



REPORT

ADRIA

2017



# Protected Area Benefit Assessment (PA-BAT) in Croatia

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Birdwatching is becoming a frequent tourist attraction in protected areas © Staffan Widstrand

# Introduction

The vision of WWF<sup>1</sup> is to ensure that valid evaluation of protected area values results in an increased interest, investments of higher quality and better conservation of natural values. Evaluation of ecosystem services provided by protected areas has a long-term importance for the local and national economy. It takes years of working on mapping values, engaging key decision makers, changing policies and development of economic models which include natural values in their development plans. WWF has created an evaluation that can provide initial information on how various stakeholders perceive actual and potential values of protected areas in order to integrate natural values and ecosystem services into management and development documents as soon as possible.

In Croatia, WWF has collaborated with the State Institute for Nature Protection (now Croatian Agency for Environment and Nature, HAOP), Ministry of Environment and Nature Protection and coordinators in 18 protected areas (PAs).

Croatia has the biggest surface area of protected areas in the region: 8.56% of the Republic of Croatia, i.e. 12.23% of the mainland and 1.94% of territorial waters. PA BAT<sup>2</sup> assessment in Croatia was conducted in the biggest number of PAs, in comparison with other countries in the region, having evaluated 97% of national and nature parks in Croatia (8 national parks and 10 nature parks).

# Methodology

PA-BAT<sup>3</sup> methodology is an important tool for the identification of a whole range of current and potential benefits of individual PAs, including protected area management challenges.

PA-BAT methodology is used to assess 22 legal values achieved by protected areas. Values are organised in nine major groups: nature protection, protected area management, food, water, culture and history, health and recreation, knowledge, ecosystem regulatory services and natural materials.



Using this methodology, workshop participants assess economic and non-economic/existential values (fulfilment of basic subsistence needs) in terms of their benefits for different stakeholders. The benefits are assessed at six possible levels: no benefit; minor or major existential benefit; minor or major economic benefit; and potential benefit.

The PA-BAT has been designed to be used by protected area managers working with other stakeholders in order to define important values and benefits that they bring to stakeholders. Eight stakeholder groups have been defined for the countries that are a part of the Dinaric Arc: local people living in the protected area, local people living in the vicinity of the protected area, national population, scientists/experts, civil society organizations, government/protected area manager, business sector, global community. The analysis combines the assessments by workshop participants and the information collected during data validation process from PA-BAT workshop coordinators in protected areas and from experts. We have also received a valuable feedback through a workshop participant survey carried out after each workshop. Guidelines have been developed in order to support park management in utilising PA-BAT findings.

Steps in implementing PA-BAT:

1. Nomination of PA BAT coordinator in a protected area and basic PA data collection;
2. Workshops in protected area (technical specification, detailed notes, stakeholder surveys);
3. Data validation (after the workshop);
4. Data analysis (at the level of a protected area, at national and international level);
5. Guidelines on the PA-BAT result application method and
6. Implementation of recommendations

<sup>1</sup> “Dinaric Arc Parks”(DAP) project is a project implemented by WWF in the Dinaric Arc region. The project’s main objective is to improve the quality of dialogue, understanding and collaboration among PA practitioners in the Dinaric Arc (Albania, Bosnia and Herzegovina, Croatia, Kosovo\*, FYR Macedonia, Montenegro, Serbia and Slovenia).

<sup>2</sup>This designation is without prejudice to positions on status and in line with UNSCR 1244/1999 and the ICJ Opinion on the Kosovo independence.

