



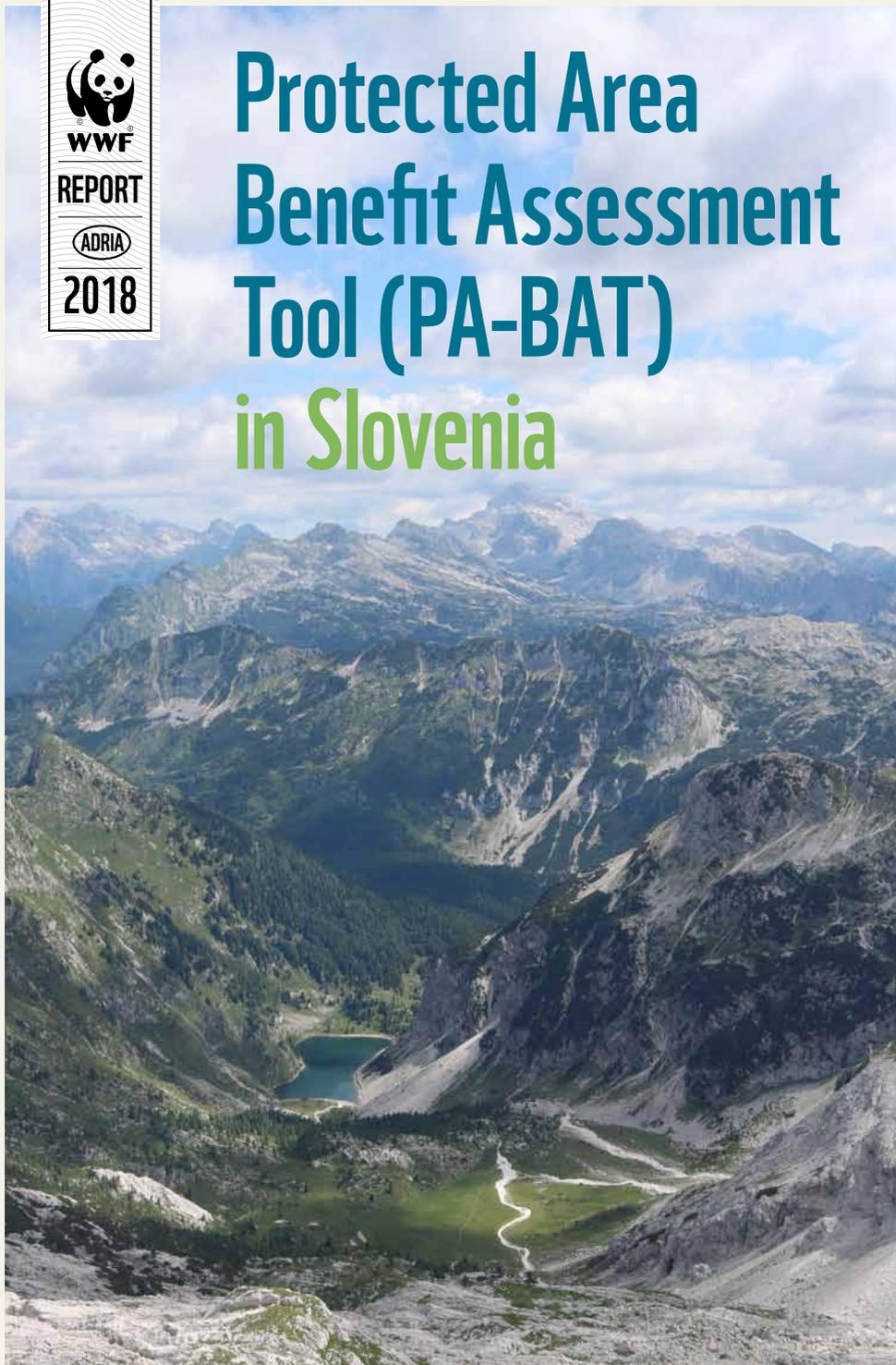
WWF

REPORT

ADRIA

2018

Protected Area Benefit Assessment Tool (PA-BAT) in Slovenia



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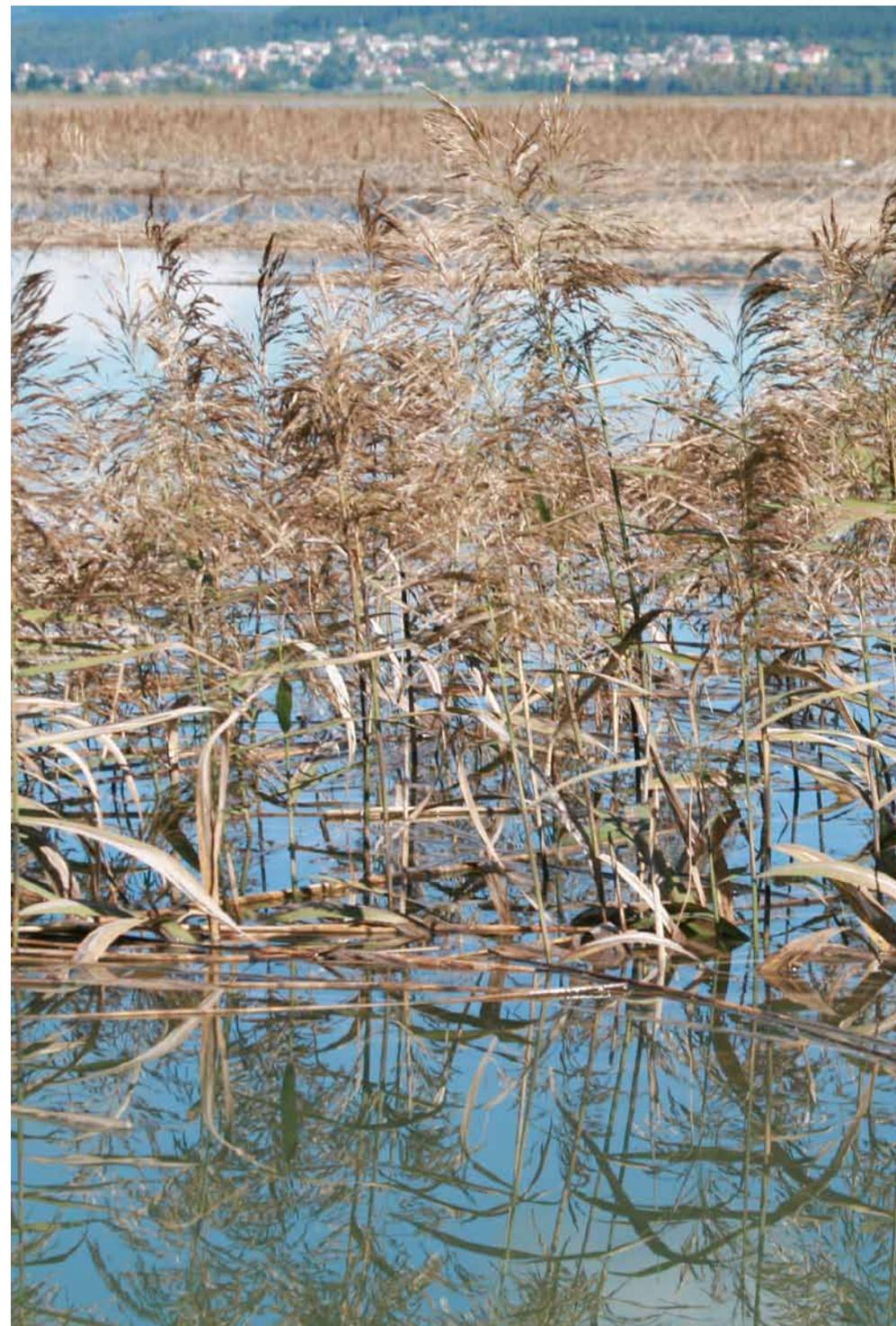
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Triglav National Park
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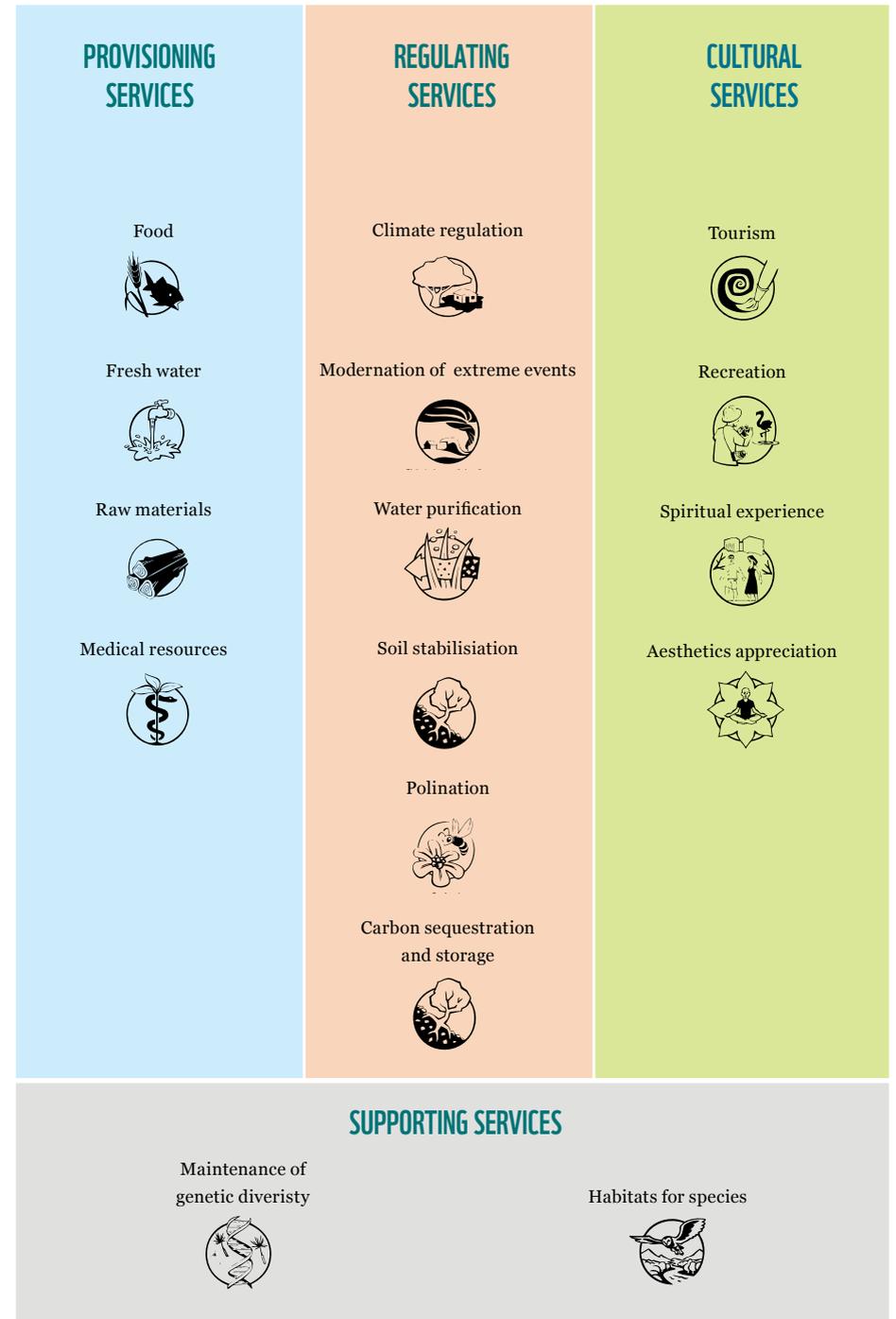
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What are ecosystem services?

Ecosystem services are the direct and indirect contributions of ecosystems to human well-being and support our survival and quality of life. One of the most widely used classification of ecosystem services was developed under the global initiative The Economics of Ecosystems and Biodiversity (TEEB) which is aiming at mainstreaming the values of biodiversity and ecosystem services into decision-making at all levels. They divide ecosystem services to four broader categories: Provisioning services, regulating services, cultural services and supporting services.



Who we are

WWF is one of the world's leading non-governmental and non-profit organizations for nature conservation. WWF's mission is to stop the degradation of our planet's natural environment, and to build a future in which people live in harmony with nature. WWF was established in 1961, and has representative offices in over 100 countries across the globe. The organization is proud to have over five million people who support it.

WWF Adria's aim is to contribute to conservation, better governance and sustainable management of protected areas, marine and freshwater ecosystems, and forests as well supporting a broadened involvement of stakeholders (including civil society organizations or CSOs) in natural resource management and sustainable development in the Adria–Dinaric region.



