheries](#); birds and mammals that form the basis of hunting activities ([wildlife harvesting](#)); and shrubs such as *Salvia officinalis* which are collected for commercial trade ([non-timber forest products](#)).

Cultural System

Rozafa Castle, strategically located between the junction of the Drin and Buna Rivers and overlooking Shkodër town, is the most famous historical landmark in the region. The bulk of the BRPL was until recently a swampy wilderness, such that it is devoid of any such major historical features. However, the visual attractiveness of the landscape, in particular the alluvial forest of the [Velipojë](#) wetlands comprises an important tourism and thus cultural resource.

In Europe, there are only a few examples where pastoralism is still practised on a scale as large as in the BRPL. Associated with this, Euronatur (2006) documented the presence of a number of primitive and indigenous breeds of domestic animals, including Siska pigs, Busha cattle and Zackel sheep, whilst noting that goat, horse and donkey populations require further investigation.

The particular rural feel of this landscape comprises a considerable tourism asset, but which in the face of uncontrolled and haphazard urban development, is fast being lost.

2.2 Assessment of Threats

Natural System

Key direct threats to the natural system include modification, fragmentation and loss of habitat, overuse of resources, pollution particularly of water resources, and the establishment of alien fish species.

Water resources. The main threat to water resources is due to increasing levels of pollution, resulting from upstream mining and industrial development in the Drin catchment; the release of untreated waste waters, particularly from Shkodër town; poor management of solid wastes, particularly with respect to Shkodër; and due to increased use of agricultural chemicals such as fertilizers and pesticides ([river network](#) and [groundwater](#)). Solid wastes carried from Shkodër by the Buna River are deposited into the sea, resulting in pollution of coastal areas too. The flow regime has already been greatly modified through diversion of the Drin into the Buna River and through the building of dams in the upstream catchment area mainly for hydropower purposes ([river network](#)); it is possible that additional dams will be built resulting in further impacts to the flow regime.

These impacts represent a direct threat to wetland systems ([wetlands](#)) and aquatic organisms ([amphibians](#) and [fresh water fish](#)), and also to human populations, principally in the form of contaminated drinking water supplies ([water use: drinking water](#)). The washing up of solid wastes on [Velipojë](#) beach also creates a significant concern for tourism use.

Rangelands. Erosion of the river banks along the Buna River comprises a particular threat to [riverine forests](#), which are restricted to a narrow belt along the course of the river ([riverine forest](#)). Such forests play an important role in terms of both erosion and flood control ([erosion regulation](#) and [water regulation](#)).

Another important threat to [alluvial forests](#) comes from tourism activities, in the form of both high levels of use ([attractions and activities](#)) and also due to continuing uncontrolled development ([tourism infrastructure](#)). This applies in particular to [Velipojë](#) forest and wetland complex within the core protected area.

The extent of [wetlands](#) within the BRPL have already been drastically reduced through drainage works which have enabled their conversion to agricultural uses ([wetlands, infrastructure](#)), to the extent that the bulk of the floodplain area is now under intensive agricultural production ([agricultural production](#)). Additional threats come in the form of deteriorating water quality, in particular relating to run-off from adjacent agricultural fields (in some cases leading to eutrophication), and high levels of utilization by livestock.

Sand dunes are another component that is highly threatened, largely due to tourism related impacts in the form of both high levels of direct use (beach tourism) and the development of infrastructure to service the beach tourists ([sand dunes](#)). Coastal erosion is another important threat, which is related to upstream dam construction resulting in reduced sediment loads in the Buna River, and hence lower rates of sediment deposition in coastal systems ([sand dunes](#)).

The vegetation of the carbonitic hills ([dry oak forests](#), [shrublands](#) and [grasslands](#)) appears to be in reasonable status and relatively stable. Potential impacts include fires, overgrazing by livestock and soil erosion. The shrub *Salvia officinalis* is believed to be threatened by excessive levels of harvesting ([non-timber forest products](#)).

Fauna. The use of inappropriate and unsustainable forms of harvesting were identified as a major threat to animal populations, in the form of excessive levels of hunting of mammals and birds ([wildlife harvesting](#)) and the harvesting of fish (for example, using dynamite and fishing during the spawning season) ([fresh water fisheries](#)). Collection of frogs was also reported to occur, but the impact of this was not clear ([wildlife harvesting](#)). Pollution poses another important threat, particularly to aquatic organisms, but attention was also drawn to detrimental impacts to bee populations resulting due to inappropriate uses of agricultural pesticides. The introduction and establishment of several alien fish species was noted to comprise a serious threat to certain fish populations ([fresh water fish](#)). Ongoing development will necessarily result in further habitat fragmentation which will be an additional threat to certain animals.

Socioeconomic System

Broader constraints faced by local communities include poor socioeconomic conditions; lack of local and regional employment opportunities; limited potential of livelihood options; poorly developed infrastructure and services (lack of safe drinking water supplies; poor road access; poor access to education and health facilities), and difficulties in accessing finance and markets. People are thus forced to rely heavily on the use of natural resources, so providing pressure for damaging and unsustainable uses of resources.