<sup>3</sup> [http://adria.panda.org/en/what\\_we\\_do/protected\\_areas/pa4np/pa\\_bat\\_methodology/](http://adria.panda.org/en/what_we_do/protected_areas/pa4np/pa_bat_methodology/)

# Results and Discussion

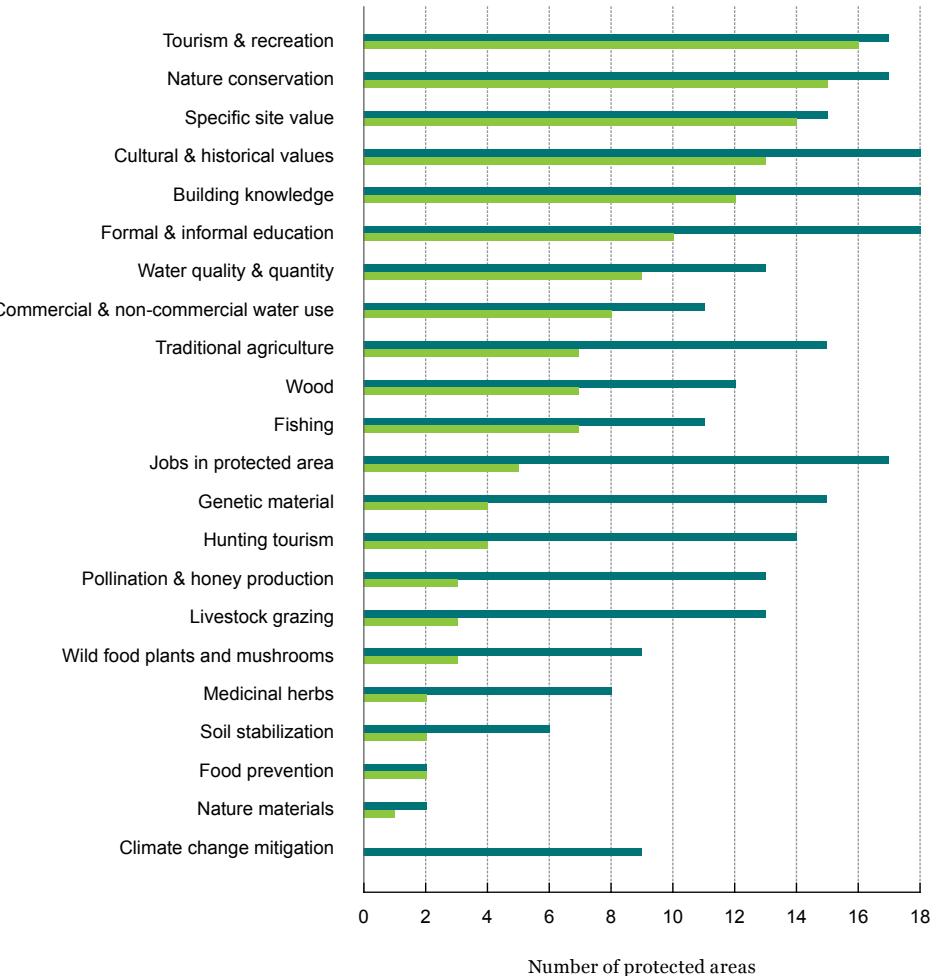
Workshop in Mljet National Park © Andrea Štefan / WWF Adria



PA-BAT workshop in Kornati National Park © Andrea Štefan / WWF Adria



Assessment of protected area values and benefits using the PA-BAT was carried out for all eight national parks and ten nature parks in Croatia (except Učka Nature Park) through workshops with more than 700 participants representing different user groups and actively contributing to the assessment.



**Figure 2 Distribution of existential values to different stakeholder groups of protected areas**

Legend

- Minor existential value
- Major existential value

Apart from maintaining its natural values, protected areas should nowadays carry out numerous other functions. The result analysis from the workshops highlights the key benefits and potentials, as well as challenges in Croatian protected areas.

Figure 2 shows a number of assessed protected area benefits that are of an existential importance (major and minor importance) for at least one stakeholder group. Major existential benefits for stakeholders within a PA, above all for the local community, are the following: tourism and recreation, nature protection, specific features (recognition of protected area special features) and other soft values (culture and history, knowledge/research, education).

Well-managed nature results in a better recognition and higher quality of natural environment, which attracts tourists and provides jobs.

Clean drinking water as a natural resource has a great subsistence value for local communities in eight PAs<sup>4</sup>, as well as ecosystem services these PAs provide. Jobs in five protected areas have been assessed as being very important for the local population subsistence.