What we want to achieve

Sustainable use of natural capital forms a basis for social and economic development and is safeguarded through enhanced environmental responsibility among the public, governments, CSOs and the business sector.

How this document contributes to our goal

WWF brings to the region a wide range of the best international and regional practices that can be locally applied according to our in-depth knowledge and experience of conditions and needs.



Triglav national park © Jana Kus Veenvliet

Why you need to read this document



This analysis identifies main drivers relevant for both protected areas and the country's development policies. It also provides ideas to build on incentives to make local inhabitants motivated to contribute to tow. The analysis also reveals the importance of jobs in protected areas – which are vital for rural economies and relevant for politicians. This report is contributing to the Strategic Plan for Biodiversity 2011–2020 of the Convention on Biological Diversity, and demonstrating the values of protected areas in the region and provides examples of good practice to help achieve the first Aichi Biodiversity target: *»By 2020, at the latest, people are aware of the values of biodiversity and the steps they can take to conserve and use it sustainably«¹*. The outcomes of the analysis can also be used as a background information in developing national policy documents on nature conservation and management plans of protected areas.

¹ More information can be found at <https://www.cbd.int/sp/targets/>

Introduction

The primary goal of establishing protected areas worldwide is to conserve natural habitats and species. However, by doing so, protected areas indirectly support other ecosystem services, for example, tourism, recreation, food, soil protection, climate regulation and many others. These can have non-economic or economic value for the inhabitants of protected areas, residents in the surroundings of protected areas and visitors and, indirectly, through a collection of taxes, for municipalities and states. Recognizing wider benefits of protected areas for human well-being is vital for providing arguments for their long-term maintenance, which extends well beyond the conservation of biodiversity.

Increased awareness of the multiple benefits of protected areas has resulted in many studies and initiatives to evaluate ecosystem services (e.g. The Economics of Ecosystems and Biodiversity – TEEB²). However, in-depth calculation of the economic value of ecosystem services requires complex methodological approaches, and it is often not possible to perform it on a larger scale. But even without calculating exact monetary benefits of ecosystem services, assessing their relative value and importance for different stakeholder groups can help us better manage the use of natural resources.

Methodology *The Protected Areas Benefits Assessment Tool (PA-BAT)* was first developed in 2008, to enable identification of benefits of protected areas for well-being and poverty reduction. In 2012, the methodology was adapted for the use in the Dinaric Arc Region³. As the PA-BAT is, compared to other valuation approaches, less labour intensive, it can be used on a larger scale, for example at a country or even regional level. Results can reveal challenges for safeguarding certain values, show differences in perception of various stakeholders. They can also point to the necessary systemic or legislative changes, needed to (in the light of conservation goals) enable future use of some of the benefits.

PROTECTED AREAS
ARE ESTABLISHED ON
13,9 PERCENT
OF THE NATIONAL
TERRITORY

Supported by the World Wide Fund for Nature (WWF) and Association Parks Dinarides⁴, protected area benefits assessments were conducted in all countries of the Dinaric Arc during 2013 and 2014. The results provide initial information on how various stakeholders perceive actual and potential values in protected areas and can be used in their future development and management.

In this report, we present results of the Protected Areas Benefits Assessment (PA-BAT) in Slovenia. Currently, protected areas are established on 13,9 % of the national territory (281.711 hectares)⁵. Management through dedicated management authorities is ensured in 11 wider protected areas, which together cover 10,3 % of the national territory. In Slovenia, five protected areas were asked to participate in the analysis, as it was felt that with the differences (e.g. ecosystems, governance type) among them we would be able to show the whole array of protected area benefits. The following protected areas participated in the assessment: Triglav National Park, Landscape Park Goričko, Landscape Park Logarska Valley, Sečovlje Salina Nature Park and Škocjanski zatok Nature Reserve. These areas cover 6,6 % of the national territory, so the assessment has covered about half of the protected area system in Slovenia. These areas vary greatly in size, management objectives (IUCN category)⁸ and governance types (Table 1.) and can, therefore, provide a relatively good insight into the multiple values and benefits of protected areas in Slovenia.

Table 1.
Characteristics
of the protected
areas assessed
in Slovenia.

English name of PA	IUCN category	Surface [ha]	Governance types	Year of designation	Year of management authority establishment
Triglav National Park	II / V	83.982	Government	1981	1981
Landscape park Goričko	V	46.268	Government	2003	2004
Landscape park Logarska Valley	V	2431	Municipality	1987	1992
Sečovlje Salina Nature Park	V	701	Government, concession granted to a company	2001	2002 ⁶
Škocjanski zatok Nature Reserve	IV	122	Government, concession granted to an NGO	1998	1999 ⁷

Source: Slovenia Environment Agency, 2016

² Available at: <http://www.teebweb.org/>

³ N. Dudley & S. Stolton, 2012. The protected Areas Benefits Assessment Tool.

⁴ A methodology. WWF and Parks Dinarides. Available at: http://croatia.panda.org/en/what_we_do/protected_areas/pa4np/pa_bat_methodology/

⁴ Available at: http://parksdinarides.org/en/about_us/

⁵ Based on data from Slovenian Environment Agency, 2016. Available at: http://kazalci.arso.gov.si/?data=indicator&ind_id=755

⁶ The year of granting concession to the company Soline d.o.o.

⁷ The year of granting concession to the Bird Study association of Slovenia (DOPPS).

⁸ Dudley, N. (Editor) (2008). Guidelines for Applying Protected Area Management Categories. Gland, Switzerland: IUCN. x + 86pp Available at: <https://portals.iucn.org/library/sites/library/files/documents/PAG-021.pdf>

Methodology

The PA-BAT is a simple tool allowing assessment of current and potential benefits of individual protected areas. The methodology allows assessment of 22 values, but in the individual protected area only legally permissible values are assessed. Values are organized into nine major groups: nature protection, protected area management, food, water, culture and history, health and recreation, knowledge, ecosystem regulatory services and natural materials. The PA-BAT tool enables us to analyze and compare non-economic and economic potentials of protected areas. Protected areas provide a range of non-economic benefits that are important for subsistence. They may not bring income but contribute to human well-being. There can be marked differences among protected areas in the importance of values, depending on the natural assets of the areas, conservation goals, legally binding protection arrangement and perception of stakeholders.

The steps in implementing the PA-BAT assessment are:

1. Nomination of the PA-BAT coordinator in a protected area and collection of basic data;
2. One-day site-based participatory workshops in protected areas (datasheets, detailed minutes, stakeholder surveys);
3. Data validation (post-workshop);
4. Data analysis (site-based, national and international level);
5. Preparation of guidance on the use of the results and
6. Implementation of recommendations.

The crucial step of the assessment is the workshop, which should ideally be attended by diverse stakeholder groups. For the Dinaric Arc⁸, eight stakeholder groups were defined as the most relevant:

- a) local people living in the protected area;
- b) local people living near the protected area;
- c) national population;
- d) scientists/experts;
- e) civil society organisations;
- f) government (local, national, protected area managers);
- g) business sector;
- h) global community.

The workshop participants assess economic and non-economic/existential values (fulfilment of basic subsistence needs) of ecosystem services regarding their benefits for different stakeholders. The benefits are scored on a six-point scale, so that answers are agreed upon within each stakeholder group through a discussion (Table 2.).

The scale is as follows:

- a) no benefit (blank cell);
- b) minor existential benefit (+);
- c) major existential benefit (++);
- d) minor economic benefit (€);
- e) major economic benefit (€€);
- f) potential economic benefit (P).

	Local people living in the PA	Local people living near PA	National population	Scientists/experts	Civil society organisations (mushroom collector organization)	Business sector	Government (local, national, PA managers)	Global community
Existential value	+	+	+	+		n.a.	n.a.	+
Economic value	€CP	€€	€			€P	P	

n.a. non-applicable to the particular stakeholder group

Table 2. Example of the PA-BAT datasheet filled for Landscape Park Goričko shows the importance of the area for different stakeholder groups for collecting mushrooms and other wild fruits and plants in Landscape Park Goričko

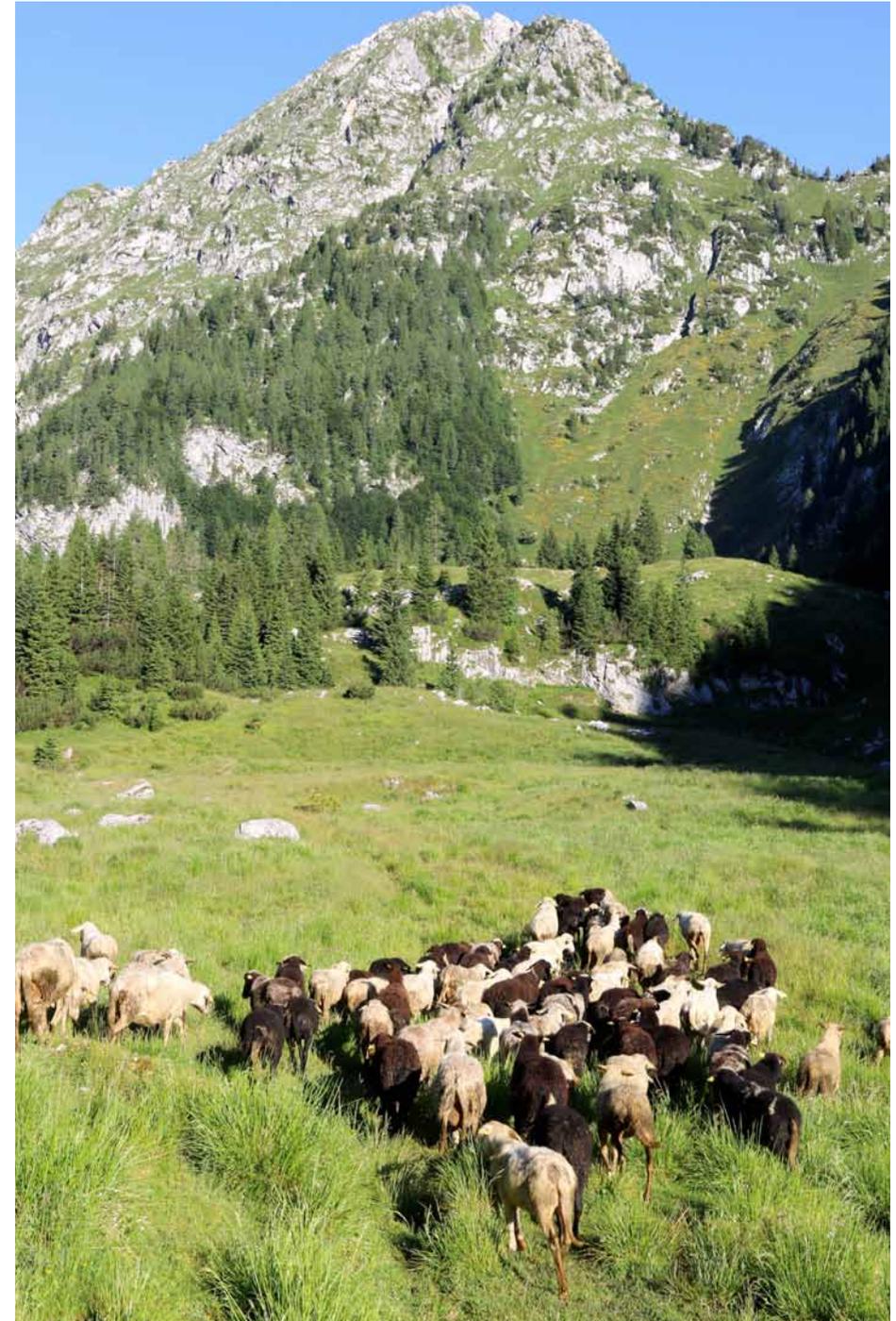
⁸ Albania, Bosnia and Herzegovina, Montenegro, Croatia, Kosovo*, Macedonia, Slovenia, and Serbia

* This designation is without prejudice to positions on status, and is in line with UNSCR 1244/99 and the IJC opinion on the Kosovo declaration of independence.

The first row presents the non-economic/existential value for eight different stakeholder groups (presented in columns in Table 2) and the second row presents the economic value. Stakeholders assessed their usage of mushroom and other wild fruits and plants in Goričko through these grades: + minor existential benefit (locals in and out PA, national population, scientist and global community/bordering country), € minor economic benefit (national population, business), €€ major economic benefit (locals in and out PA), P potential economic benefit (locals in PA, business sector and PA managers). In this case the existential value for the business sector and the government have not been measured, because these groups cannot have existential value but only economical one.