Apart from threats relating to the unsustainable use of resources, such as over grazing by livestock; excessive levels of hunting of mammals and birds; damaging techniques and unsustainable levels of fish harvesting, and damaging methods and unsustainable levels of harvesting of plants, the main threats to livelihoods concern limited access to financial resources and poor access to markets; and particularly for tourism ongoing uncontrolled and insensitive development that could rapidly reduce the attractiveness of the area to visitors. Sector specific threats include:

Water ([water use](#)) – the pollution of [groundwater](#) due to upstream industrial and mining development; poor management of waste waters and solid wastes, and the use of fertilizers and pesticides for agricultural purposes, and the limited development of safe water supplies based on deeper aquifers ([drinking water](#)).

Agriculture ([farming system](#), [financial capital](#), [irrigation](#) and [agricultural machinery](#)) – key constraints include land fragmentation and the small farm sizes, limited levels of production, difficulties in accessing credit and therefore investing in mechanization and irrigation, and in accessing markets. Additional threats relate to the high risk of flooding and the associated poor status of some of the drainage canals and pump stations ([water use](#), [agriculture](#)). Damage by birds to crops and losses of livestock to wildlife were noted, but were not considered to be significant ([birds](#) and [mammals](#)).

[Tourism](#) – One of the key threats to tourism is the continuing focus on high volume – low spending tourists, which results in major demands on services and potentially unsustainable impacts to the environment (for example to sand dune communities) ([tourism infrastructure](#), [tourism-related services](#) and [ancillary activities](#)). The quality of tourism services is reported to be low. Continued growth of tourism is a key driver of ongoing uncontrolled development, such that the character of the area is rapidly changing and which ultimately is likely to be detrimental to the sustainability of tourism within the BRPL.

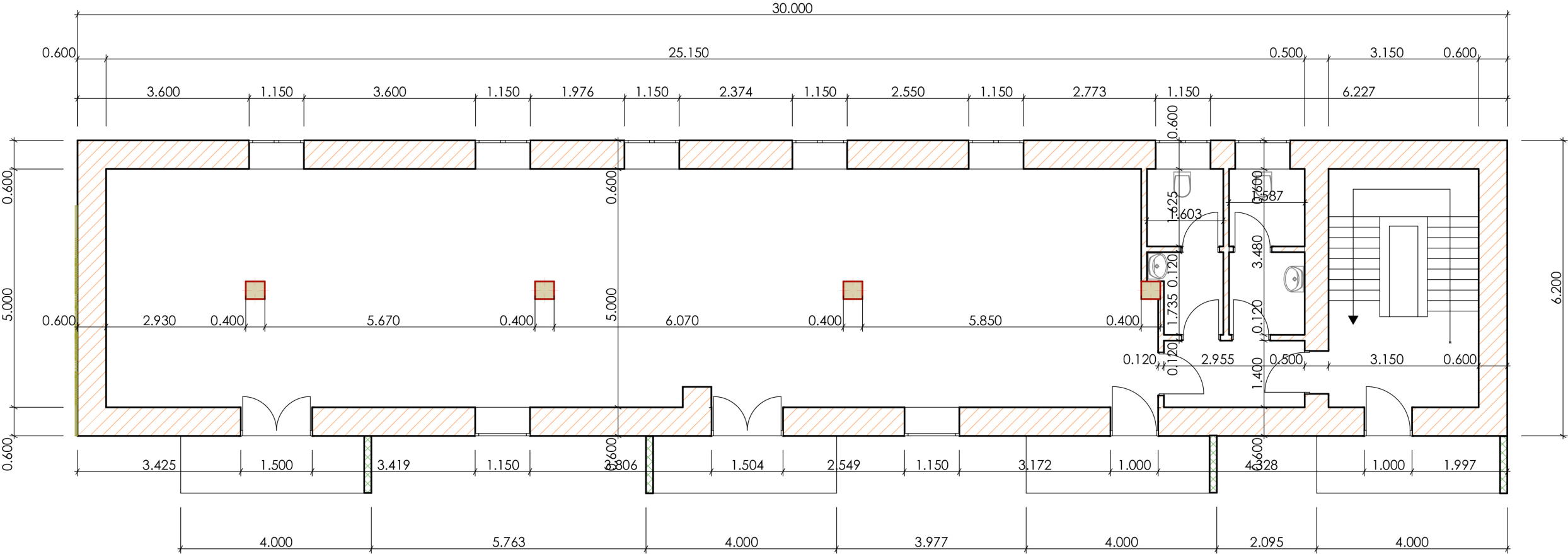
[Fisheries and aquaculture](#) – Current fishing practices are considered to be unsustainable and to be reflected in diminishing fish catches ([primary products](#)). Fishermen in the sea face strong competition from larger vessels that launch from the nearby Shěngjin Port ([sea fisheries](#)). Increasing levels of pollution pose a potential risk in terms of quality of fish for consumption ([primary-derived processed products](#)).

[Infrastructure](#) – Key limitations of infrastructure include the limited availability of safe supplies of drinking water ([drinking water](#)), the absence of facilities for treatment of waste waters and solid wastes; poor road access to many places; and the poor status of drainage infrastructure (canals and pump stations); and the absence of flood control works.

Cultural System

The principal threat to cultural resources comprises the rapid and unregulated nature of development that is leading to a rapid change in the nature of the area. It appears that there is also a danger of loss of important local breeds of livestock.

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