Traditional agriculture and stock-farming, fisheries and honey production (as a pollination by-product) are important for local communities in more than 70% of assessed PAs for their own use, but also for income generation because meeting the basic existential needs of local communities on regular basis is as important as economic gain.

These values include timber, edible wild plants and mushrooms, medicinal plants, genetic material (indigenous plants and breeds), cultural values and traditional knowledge.



## KRIKA NATIONAL PARK AND PAPUK NATURE PARK ARE VITAL FOR THE SUPPLY OF DRINKING WATER IN ŠIBENIK-KNIN AND POŽEGA-SLAVONIA COUNTIES



Plitvice Lakes National Park (Nacionalni park Plitvička jezera) © Wild Wonders of Europe, Maurizio Biancarelli, WWF

Protected areas have not been recognised as regulatory ecosystem service providers because the majority of stakeholders are unaware of them. Such services have been taken for granted, with the exception of water quality and quantity and pollination. Water has an economic value for the business sector and the government in eight PAs<sup>5</sup> (44%) due to the high quality habitats. Pollination is in 10 PAs<sup>6</sup> (55%) associated only with honey production, and the importance of the pollination for agriculture has not been recognized. Local community and beekeeper associations gain an economic value from honey production in PAs, the only exception being Kopački rit Nature Park where agricultural sector (cooperation with Belje d.d.) has a direct benefit from insect pollination from that PA.

**The biggest complexes of natural and preserved lowland floodplain forests in Europe are in the area of Lonja Field (Lonjsko polje) and Kopački rit nature parks that play an important international role as a natural retention area in the flood defence system.**

The only regulatory ecosystem service recognized by majority of stakeholders is flood protection (Kopački rit and Lonja Field). Generally, PAs do not gain any profit from providing regulatory ecosystem services.



**WHEN PREPARING  
NATURE PROTECTION  
AND SUSTAINABLE  
DEVELOPMENT  
STRATEGIES,  
DECISION MAKERS  
SHOULD TAKE INTO  
ACCOUNT ECONOMIC  
AS WELL AS  
EXISTENTIAL VALUES**