In the further analysis of the results, we combined the workshop results, other valuable remarks of participants collected during the workshop and relevant written resources which help us interpret the results.

The PA-BAT results can be used on a level of individual protected areas to support management and on a national level to support the development of policies that ensure nature conservation while promoting sustainable development and the wise use of natural resources. To support the use of the assessment results, we have developed several guidelines for park management authorities.



Sheep in the Triglav National Park © Neža Pošnjak

Results and discussion

The results of the PA-BAT workshops show that stakeholders in Slovenia recognise a wide array of values in protected areas (Figure 1.). The most recognised benefits were: nature conservation, tourism and recreation, followed by formal and informal education. They received high scores for both non-economic and economic value. Specific site value⁹, building knowledge/research and cultural and historical values received high scores for non-economic value but lower scores for economic value. The results of the PA-BAT assessment in Slovenia show that stakeholders see economic development shifting away from the traditional use of natural resources (wood, water, minerals) towards developing cultural and educational assets which is especially visible in the stakeholders perception of PAs economic potential in the future (Figure 5.). In particular, in education Slovenian protected areas are exemplary in the Dinaric Arc region and several protected areas from neighbouring countries are replicating their models, including WWF project in Serbia¹⁰.

Several values related to provisioning ecosystem services (wood, livestock grazing, genetic material, wild food plants and mushrooms, and hunting) have received medium scores in for both non-economic and economic value. This supports the evidence from the field, as local inhabitants often rely on these values for their subsistence, but some may also market them and generate some income.

One more trend is visible from the overall scores. For almost all values scores for the non-economic value are higher than for the economic value. This could imply that majority of stakeholders has not yet recognized the economic value of some of the ecosystems values. Some of the most important findings regarding the specific values with the highest scores are:



EDUCATION
IS THE MOST
EXEMPLARY VALUE
FROM SLOVENIAN PAs.



Ecotourism © Paul Veenwijet

1. Nature conservation is the most recognised value of protected areas in both non-economic, slightly less so in economic terms. This shows that stakeholders recognize the primary role of protected areas and are partially also seeing economic potential in conserving nature. Also, other studies show relatively high support of Slovenians towards nature conservation. In the European-wide survey Attitudes of Europeans towards Biodiversity, 68 % of Slovenian respondents agreed that our health and well-being are based upon nature and biodiversity, and 69 % (one of the highest scores among the EU countries) agreed that biodiversity and nature are important for our long-term economic development. 50 % of Slovenians (average EU was 51 %) totally agree, and 37 % tend to agree that, in order to preserve nature, protected areas could be expanded¹¹.

⁹ An area recognized by a significant number of people as being of unusually high importance from a cultural, historical, spiritual or scientific perspective. Such places are likely to have a special role in national, regional or global consciousness.

¹⁰ Available at: https://natureforpeople.org/wwf_examples/education/

¹¹ European Union, 2015. Special Eurobarometer 436 “Attitudes of Europeans towards biodiversity”. Available at: <https://ec.europa.eu/commfrontoffice/publicopinion/index.cfm/ResultDoc/download/DocumentKy/68148>

2. **Formal and informal education** and building knowledge both received high scores for non-economic values. Indeed, protected areas in Slovenia play an important role in education. They offer programs for nature science days for primary and secondary schools and often support students in conducting research. Protected area management authorities often also provide training opportunities for the local inhabitants, and in some cases, they act as an important pillar of the local society.

3. Not surprising, **tourism and recreation** have received the highest scores for economic value. It also received high scores for non-economic value which implies that preserved landscape and nature is an important component of people's lives. In the last few years Slovenia is successfully promoting sustainable tourism and is recording high growth in incoming tourism. In September 2016, Slovenia has as the first country in the world received Green Destinations Award¹².

4. Several **provisioning services** received intermediate scores for both non-economic and economic value. Important to note is that in some of the protected areas, where the assessment took place, they either do not have conditions for certain provisional services (e.g. there is no forest in Sečovlje Salina Nature Park) or their exploitation is not allowed. For example, in Triglav National Park the exploitation of provisional values is not allowed in the first protection zone, and it is also partially restricted in the second zone.



**HIGHEST ECONOMIC
BENEFIT COMES FROM
TOURISM. SLOVENIA
IS THE 1ST COUNTRY
TO RECEIVE GREEN
DESTINATION AWARD
IN 2016.**



¹² Available at: <https://www.ljubljana.si/en/news/ljubljana-slovenia-green-destination-3/>

¹³ Anonymous, 2016. Strategic framework for climate change adaptation. Available at: http://www.mop.gov.si/fileadmin/mop.gov.si/pageuploads/podrocja/podnebne_spremembe/SOzP_ang.pdf

¹⁴ European Union, 2015. Special Eurobarometer 436 "Attitudes of Europeans towards biodiversity". Available at: <https://ec.europa.eu/commfrontoffice/publicopinion/index.cfm/ResultDoc/download/DocumentKy/68148>

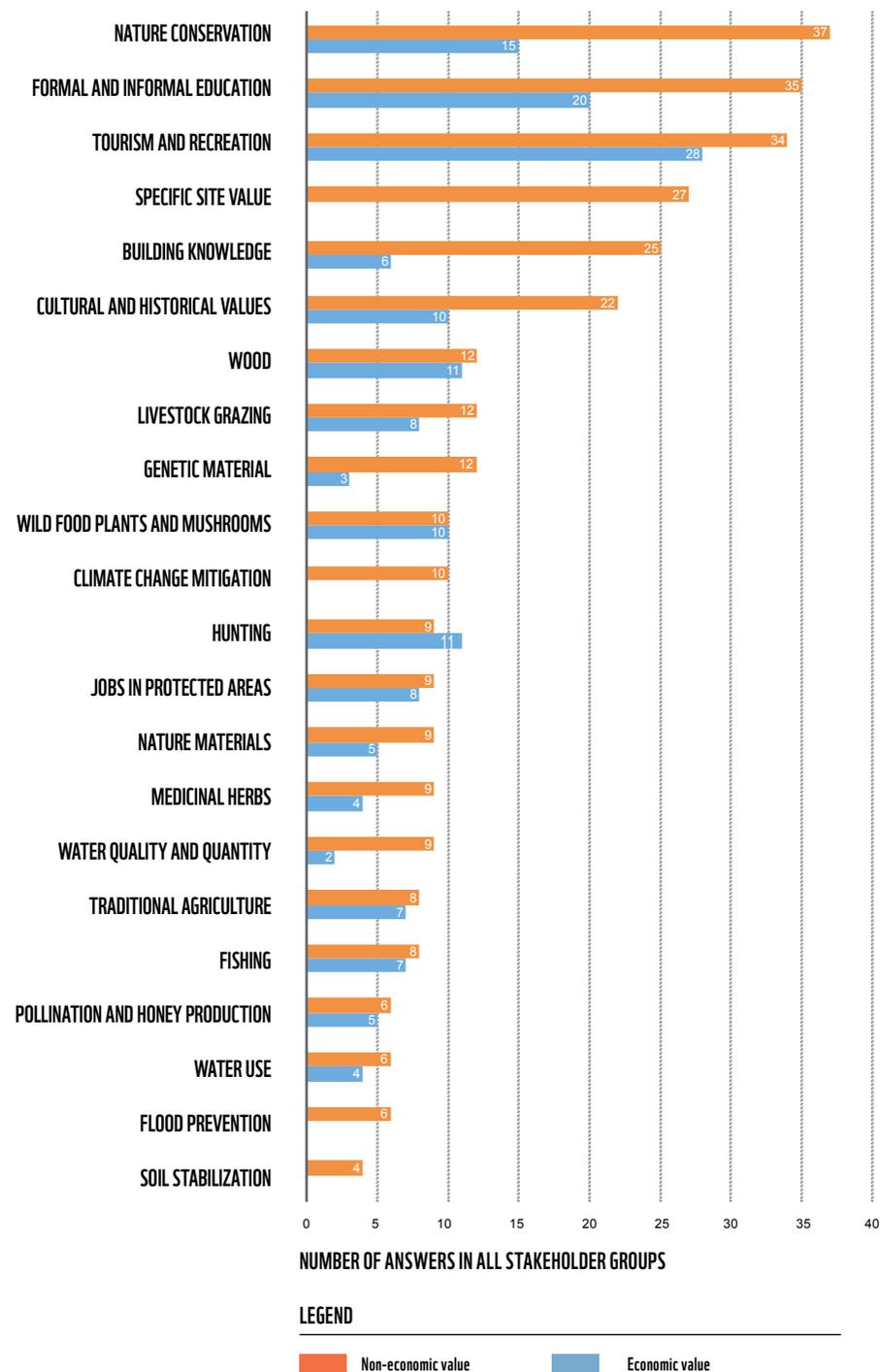
5. **Regulating services** received relatively low overall scores, which shows that the perception of their importance is still limited. The only regulatory service which has received higher score was climate change mitigation. In Slovenia, climate change is becoming an important environmental topic, which due to extreme summer temperatures, drought and storms in the last years, seriously affects the well-being of citizens. Climate change is also high on political agendas. In December 2016, Slovenia adopted a Strategic framework for climate change adaptation¹³ which sets steps towards cooperation of all ministries on measures for climate change adaptation¹³. Also, general public perceives climate change as an important issue. In the survey of attitudes of Europeans towards biodiversity, 72 % of Slovenians have agreed that looking after nature is essential for tackling climate change¹⁴.



Gerčičko forest © Grega Žorž

The assessment using the PA-BAT methodology, performed in Slovenia in 2013 and 2014, has shown that stakeholders from various groups recognize multiple benefits of protected areas. Nature conservation is the most recognized value of protected areas in both non-economic, and slightly less so, in economic terms. This shows that stakeholders recognize the primary role of protected areas and are partially also seeing economic potential in conserving nature. Other high-scoring values were formal and informal education and building knowledge. This supports the important role of Slovenian protected areas in education, as they organize many school and extracurricular activities and importantly contribute to awareness raising on biodiversity. Tourism has received one of the highest scores for economic value, supporting the significance of protected areas for domestic and foreign visitors.

Figure 1. Comparison of non-economic and economic values of various ecosystem services in five Slovenian protected areas as assessed by different stakeholder groups.



Major non-economic values

Values, of which non-economic importance was recognized in the highest number of protected areas were: formal and informal education, building knowledge, tourism and recreation, nature conservation and specific site value. Other recognised major non-economic values were: flood prevention, wood, jobs in protected areas and non-commercial water use (Figure 2.). It should be noted here, however, that the sample of assessed areas in Slovenia was rather small and results are strongly influenced by characteristics of protected areas which completed the assessment. On the other hand, in the PA-BAT assessment in Croatia¹⁵, where all larger protected areas were included (8 national parks and 10 nature parks), the ranking of non-economic values was very similar.

Slovenia is rich in water resources, exceeding the European average by almost four times¹⁶. Therefore, it is not surprising that both values related to water, non-commercial use water and water quality & quantity, have received relatively high scores. However, two out of five assessed areas are rather small coastal protected areas, with limited freshwater resources and therefore of little importance for providing drinking water.

Despite that, employment opportunities are by its nature more an economic value while people perceive them as existential value as well because it is interconnected with their livelihood. Protected areas, depending on their size and number of staff, provide direct employments, which are usually quite stable and often provide income to people living in or close to protected areas. Management authorities may also provide additional seasonal employment, mostly in visitor management and therefore the value of jobs in protected areas is closely linked to the tourism potential of protected areas. Indirect jobs, providing other services in protected areas can be significant, in particularly in protected areas with well-developed tourism.

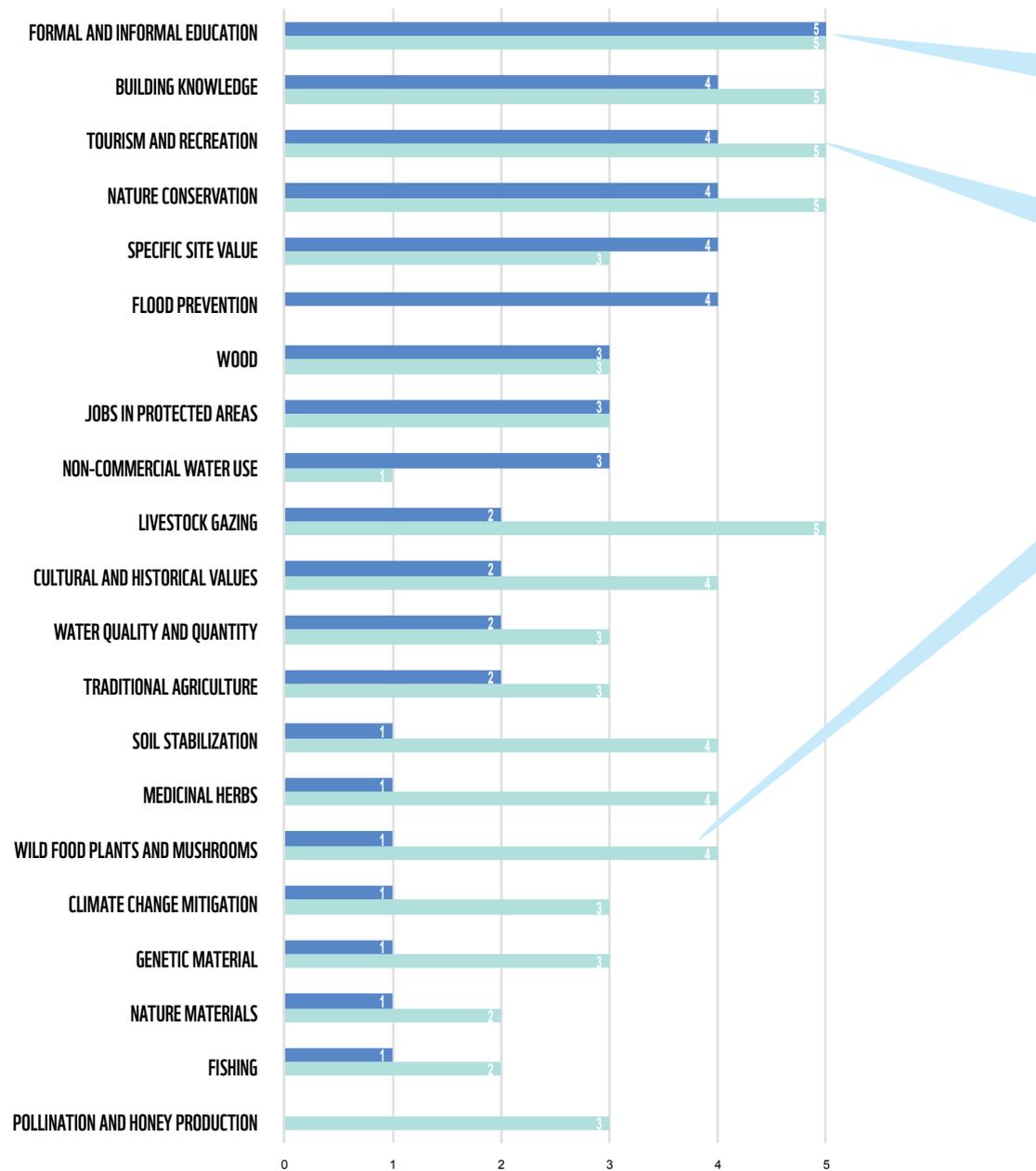
**SLOVENIA IS RICH IN
WATER RESOURCES,
EXCEEDING THE
EUROPEAN AVERAGE BY
ALMOST FOUR
TIMES.**

¹⁵ Štefan, A., Ivanić, K.-Z., Porej, D., 2017. Protected Area Benefit Assessment (PA-BAT). WWF Adria. Available at: https://natureforpeople.org/protected_areas/pa_bat_report_2017_a5_eng_verzija_za_web.pdf

¹⁶ Črnigoj, M., Žitnik, T., 2017. Let's enjoy the nature and take care of preserving its beauty. Statistical Office of Slovenia. Available at: <http://www.stat.si/StatWeb/News/Index/6711>



Soča river © Neža Posnjak



IMPORTANT ROLE OF PROTECTED AREAS IN THE FIELD OF EDUCATION IS WELL RECOGNISED AMONG STAKEHOLDERS.

PROTECTED AREAS ARE IMPORTANT FOR DIFFERENT FORMS OF RECREATION AND ALSO RELEVANT FOR PEOPLE ON A PERSONAL LEVEL.

COLLECTION OF MEDICINAL PLANTS AND MUSHROOMS IS COMMON SPARE TIME ACTIVITIES FOR MANY SLOVENIANS, BUT ONLY FEW PEOPLE DO IT COMMERCIALY.

The importance of protected areas for maintenance of ecosystem services in Slovenia is increasingly recognised, both among researchers and on a policy level. Researchers from several institutions are studying the role of protected areas in regional development. Many of those were presented during a symposium Slovenian regional development days in 2011¹⁷. Some further insights into the importance of ecosystem services can be expected from the Interreg project ECO KARST, which is running from January 2017 until June 2019. The project aims to contribute to the protection and sustainable development of karst bio-regions in the Danube region based on their valued ecosystem services. The project addresses seven nature protected karst areas in seven different countries with common features and similar problems and built on the opportunity to use the natural heritage of seven protected areas in economic development¹⁸.

Figure 2. Protected areas in which various stakeholders recognise minor and major non-economic/existential values.



¹⁷ Nared, J. Perko, Razpotnik Visković N. 2011. Razvoj zavarovanih območij v Sloveniji. Zbirka Regionalni razvoj 3.

¹⁸ Available at: <http://www.interreg-danube.eu/approved-projects/eco-karst>

Major economic values

We further analysed in how many protected areas different values are recognised as having minor or major economic value (Figure 3.). While several non-economic values have received high scores, economic values were recognized only for a few. The **highest economic values were attributed to** natural materials, nature conservation, tourism and recreation, and exploitation of wood. In all five protected areas only minor economic value was recognized for values formal and informal education and job opportunities. The lowest scores were given to values building knowledge/research, traditional agriculture, fishing and hunting.

Stakeholders recognised economic value for only one regulating service - water quality and quantity, while for the provisioning services it was honey production. Most stakeholders did not relate honey production to pollination, which shows the lack of understanding of ecosystem functioning and stakeholders seem to take processes in nature for granted. **Climate change mitigation, flood prevention and soil stabilisation were not recognised to have economic value in any protected area.** This reflects the current situation, as protected area management authorities, local inhabitants or municipalities do not have any economic benefit from contributing to the conservation of regulating ecosystem services. The concept of payments for ecosystem services is a relatively new emerging financial mechanism in which beneficiaries of ecosystem services provide economic incentives (voluntary or mandated by law) to the providers of the services¹⁹.

**NATURE MATERIALS
SUCH AS WOOD AND
SALT HAVE MAJOR
ECONOMIC VALUE
FOR SOME OF THE
STAKEHOLDERS IN
SLOVENIAN PAs.**

In Slovenia, such mechanisms are poorly developed. Until 2013, farmers having land in the landscape, regional or national parks, had received higher payments from agricultural subsidies. Since the reform of the agricultural policy in 2014, this is no longer possible, and payments inside and outside of protected areas are the same. There is however still a mechanism which provides some economic benefit to the protected areas via profits in agriculture. On the basis of the National Farm Land and Forest Fund Act²⁰, management authorities can receive a small part of the profit of the National Farm Land Fund, which is divided over to the management authorities which were established by the state and they can use these funds for measures for conservation of nature, agricultural land and forests.



Forests in Slovenia © Paul Veenvliet

¹⁹ ICIMOD, 2011. Payments for Ecosystem Services. Introduction Participatory Integrated Watershed Management (PIWM). Sessions 21-22. Module 5. Available at: <https://www.icimod.org/resource/4103>

²⁰ Consolidated text UPB2, Official Gazette of Republic of Slovenia No. 19/2010

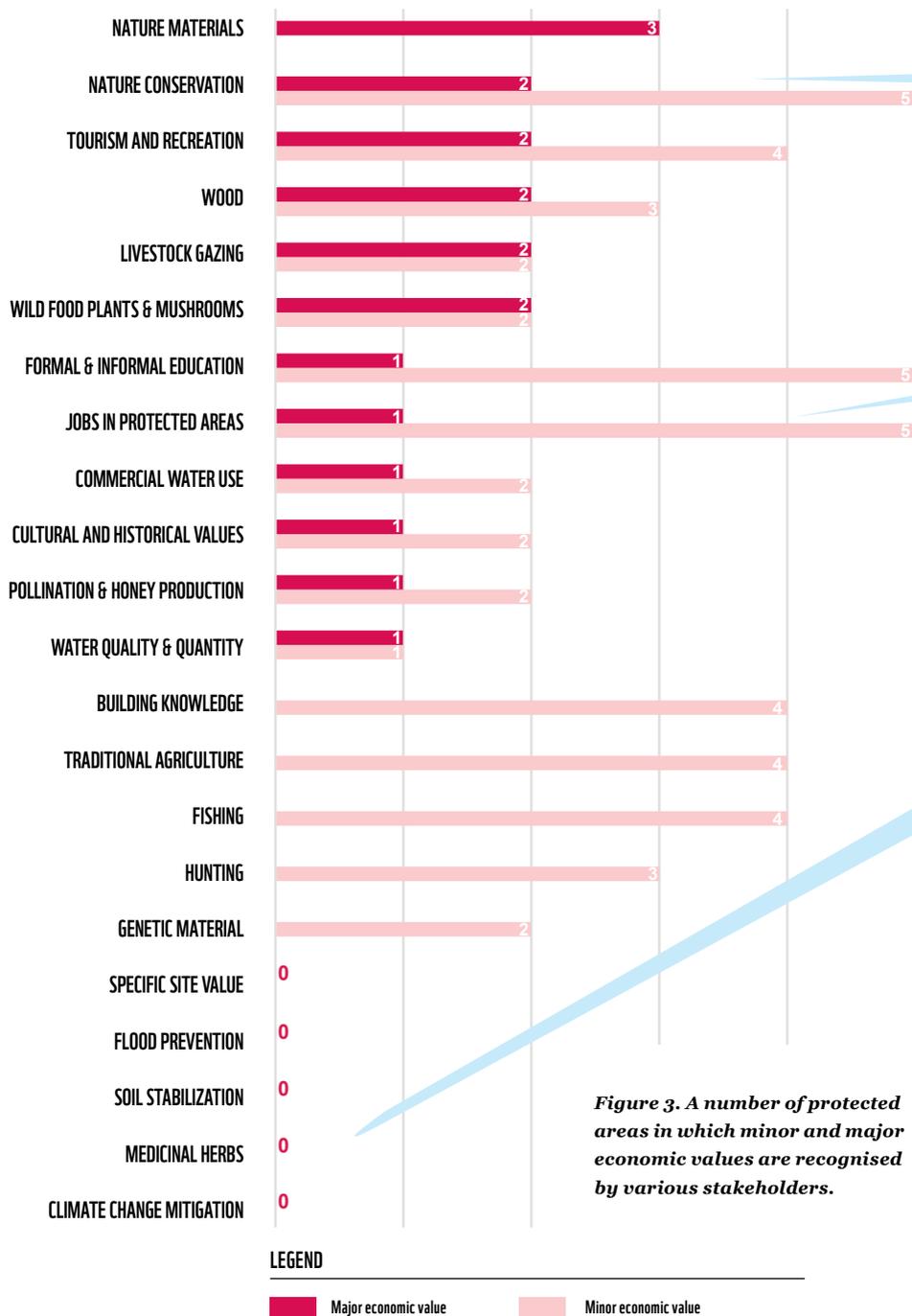


Figure 3. A number of protected areas in which minor and major economic values are recognised by various stakeholders.

LEGEND

Major economic value Minor economic value

IT IS INTERESTING THAT MARKET POTENTIAL OF NATURE CONSERVATION WAS ALSO RECOGNISED. DOES THAT MEAN THAT STAKEHOLDERS REALISED THE IMPORTANCE OF PRESERVED NATURE FOR TOURISM?

STAKEHOLDERS CONSIDER THAT JOB IN PROTECTED AREAS HAVE ONLY MINOR ECONOMIC VALUE. IS THIS BECAUSE MANAGERS OF PROTECTED AREAS ARE HIGHLY DEPENDENT ON PROJECT FUNDING AND MANY JOBS ARE TEMPORARY?

ECONOMIC VALUE OF REGULATING SERVICES IS NOT RECOGNISED, PROBABLY BECAUSE THE PRINCIPLES OF PAYMENTS OF ECOSYSTEM SERVICES HAS NOT YET BEEN INTEGRATED INTO THE SLOVENIAN LEGISLATION.

Not surprising, tourism and recreation have received the highest scores for economic value. As it received high scores also as a non-economic value, nature is obviously an important component in people's lives. In some protected areas local businesses generate substantial income from tourism. The challenge however is, to achieve that tourism is sustainable and does not jeopardize the attainment of nature conservation goals.

Tourism and recreation

Tourism and recreation have received one of the highest scores, but it was recognised to be of major economic importance in only two out of five protected areas. The reason for this may be that different stakeholder groups may not have a good insight information about the actual income from tourism in protected areas. In the area of Triglav National Park the income is significant, but in the PA-BAT assessment, it was recognised as such only by stakeholders from the business sector and national, regional and local governments. Triglav National Park is largely a mountainous area, with peaks of visitors in the summer and some skiing tourism in winter. It is estimated that it is visited by around 2 million visitors each year, of which more than two-thirds come in July and August²¹. This brings significant income to the local businesses, but on the other hand, numerous visitors can exert significant pressure to the environment. In the year 2017, when Triglav National Park was visited by a record number of tourists, it became evident that more will have to be done for visitor's management in the future. The management authority does carry out many activities to develop sustainable tourism offer. In 2016, Triglav National Park²² and Prealpi Giulie Nature Park (Italy) were awarded a Charter for Sustainable Tourism for the Julian Alps Transboundary Ecoregion.

With the high number of tourists coming to the area of Triglav National Park, indirect income in the wider local community is significant. However the overall economic assessment has not yet been made. From the state statistics, we can see that foreign visitors create most overnight stays (28 % of all overnight stays by foreign tourists) in the mountainous part of the country, predominately in or in the vicinity of Triglav National park²³. For each overnight stay, tourists are charged with a tourist tax, which varies from about 0,5 € to 1,3 € per night.



PROTECTED AREAS DO NOT DIRECTLY GAIN FINANCIAL BENEFITS FROM TOURIST TAXES COLLECTED IN THEIR AREA.



The Kozjansko Regional Park © The Kozjansko Regional Park

The tax is collected by businesses offering any accommodation and has to be transferred to the account of the respective municipality each month. In some municipalities, this represents a significant part of the budget. For example, in 2014, eight municipalities, which are entirely or partially included in the Triglav National Park together collected 1,9 million €, which represents **almost one-quarter of the tourist taxes collected in the whole country**²³. Without a doubt, natural assets of the National Park are one of the main reasons for tourists visiting the park in the summer. Protected areas do not directly get any financial benefits from this source, in some cases, municipalities co-finance some of their programs.

²¹ Bajuk Senčar, T. 2016. Komunikacijski načrt vpeljave trajnostne mobilnosti na izbrane NV. Projekt: Parkiraj & doživi naravo!, Ljubljana: ZRC SAZU Inštitut za slovensko narodopisje.

²² Sabljic, N., Vovko, M., 2016. Tourist arrivals and overnight stays, Slovenia, 2015. Available at: <http://www.stat.si/StatWeb/en/News/Index/5933>

²³ Data calculated from Association of Municipalities and Towns, 2014. Available at: <https://skupnostobcin.si/podatki/realizacija-turisticne-takse/#p2>

The management authority of Triglav National Park has three direct sources of income from tourism. The highest (about 5 % of the protected area's annual budget) comes from renting out various mountain huts managed by the park authority. Second (about 4 % of the protected area's annual budget) is generated by the hunting tourism and third (about 0,5 % of the annual budget) by guiding in the park²⁴. For now, there is no legal ground to impose entrance fee for visiting the National Park, despite that this was already proposed on several occasions. However, the results of survey poll, conducted in 2016 have shown, that 70 % of visitors still visit the park if entrance fees were introduced²⁵.

**EACH OF LANDSCAPE
PARKS LOGARSKA
VALLEY AND GORIČKO
HAS AROUND
100.000
VISITORS ANNUALLY.**

Landscape Park Logarska Valley is yearly visited by approximately 100.000 visitors . Until 2016, the landscape park was managed by a company established by local inhabitants, which was granted a concession from Municipality Solčava, the establisher of the park. They collected entrance fee for motor vehicles, which they invested in various management activities. In 2017, the concession was not renewed, and the park is now managed by a public utility unit of the municipality.

Landscape Park Goričko also has about 100.000 visitors per year, most are only daytime visitors, staying in accommodations outside of protected areas where there are several thermal baths. The castle, managed by the management authorities is visited by about 20.000 people per year, but the income from entrance fee does not cover all the necessary investment costs²⁷.

Being situated on the Adriatic coast, Sečovlje Salina Nature Park has a great tourism potential. The park is visited by around 50.000 people per year and visitors pay an entrance fee. This income goes to the company which is managing the protected area by a concession,



**IN SEČOVLJE SALINA
NATURE PARK A
SOLAR-POWER TRAIN
REPLACED MOTOR
VEHICLES.**

²⁴ JZ TNP, 2016. Poročilo o delu, poslovno in računovodsko poročilo javnega zavoda Triglavski narodni park za leto 2015. Available at: <https://www.tnp.si/assets/Javni-zavod/Letna-porocila/Porocilo-JZ-TNP-2015.pdf>

²⁵ Odar, M., Marolt, M., A. Krek, I. Mrak. Turistični obisk biosfernega območja Julijske Alpe. Analiza stanja Analiza vprašalnika o obiskovanju Triglavskega narodnega parka 2016. JZ Triglavski narodni park.

²⁶ Solčavsko Upravljanje s turističnim obiskom Umiritev motornega prometa v zavarovanih območjih. Available at: http://www.logarska-dolina.si/knjiznica/projekti/Lenar_Logarska-dolina.pdf



Sečovlje architecture © Grega Žoiž

granted by the state. Most of this earnings are used to finance the management activities of the park, in the part which is not covered by the state. In the last years, the park has through project funding made additional investments in the visitors' infrastructure with additional walking paths and a solar-powered train which made it possible ban all motor vehicles from the park²⁸.

Škocjanski zatok Nature Reserve is the only one of the five assessed protected is where stakeholders did not recognise any current economic potential for tourism. This could be because the assessment was carried out in 2014 when the reserve was closed to visitors due to the construction of new visitors' infrastructure. Since the beginning of 2016, the reserve is again open for public. Entrance fee is charged for groups of more than ten people. Despite the small size of the area, the reserve has now excellent infrastructure to develop specialised bird watching tourism.

In 2011, a detailed study of ecosystem values was performed in Škocjan Caves Regional Park. It was estimated that there are about 13 indirect jobs created in the protected area and its vicinity, mostly providing services of accommodation and dining to tourists. The indirect employment value was estimated at 190,000 €²⁹.

²⁷ Minutes of the assessment workshop.

²⁸ Po Sečoveljskih solinah z električnim vlakcem (Through Sečovlje Salina with an electrical train), Multimedia news portal, 31.10.2016

²⁹ Žujo, J. & Marinšek, M. 2011. Ecosystem Services Evaluation in the Škocjan Caves Regional Park. Available at: http://www.park-skocjanske-jame.si/si/file/download/48_8c77a17c04b9b/Ecosystem_Services_Evaluation.pdf

Water

Values related to water (water quality and quantity and commercial and non-commercial use of water) have received relatively low scores. This is likely due to the type of protected areas which were assessed because they are markedly different in the number of freshwater resources. Triglav National Park is the richest, holding more than 20 % of the national water resources on only 4 % of the territory. Some streams are present in Landscape Park Logarska Valley. Water resources in Landscape Park Goričko, which is situated on the edge of the dry Pannonian Plane, are scarce and insufficient for all residents of the park. The two coastal areas, included in the assessment, are small and have very few freshwater resources and also stakeholders do not recognise these values as relevant.

In 2016, Slovenia made an important step towards protecting its water resources. As the first member of the European Union, Slovenia amended its constitution to make access to drinking water a fundamental right of all citizens. Water resources are a public good managed by the state and shall not be a market commodity³⁰.

In Slovenia, all fees which are collected by the state for the use of water (drinking water, bottled water, hydropower, use of water for irrigation) are collected in a special Water Fund. **Significant part of the budget of the Water Funds is used for construction of new hydropower plants**, which is usually not the case in other countries in the region. The current legislation determining the purposes for which the money from the water fund can be used³¹ does not provide any possibility that protected areas would partially be funded from this source.

In Triglav National Park, waters are not only important as a provisional resource but are an important asset for tourism. The valley of river Soča is a leading destination for outdoor activities, but these are mainly taking place on the parts of the river, which are outside of the protected area. Within the park, fishing and kayaking is allowed only in a few places (eg. Bohinj Lake, river Sava Bohinjka), while rafting is not allowed at all.

TRIGLAV NATIONAL
PARK IS THE RICHEST,
HOLDING MORE THAN
20%
OF THE NATIONAL
WATER RESOURCES
ON ONLY 4 % OF THE
TERRITORY.

SLOVENIA IS A
FIRST EU MEMBER
THAT AMENDED IN
ITS CONSTITUTION
DRINKING WATER AS A
FUNDAMENTAL RIGHT
OF ALL CITIZENS.



Despite the proven high economic value of the preserved river, there is also pressure to build more hydropower plants on the upper parts of the river Soča, which would have a devastating effect on the freshwater ecosystem and serious impact on the livelihoods of local inhabitants. WWF has been present in Slovenia since 2013 with the project “STAR!” which aimed to ensure strategic planning of hydropower development on Alpine rivers and raise awareness of local communities about detrimental effects of hydropower plants on rivers and freshwater ecosystems³². WWF Adria now continues the work with the goal that healthy Alpine river basins in Slovenia can support biodiversity and local communities’ livelihood through integrated water resource management³³.

WWF works towards ensuring that by the year 2022, legal protection of high conservation value areas of Alpine river basins in Slovenia is in process. To achieve this, WWF will firstly build a knowledge base to understand conservation needs and pressures in the Alpine river basins, which will underpin planned activities to raise awareness on various challenges, provide solutions to them, and finally advocate for the implementation of those solutions.

As our emphasis remains on hydropower development practice, we focus on ensuring that strategic pre-planning mechanism is used to plan hydropower development in Alpine river basins in Slovenia. Balancing hydropower development with environmental needs will lead to the identification of areas of high conservation value that should be kept free from hydropower. By providing the necessary inputs through our work (i.e. conservation value, legal recommendations, tools to be used) and engaging in advocacy to gather expert and wider public support, WWF will facilitate legal protection for high conservation value areas of Alpine river basins³⁴.

In Sečovelje Salina Nature Park, the company, which is managing the park, is also actively producing salt. For this, they are using sea water and have to pay a fee to the state for the exploitation of minerals. At the same time, they were granted a concession for management of the park, so the state is financing management activities.

³⁰ Constitutional Law amending the III. Chapter of the Constitution of the Republic of Slovenia – UZ70a (National Gazette, No. 75/16, 30. 11. 2016).

³¹ Waters Act (National Gazette, No. 67/02, 2/04 – ZZdrI-A, 41/04 – ZVO-1, 57/08, 57/12, 100/13, 40/14 and 56/15), 162nd article. Water fund.

³² Available at: <https://www.wwf.at/de/star-projekt/>

³³ Available at: http://croatia.panda.org/en/what_we_do/freshwater/alpine_rivers/

³⁴ Dinaric Arc Sustainable Hydropower Initiative. Available at: http://croatia.panda.org/en/what_we_do/freshwater/dinaric_arc_sustainable_hydropower_initiative__dashi__/

Jobs and protected areas

The assessment results show that stakeholders recognise the importance of protected area management authorities as employers only to a minor extent. This could be due to the restrictive employment policy in the past years when employment of new staff in public sector almost entirely stopped. However, in rural areas, employment in protected areas authorities can be very important, in particular for the higher educated people. Also local businesses are indirectly benefiting from protected areas, as they are often subcontracted to provide various goods and services.

In the year 2010, 111 jobs were financed by the state in all Slovenian protected areas³⁵. Since then, there was some new employment in the newly established protected areas, but reductions in others, so the number remains more or less stagnant. The number of job positions among different authorities varies greatly, and there is no correlation between their number and the size of the protected area. Typically, protected areas established several decades ago have more staff while protected areas established in the last decade have only a few employees, which is a result of a restrictive employment policy of the state in the recent years.

Besides the job positions which are financed from the state or municipality budget, managers also employ temporary staff on various (mostly EU funded) projects and as seasonal workers. Implementation of nature conservation programs and activities is often financed within projects, which makes management authorities highly dependent on the available project funding and causes fluctuations in the number of staff.

One of the assessed protected area, Sečovelje Salina Nature Park nowadays employs a large number of seasonal workers for production of salt. In 2002, when a new company Soline d.o.o., took over

INDIRECT JOBS FROM PA VALUES CAN BE SIGNIFICANT, IN PARTICULAR, IN PROTECTED AREAS WITH WELL-DEVELOPED TOURISM.



INDIRECT EMPLOYMENT VALUE IN ŠKOCJANSKE CAVES WAS ESTIMATED AT 190,000 €.

Bee hive © Paul Veen/ist



the salts, they decided to reestablish the traditional salt-making procedure and combine this with creating favourable conditions for biodiversity. The company launched two lines of products related to traditionally harvested salt and salt-making by-products and has by now seven stores in major Slovenian cities. In the same period the company was steadily increasing the number of employees and from 19 in 2002 to 80 in 2010³⁶. In the recent years, there is about ten permanently employed staff in salt making, additional ten are hired during the season, and some salt-workers are leasing salt ponds, and the company is buying the products from them. The staff, employed on the nature conservation program (in the year 2010 that was 21 employees³⁷), is largely paid from the state budget.

³⁵ Ministry of the Environment and Spatial Planning, 2010. Analysis of the functioning of public institutes managing protected areas with proposals for rationalization. Available at: http://www.mop.gov.si/fileadmin/mop.gov.si/pageuploads/podrocja/narava/delovanje_zavodov_zav_obm_narave_2011.pdf

³⁶ Sovinc, A., 2012. Assessment of the use values of the Sečovelje salina nature park (Slovenia). *Annales, Ser. hist. nat.* 22(2): 189-196

³⁷ Sovinc, A., 2012. Assessment of the use values of the Sečovelje salina nature park (Slovenia). *Annales, Ser. hist. nat.* 22(2): 189-196

Some more insight into the job positions indirectly generated by the protected area was given by the study of the ecosystem services of Škocjan Caves Park (not included in PA-BAT assessment), which was financed through WWF Dinaric Arc Project in 2011. Škocjan Caves Park is a relatively small protected area, but many visitors come to the area in the summer to visit the caves. **In 2011, management authority was employing around 30 people and 16–19 seasonal workers and 11–14 students during the summer. Direct employment value in 2011 was estimated at almost 850.000 €²⁹.**



Škocjan Caves © Borut Lozej, PSJ archives

Forestry

Forests cover about 58 % of Slovenia and are the most important natural resource. Forest management in the whole country is in principle sustainable, taking into account the various functions of the forests and the environmental protection principles. Forests in Slovenia are largely privately owned. Especially in mountainous regions, **forests are an important source of income for farmers, and they often contribute towards the preservation of settlements in rural areas.** The large majority of Slovenian forest owners typically own very small properties, which makes the much-needed specialisation in forestry work and in the marketing of forestry products and the management of other forest-related effects very difficult³⁸.

Detailed information on the importance of forestry in protected areas is not available, but the importance of the sector and some trends can be observed from the national statistical data. As many farmers perform work in own forests as unpaid work, this cannot be estimated in the number of job positions but annual working unit (AWU) is used instead. This corresponds to the work performed by one person who is occupied on an agricultural holding on a full-time basis. After a steep decline in the number of employees in forestry, this is now stable in the recent years and amounted to 6.000 annual working units (AWU)³⁹. The share of forestry in the gross domestic product (GDP), which was 0,5 percent in 2007, increased in 2014 to 0,6 percent trending with a weak positive growth. In the period 2007–2014, the revenue per employee increased from 29.000 EUR per AWU in 2007 to about 43.000 EUR per AWU in 2012 and 2013. In 2014 the revenue decreased to 39.000 per AWU⁴⁰.



In Triglav National Park, forests cover about 50 % of the territory. Logging is in principle allowed in the second and third protection zone of the park (68,50 %) but forbidden in the first protection zone (exception for sanitary felling if the protected area authority allows it). In the recent years there is a notable increase in logging, both, for economic reasons and as sanitary felling due to bark beetle attack. Due to the poorly developed forest wood supply chain, most timber is exported to Austria as raw material, without much added value.

In Landscape Park Goričko, forest is mostly privately owned and an important benefit for the local inhabitants. As in other border regions of Slovenia, wood is used as firewood, but timber is mostly exported to Austria, where they process it further. This weakness of the Slovenian wood-processing industry means that currently much less added value is created with the exploitation of wood.

In Landscape Park Logarska Valley, logging provides important income for some local inhabitants. Wood is used as firewood and partially is exported to Austria. Mountain wood is valuable especially for the production of doors, windows and roofing. In 2017, a new project has started, led by Slovenian Forest Service, to establish a chain of companies for exploiting mountain wood from cutting to final products with high added value⁴¹.

In Sečovelje Salina Nature Park and Škocjanski zatok Nature Reserve there is no forest.

³⁸ Perko, F. (2004): Gozd in gozdarstvo Slovenije. Ljubljana: Zveza gozdarskih društev Slovenije: Ministrstvo za kmetijstvo, gozdarstvo in prehrano RS: Zavod za gozdove Slovenije. ISBN 961-6142-11-9

³⁹ Ministry of Agriculture, Forestry and Food, 2016. Summary of the Report on Slovenian Forests and Forestry 2007-2014. Available at: http://www.mkgp.gov.si/fileadmin/mkgp.gov.si/pageuploads/podrocja/Gozdarstvo/Slovenian_Forests_ANG_splet.pdf

⁴⁰ Ministry of Agriculture, Forestry and Food, 2016. Summary of the Report on Slovenian Forests and Forestry 2007-2014. Available at: http://www.mkgp.gov.si/fileadmin/mkgp.gov.si/pageuploads/podrocja/Gozdarstvo/Slovenian_Forests_ANG_splet.pdf

⁴¹ Šubic, P. 2017. Na Solčavskem nastaja gozdno-lesna veriga za gorski les. Available at: <https://agrobiznis.finance.si/8855604>

Knowledge and education

Results of the assessment show that stakeholders recognise the importance of protected areas for knowledge and education. Several protected areas are active in the maintenance of traditional knowledge, especially old habits and customs, crafts, traditional stories, agricultural practices and similar. Traditionally, protected areas in Slovenia have well-developed education programs, mainly targeting primary and secondary school children. Visiting at least one protected area is part of the curriculum of schools and protected area staff often assists teachers in conducting educational activities, which is not yet common practice in most of the Dinaric Arc countries.



Triglav National Park has developed several programs for primary and secondary schools, which consists of lectures and presentations at their information centres or nature walks. They also developed a special program for visually impaired children. The park successfully runs a training program for junior rangers since 2002⁴². Since 1998, the park is organizing nature science days in memory of Albin Belar (Belar Days), when children from primary schools within the park and bordering areas visit the protected area.

Landscape Park Goričko, Sečovelje Salina Nature Park, and Škocjanski zatok Nature Reserve are often visited by school groups. Exemplary in this field is the Škocjan Caves Park, where they first started developing a network of schools in 1999. In 2017, they had six active primary schools participating in the program with 21 teachers and about 160 pupils⁴³. By the end of this year, they expect two more schools to join so the program will involve at least 31 teachers and almost 200 pupils⁴³. In 2016, they received a special award of the Republic of Slovenia for outstanding achievements in the elementary schools' education. In 2014, the park also established a network of universities of the park. The three largest universities have joined the network to collaborate in research and use the results for management of the Biosphere area.

**TRIGLAV NATIONAL
PARK DEVELOPED A
SPECIAL PROGRAM
FOR VISUALLY
IMPAIRED CHILDREN.**

⁴² Available at: <http://www.tnp.si>

⁴³ Vanja Debevec, personal information



Values related to food

The PA-BAT includes five values which are related to food: traditional agriculture, livestock grazing, hunting, wild food plants and mushrooms and fishing. The importance of each of these values greatly varies among protected areas due to their natural characteristics, size and the permissible use of natural resources.

In Triglav National Park⁴⁴, **hunting** is allowed in the second and third protection zone, but not permitted in the first one. 65 % of the park territory belongs to the national hunting area (Hunting Ground for Special Purpose Triglav), which is managed by the staff of the PA management authority. Most staff employed as nature rangers also perform tasks of hunting guards, which is not the case in some other countries in the region where hunting guards or forester perform duties only related to their resources. Hunting can only be performed within the quotas set by the yearly hunting management plan, which is also taking into account cross-border populations in the Prealpi Giulie Nature Park. Management authority has significant income from hunting tourism, which in 2016, represented about 4 % of their annual revenue⁴⁴.

⁴⁴ JZ TNP, 2016. Poročilo o delu, poslovno in računovodsko poročilo javnega zavoda Triglavski narodni park za leto 2015. Available at: <https://www.tnp.si/assets/Javni-zavod/Letna-porocila/Porocilo-JZ-TNP-2015.pdf>

In Landscape Park Goričko, they are mainly hunting red deer, roe deer and wild boar. Local people are mainly hunting for their use and income from hunting is relatively small. Hunting tourism in the past years has declined. Also in Landscape Park Logarska Valley hunting is allowed. The income from hunting tourism is significant, but no hard numbers exist.

In the areas of Sečovlje Salina Nature Park and Škocjanski zatok Nature Reserve, hunting is prohibited.

Collection of **wild plants** for medicinal purposes in Slovenia is very widespread. According to some research, 72 % Slovenians are using medicinal plants, which they collect themselves or are given by relatives and friends⁴⁵. Rules on forest protection⁴⁶ limit quantity plants which can be collected for personal use to one kilogram per day. There is no data on how widespread these activities are in protected areas. Collection of wild plants is not allowed in the Škocjanski zatok Nature Reserve, the first and second protection zone in Triglav National Park and the first zone in Sečovlje Salina Nature Park. In Landscape Park Goričko, the collection of medicinal plants and **forest fruits** (blueberries) is quite widespread. It is sometimes causing conflicts when people collect these on private land. The manager of a protected area, or the state, do not have any economic benefit from these activities. In Triglav National Park, collection of wild plants is generating some additional income to a few local inhabitants. So far, no permits for commercial collecting of wild plants have been issued. This potential economic potential is probably not used due to unclear and inconsistent legislation, which make it difficult to legalize such business.

TRIGLAV NATIONAL PARK AND LOGARSKA VALLEY LANDSCAPE PARK HAVE SIGNIFICANT INCOME FROM HUNTING TOURISM.



Medicinal plants *Hypericum perforatum* © Paul Veenliet



Also, in Landscape Park Logarska Valley collection of wild plants is widespread, but no in-depth research has been made so far. Local people collect plants for their use, but there are also many people coming from outside of the park and collecting the plants (small scale). The economic potential is probably low but could be increased if properly regulated.

In Slovenia, picking **mushrooms** is a very widespread activity. This is regulated by the Rules on forest protection⁴⁷ which sets a limit to the quantity of mushrooms which can be collected for personal use to two kilograms per day. The Decree on the protection of wild fungi⁴⁸ is determining rules on selling. Since setting these limitations, the number of companies registered to buy-in mushrooms has dropped. The amount of mushrooms sold to these companies dropped from 1250 tons in 1995, to about 30 tons annually in the period 2007-2013⁴⁹, however it is unclear to what extent the trade has simply moved to the black market.

⁴⁴ JZ TNP, 2016. Poročilo o delu, poslovno in računovodsko poročilo javnega zavoda Triglavski narodni park za leto 2015. Available at: <https://www.tnp.si/assets/Javni-zavod/Letna-porocila/Porocilo-JZ-TNP-2015.pdf>

⁴⁵ Volčanjk, N. 2010. Elaborat izdelave učne poti o zdravilnih in strupenih rastlinah v okolici Bovca. Diplomsko naloga. Fakulteta za farmacijo Univerze v Ljubljani. Available at: http://www.ffa.uni-lj.si/fileadmin/datoteke/Knjiznica/diplome/2010/Volcanjk_Natasa_dipl_nal_2010.pdf

⁴⁶ Pravilnik o varstvu gozdov (Uradni list RS, št. 114/09 in 31/16)

⁴⁷ Pravilnik o varstvu gozdov (Uradni list RS, št. 114/09 in 31/16)

⁴⁸ Uredba o varstvu samoniklih gliv (Uradni list RS, št. 57/98, 56/99 – ZON, 41/04 – ZVO-1 in 58/11)

⁴⁹ MKGP, 2016. Poročilo o izvajanju Nacionalnega gozdnega programa do 2014, page 42.

Also **honey** is widely produced in Slovenia, and this activity is not exclusively limited to protected areas. Data from the state statistics show that there was between 471 and 2470 tons of honey produced in Slovenia between years 2007 and 2014⁵⁰. However, some protected areas started with branding their products as products from protected areas and honey is often one of these goods. In Landscape Park Goričko for example honey (and some other products) are sold under the brand “park Goričko”. In 2017, altogether 42 local producers were registered to sell their food product under the trademark of the park⁵¹.

In Triglav National Park and Landscape Park Logarska Valley honey production is very small due to high altitude and therefore not of high importance. In Sečovelje Salina Nature Park and Škocjanski zatok Nature Reserve there is no honey production.

Economic benefits of waters are closely linked to the **fishing tourism**, which is in particularly developed in the Soča Valley, mostly in the part which is outside of Triglav National Park. A study, conducted in 2003, showed that fishing tourism in the Soča Valley generates about 2,4 million € to the local communities⁵². Within the Triglav National park rivers, Sava Bohinjka and Bohinj Lake are important for fishing tourism.

Livestock grazing is particularly relevant in Triglav National Park, where it has a long tradition. Grazing is allowed on designated mountain pastures in the first protection zone, where grazing was present for centuries. In 2011, the total surface of pastures was 2002, 40 ha (1250 ha of mountain pastures and 752,4 ha on high-mountain pastures)⁵³. Traditional grazing is also connected with cultural heritage such as



**FISHING TOURISM IN
THE SOČA VALLEY
GENERATES ABOUT
2,4 MILLION € TO THE
LOCAL COMMUNITIES.**

**THREE TYPES OF
LOCAL CHEESE
FROM TRIGLAV
NATIONAL PARK
OBTAINED BRANDING
OF CERTIFIED
GEOGRAPHICAL ORIGIN.**

wooden shepherd’s huts, various tools and habits. Three types of local cheese from Triglav National Park obtained branding of certified geographical origin, contributing to a higher added value. Mountain grazing provides opportunities to develop secondary services for example food production (milk, cheese, cottage cheese), tourism, and education.⁵⁴

In Logarska Valley there were nine farms in 2012, four of which were registered as ecological farms⁵⁵. Besides agricultural production, many farms also perform secondary services, such as further processing of agricultural products, which are locally marketed and often also sold to tourists.

In coastal protected areas the scope of traditional agriculture is quite limited as these are not agricultural areas. In Škocjanski zatok Nature Reserve horse and cattle grazing (with a traditional breed boškarin) is used for maintenance of grassland habitats which is one of conservation measures for reducing succession and enhancing biodiversity in the protected areas.

In Kozjansko Park (not included in the assessment), which is one of the oldest and largest protected areas in Slovenia, they have a long tradition of fruit production. The management authority is promoting growing old varieties of apples, and in this way also contributing to the preservation of traditional high-trunk meadow orchards which are also important habitat of many protected species. Once a year they organize Kozjansko Apple Festival, which is one of the largest and best visited environmental events in the country. The manager also established a nursery of old varieties of fruit trees and is supporting locals by providing equipment for production of apple juice⁵⁶.

⁵⁰ MKGP, 2016. Poročilo o izvajanju Nacionalnega gozdnega programa do 2014, page 42.
⁵¹ Available at: http://www.park-goricko.org/sl/informacija.asp?id_meta_type=64&id_jezik=0&id_language=0&id_informacija=585

⁵² Sullivan, C.A., Jesensek, B., Jesensek, D., Zuza, A., 2003. An assessment of the importance of recreational sports fishing in the upper Soca basin, Slovenia. Project report to Tour du Valat, CEH, Wallingford, UK.

⁵³ Kralj, T., Koren, D., 2011. Izhodišča za načrt upravljanja Triglavskega narodnega parka 2012–2022. Analiza stanja kmetijstva. Bled: Javni zavod Triglavski narodni park. Available at: http://www.tnp.si/images/uploads/Analiza_kmetijstva.pdf

⁵⁴ Kralj, T., Koren, D., 2011. Izhodišča za načrt upravljanja Triglavskega narodnega parka 2012–2022. Analiza stanja kmetijstva. Bled: Javni zavod Triglavski narodni park. Available at: http://www.tnp.si/images/uploads/Analiza_kmetijstva.pdf

⁵⁵ Available at: www.kozjansko.info

⁵⁶ Lozej, Š. L., 2013. Paša in predelava mleka v planinah Triglavskega narodnega parka: kulturna dediščina in aktualna vprašanja. Traditiones 42 (2):49–68. Available at: <https://doi.org/10.3986/Traditio2013420203>

⁵⁶ Available at: www.kozjansko.info

Flow of benefits

Comparison of the relevance of all values for different stakeholder groups shows that in all groups, except business sector, the non-economic value is more recognized than the economic value of PA benefits (Figure 4.). The most relevant economic values for business sector are: tourism, water resources, natural materials, wood and values related to food production (hunting, fishing, traditional agriculture, grazing).

For local people the major economic benefits are mostly related to wood, tourism and recreation, livestock grazing, wild food plants and mushrooms, honey, education and jobs in protected areas. Major economic benefits were recognized by local communities in Triglav National Park, which has a considerably larger number of inhabitants within park borders which are using different protected areas resources.

The analysis has shown that in Slovenia most economic benefit is obtained by the business sector and local people living in protected areas. For both stakeholder groups, the highest economic values are attributed to tourism, values related to food (grazing, hunting, honey production, wild food plants and mushrooms) and wood.

Locals and civil sector (e.g. fishing, hunting, sport society) have the largest discrepancy between economic and non-economic perception of protected area values. We can argue that locals recognize the values very well, yet they lack capacities/knowledge to commercially exploit them.

Business sector and governments are focused on income and not show less interest the non-economic values, especially the business sector.

FOR LOCALS AND BUSINESSES IN PAs HIGHEST ECONOMIC VALUE IS DERIVED FROM TOURISM, VALUES RELATED TO FOOD (GRAZING, HUNTING, HONEY PRODUCTION, WILD FOOD PLANTS AND MUSHROOMS) AND WOOD.

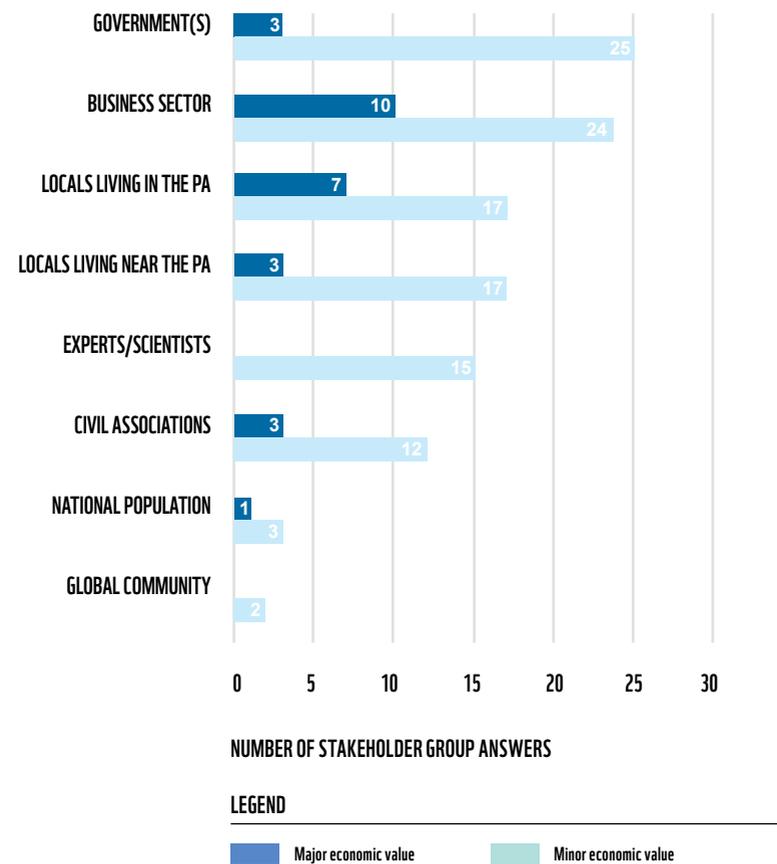


Figure 4. Flow of economic benefits (major and minor) from all assessed values within five protected areas to different stakeholder groups

Main potentials of Slovenian protected areas

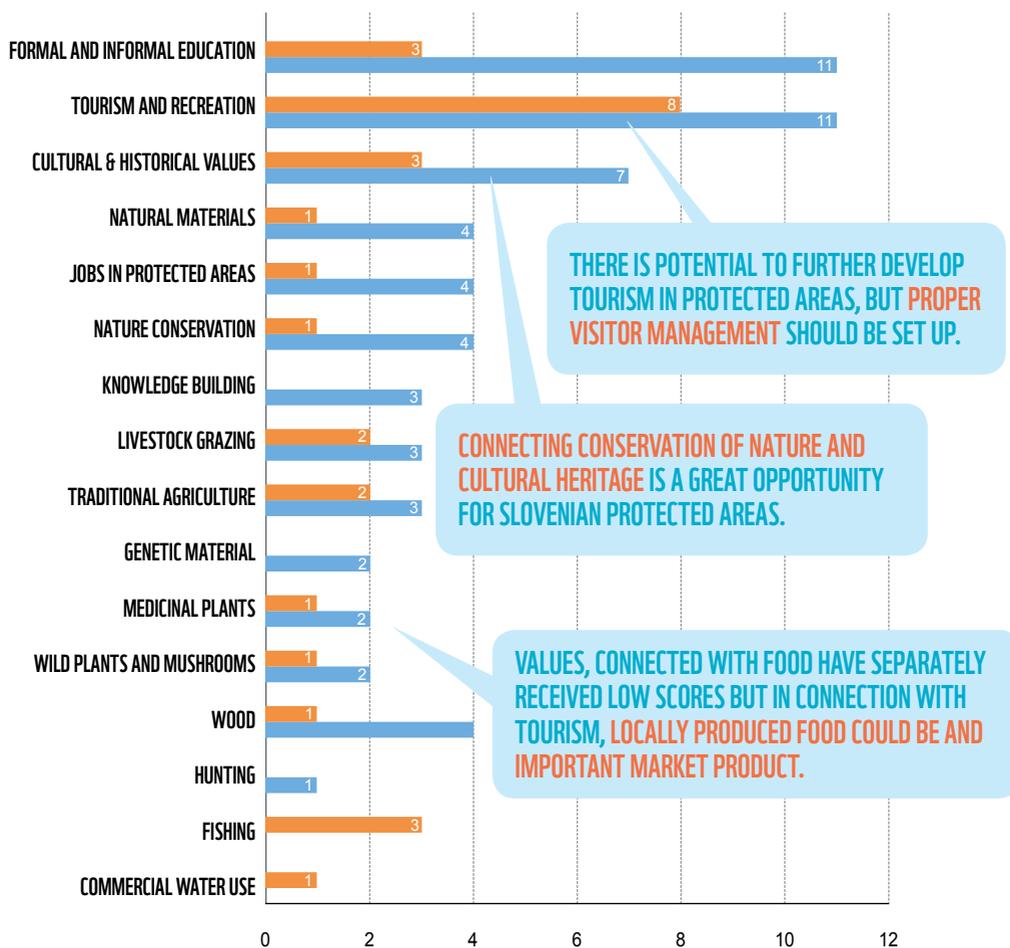


Figure 5. Potential economic values recognised by various stakeholders in the assessed protected areas.

NUMBER OF STAKEHOLDER GROUPS ANSWERS

LEGEND

■ Potential with economic value
 ■ Potential without economic value

To analyze the potential use of benefits, stakeholders could select values for which they believe they have potential economic value. The potential for protected areas to drive economic development was widely recognised among the stakeholder groups involved in the assessment. The assessed areas have different ecological characteristics, legally permissible activities and socio-economic contexts and with that different development potential.

Local communities see the potential for economic gain in particularly in tourism, education, livestock grazing, jobs at management authorities of protected areas, cultural and historical values and traditional agriculture. Interestingly, business sector sees potential benefits from the same protected area values as locals, but additionally also in hunting, wood production, and water use.

Interestingly, the potential economic value was most often attributed to the same values as for the current economic value. This could either indicate that the current values are not exploited to its full potential or that some of the stakeholders are unaware of the current economic benefits from some of the values.

Important to note here it is that the **top three potential values (Figure 5.) could bring economic benefit through ecotourism.** Tourists, interested in nature often want not only to have classical visits, but they are eager to see flora and fauna, learn new research methods or even participate in part of research and monitoring activities. This would also bring jobs in protected areas which would be independent of the state budget or project financing. **Managers should work closely with tour operators to develop new specialised tourism programs.** With their expertise, protected area managers could take part in these programs, which would make management authorities less dependent on state/municipal funding and also promote protected area values to tourists.

As single values, those related to food (traditional agriculture, livestock grazing and wild food plants and mushrooms) did not score exceptionally high. Still, traditional and ecologically produced food are important assets in developing sustainable tourism and visitors are prepared to pay extra price for these products especially when they are coming from a protected area (branding).

Importance of dialogue with stakeholders

Involvement of the local communities in protected area management is vital for successful protected area management and governance, the achievement of conservation goals and for the social and economic development of local communities⁵⁷. Workshops where various stakeholders meet and have the opportunity of exchanging views relevant to the management of protected areas such as PA-BAT workshops, can improve collaboration and help to resolve conflicts. In six countries in the Dinaric Arc region (except some protected areas in Slovenia and Croatia where participatory processes already existed) it was for the first time that local communities protected areas were invited to share their opinion on protected area values and assess how they were managed.

The discussions between stakeholders during the PA-BAT workshops are as equally important as the assessment and its results. The PA-BAT workshops provide an opportunity for exchanging information and knowledge among stakeholders and PA management. This leads to a better understanding of the role, values and benefits of protected areas. Stakeholders can also create contacts and develop joint initiatives for development.

After the assessment workshops, the participants were asked to fill in a short survey on what they gained by participating at the event. Most participants found the workshop content very useful (95 %), 75 % of stakeholders found five new contacts in their protected area and possibility for collaboration while the most valuable for them was that they have learned about values and benefits of the protected area and that they have met other stakeholders (Figure 6.)

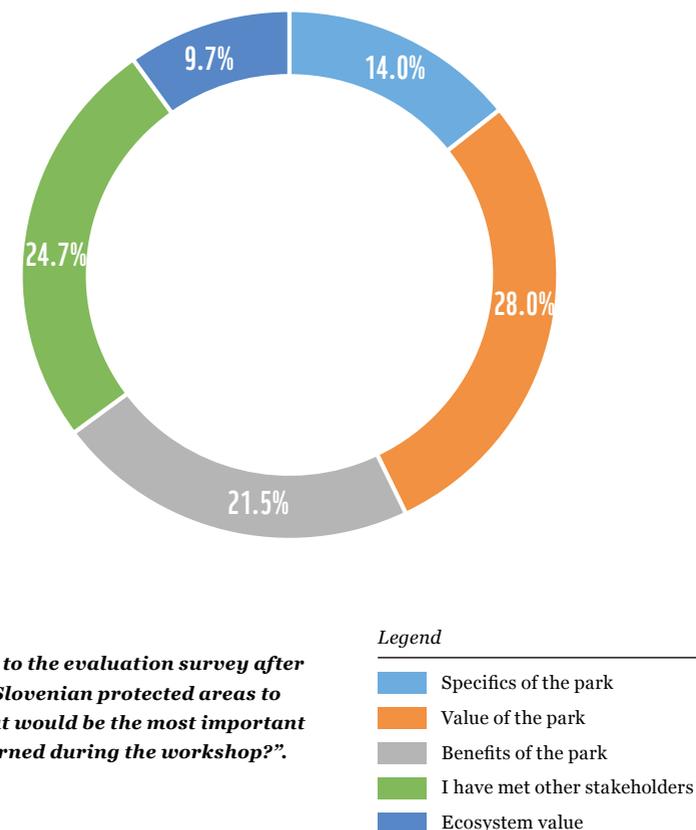
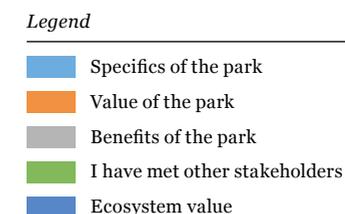


Figure 6. Answers to the evaluation survey after the workshops in Slovenian protected areas to the question “What would be the most important detail that you learned during the workshop?”.



One of the important findings of the WWF’s project Dinaric Arc Parks an PA-BAT was that cooperation and dialogue between protected areas and the local community was poorly developed. In years 2016 and 2017, WWF Adria continued to work on this issue. A methodology for Community Interaction Assessment was developed⁵⁸ and surveys were implemented in 66 protected areas over the whole Dinaric Arc. The results of this assessment provided some insights into reasons for the insufficient involvement of local communities and a set of recommendations was prepared to address this issue in the coming years⁵⁹.

⁵⁷ Fenten, W., Veenvliet, J. K., Orlović, V. L., Partington, R., 2017. Connecting local communities and protected areas - Community Involvement Assessment. Capacity Development Plan. Report to WWF Adria.

⁵⁸ Fenten, W., Veenvliet, J. K., Orlović, V. L., Partington, R., 2017. Connecting Local Communities and Protected Areas. Community Involvement Assessment. Methodology Manual

⁵⁹ Fenten, W., Veenvliet, J. K., Orlović, V. L., Partington, R., 2017. Connecting Local Communities and Protected Areas. Community Involvement Assessment. Capacity Development Plan

Challenges

During the participatory assessment process, collation of additional available data, and discussions with stakeholders during the workshops, we identified a number of challenges which impact the effectiveness of protected area system in Slovenia, and the achievement of biodiversity and social goals in nature protection.



1. **The role of protected areas in the conservation of ecosystem services**, in particularly of regulating services (e.g. carbon sequestration and climate regulation, waste decomposition and detoxification, purification of water and air) **is poorly recognized**, undermining the role of protected areas in providing well-being for the wider society.
2. **Ecosystem services are not recognized by the current nature conservation legislation** and are also usually not directly addressed by the long-term or yearly management plans of protected areas.
3. The analysis has shown that **principles of payments for ecosystem services are poorly integrated into the Slovenian legal system**. While protected area management authorities are to some extent financed by the establisher (most often the state), this is not in any way linked to finances collected as taxes by state or municipalities for the use of natural resources (e.g. water, tourism, timber).
4. Protected area managers are in some areas recognized as important employers, however an **increasing number of jobs are project-based and temporary**, therefore not providing stability for the workers and also not for the management authority.
5. While in some protected areas visitors are often collecting wild plants and mushrooms, protected areas and local inhabitants often have no direct benefit. **Collection of goods on private land is also opening landownership issues**.



Trail adjusted for PwD in the Logarska Valley © Grega Žorž

6. **Some protected areas still do not have continuous monitoring of visitor flow**, despite that this can have serious impacts to nature.
7. **Rivers in Slovenia are under constant pressure from exploitation for hydropower infrastructure inside and outside of protected areas**. The (potential) economic and existential benefits of preserved streams are poorly recognized by other sectors.
8. **Despite that protected areas, through ecosystem services they provide**, contribute to the conservation of water resources, **they are not receiving funds from the Water Fund, in which the taxes from selling water are collected**. This funding is largely used for building large hydropower plants and ensuring flood safety for people.
9. Due to insufficiently developed forest wood supply chain, **large quantities of raw wood are exported from Slovenia without added value**.

We propose to address the identified challenges in the following way:

1. Protected area managers should **integrate ecosystem services in their education programs**. These should also be communicated to the local inhabitants, visitors and wider public so that the values of protected areas are more widely recognized.
2. **Incorporate ecosystem services into the nature conservation legislation and state policy planning** and more directly address their conservation and the use of potential benefits in long-term or yearly management plans of protected areas.
3. Prepare an overview of obstacles preventing the **use of the concept of payments for ecosystem services** and when possible amend the existing legislation or develop new legislation.
4. In the development of project proposals, integrate activities which can **increase the sustainability of job positions** (even if at another employer) after the end of the project (developing services or products which generate income).
5. Regulate the use of wild plants and mushrooms in such a way that the **taking of species does not impact their conservation status** and make efforts to direct collectors to public lands by appropriate visitor's infrastructure (parking places, paths).



6. Protected area managers should **ensure permanent monitoring and management of visitors** and continue to minimize pressures with new and innovative approaches. The state should provide funding for such activities as they are now mainly relying on project funding.
7. The state should **develop adequate hydropower development policy**, taking into account the non-economic and economic value of preserved streams. Protected area management authorities, **local communities and civil society should be given opportunity to participate in the development of this policy**.
8. At the next change of the Act on waters, consider amendments which would **enable that protected management authorities would receive funds from the water fund**, based on principles of payments for ecosystem services.
9. Initiatives for **reestablishing the wood-processing chains** have started, but care should be taken to properly address conservation goals of protected areas.

³⁸ Perko, F. (2004): Gozd in gozdarstvo Slovenije. Ljubljana: Zveza gozdarskih društev Slovenije: Ministrstvo za kmetijstvo, gozdarstvo in prehrano RS: Zavod za gozdove Slovenije. ISBN 961-6142-11-9

³⁹ Ministry of Agriculture, Forestry and Food, 2016. Summary of the Report on Slovenian Forests and Forestry 2007-2014. Available at: http://www.mkgp.gov.si/fileadmin/mkgp.gov.si/pageuploads/podrocja/Gozdarstvo/Slovenian_Forests_ANG_splet.pdf

⁴⁰ Ministry of Agriculture, Forestry and Food, 2016. Summary of the Report on Slovenian Forests and Forestry 2007-2014. Available at: http://www.mkgp.gov.si/fileadmin/mkgp.gov.si/pageuploads/podrocja/Gozdarstvo/Slovenian_Forests_ANG_splet.pdf

Recommendations for using the PA-BAT results

WWF has developed several guidelines to facilitate the use of the PA-BAT results in management planning, assessments, communications, business planning, interpretation and education and project development. All guidelines are available online⁶⁰.

In developing management planning, we recommend management authorities to use the results of the PA-BAT or, when this assessment has not been done in their area, use the methodology to conduct the assessment on their own. The results of the assessment can be used to better understand the potentials of the area, ambitions of the local communities and reveal possible obstacles in using some of the benefits.

On the level of individual protected areas, the results of this analysis can be used to:

1. improve the understanding and perception of different stakeholders towards ecosystem benefits and values and use this knowledge in management planning and monitoring;
2. resolving current or potential conflicts on the exploitation of certain values which are not permissible by law and are not in line with conservation goals;
3. use results as a starting point for further, more detailed studies on ecosystem valuation;



4. develop new marketable goods, where substantial economic benefits can be achieved, in particular for the local inhabitants, taking into account protected area conservation goals;
5. develop cooperation with the business sector and gain their support for conservation measures;
6. inform inhabitants and visitors of protected areas and policy-makers on the importance of protected areas on protecting and maintaining regulating ecosystem services;
7. improve understanding of the multiple benefits of protected areas for human well-being and use this to improve support for maintenance of protected areas.

Notranjska Regional Park © Jana Kus Veenwilet



⁶⁰ Available at: http://croatia.panda.org/en/what_we_do/protected_areas/pa4np/pa_bat_methodology/

Conclusions

Protected areas not only support the conservation of habitats and species but also many ecosystem services. These can provide non-economic benefits or they can generate income for businesses, local inhabitants and governments. **Recognizing wider benefits of protected areas for human well-being is vital for providing arguments for their long-term maintenance.** It can also help managers of protected areas in management planning and resolving conflicts regarding the use of some ecosystem services.

The results of the assessment of the protected area benefits, carried out in the Dinaric Arc Region by WWF in 2014 has confirmed the importance of non-economic and economic values of ecosystem services in protected areas. In Slovenia, the assessment performed in five protected areas has shown that stakeholders from various groups recognise multiple benefits of protected areas. Nature conservation is the most recognised value in both non-economic, slightly less so in economic terms. This shows that stakeholders recognise the primary role of protected areas and are partially also seeing economic potential in conserving nature. Other high-scoring values were informal education and building knowledge. This supports the important role of Slovenian protected areas in education, as they organize many school and extracurricular activities and importantly contribute to awareness raising on biodiversity.

Not surprising, tourism and recreation have received the highest scores for economic value. It also received high scores for non-economic value which implies that preserved landscape and nature is an important asset to peoples' well-being. In some protected areas local businesses generate substantial income from tourism. The challenge however is, to achieve that tourism is sustainable and does not jeopardize the attainment of nature conservation goals.

Based on the challenges raised during the assessment workshops, we looked through some of the rules determining the use of funds collected by the state or municipalities for the use of ecosystem services. The analysis has shown that principles of payments for ecosystem services are poorly integrated into the Slovenian legal system. While protected area management authorities are to some extent financed by the establisher (most often the state), this is not in any way linked to finances collected as taxes by state or municipalities for the use of natural resources (e.g. water, tourism, timber). Several regulations would need to be amended for such payments to be possible. The reason for this situation is probably caused by the fact that on a political level the role of protected areas in safeguarding ecosystems is not yet recognized. While in principle, the importance of ecosystem services for human health and well-being are, together with sustainable development, high on the political agenda in Slovenia, protected areas are still rarely considered in this context.

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