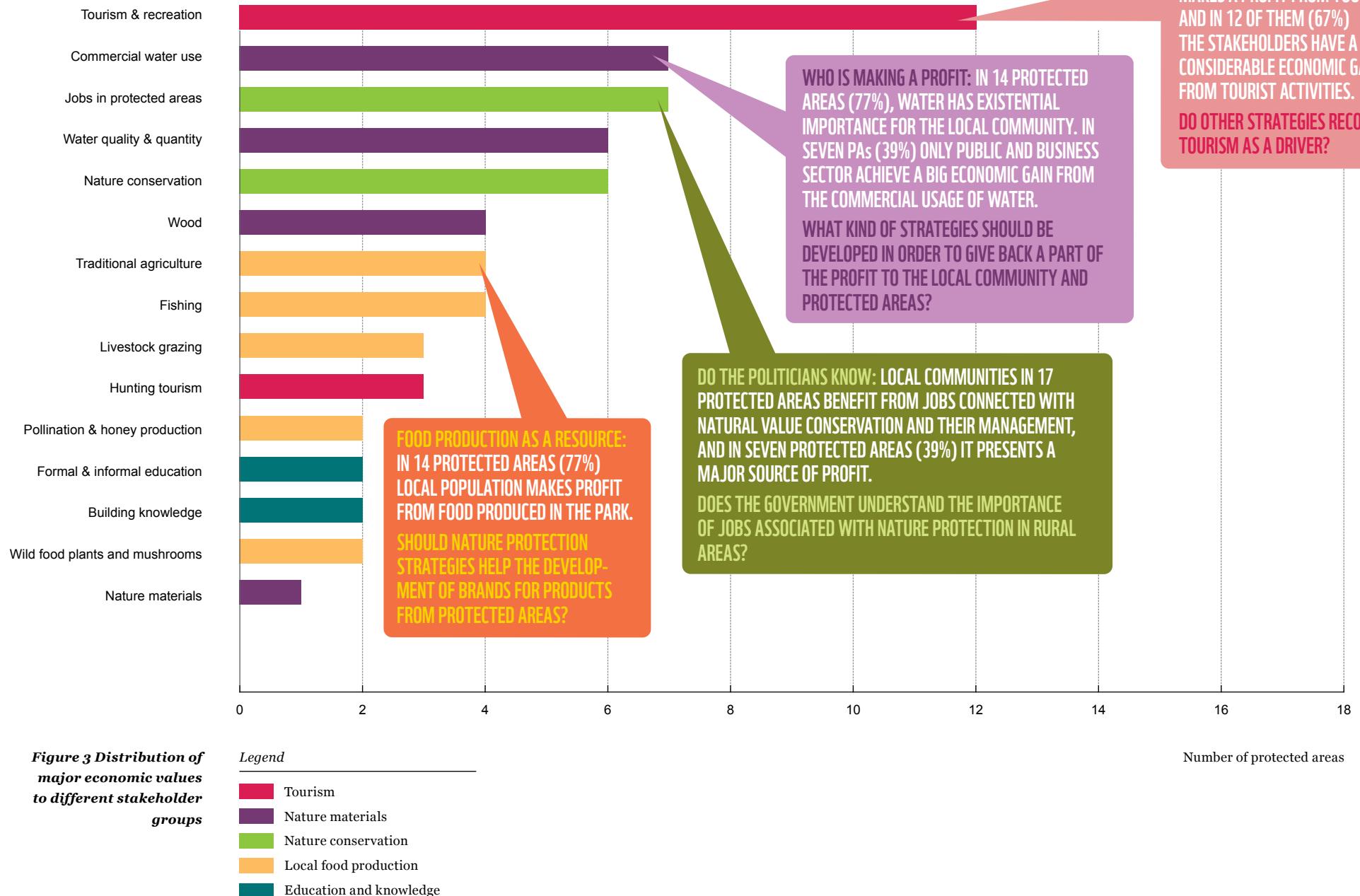
<sup>4</sup> Krka, Risnjak, Lonja Field, Papuk, Velebit, Vrana Lake (Vransko jezero), Plitvice Lakes

<sup>5</sup> Krka, Paklenica, Northern Velebit, Papuk, Velebit, Žumberak, Risnjak, Plitvice

<sup>6</sup> Risnjak, Biokovo, Kopački rit, Lonja Field, Papuk, Velebit, Vrana Lake, Žumberak-Samobor Mountains, Plitvice Lakes, Telašćica



# Major Economic Values



**RECOGNIZING DRIVERS:**  
IN ALL 18 ASSESSED PROTECTED AREAS, A PART OF STAKEHOLDERS MAKES A PROFIT FROM TOURISM, AND IN 12 OF THEM (67%) THE STAKEHOLDERS HAVE A CONSIDERABLE ECONOMIC GAIN FROM TOURIST ACTIVITIES.

**DO OTHER STRATEGIES RECOGNIZE TOURISM AS A DRIVER?**

# Tourism

All 18 assessed PAs participating in the assessment have economic benefits from tourism, 12 PAs<sup>8</sup> (67%) make considerable economic profit from tourism, especially for public and business sector and population living in the vicinity of protected areas. Apart from protected areas' direct profit, they are the source of profit to service providers not directly situated in protected areas, such as carriers, caterers, hotel managers and private accommodation providers, travel agencies and others.

Tourism is an example of a major value contributing to local economies while also being equally distributed to key stakeholders. The potential benefit of local development lies in tourism associated with protected nature, unlike industry that requires a big number of employees.

This kind of tourism offers a lot of opportunities for women, jobs without high labour market criteria (including also lower education levels), providing diverse jobs in areas with poorly developed agriculture.

The Croatian PA system represents a relatively good model of balancing between tourism and nature conservation. The number of protected area visitors in 2012 amounted to 2,579,000<sup>7</sup>. Tourism is a major driver, but also a potential threat for nature conservation and its impact should be carefully monitored.

Tourism challenges could possibly be solved by changing the management model, taking into consideration existing solutions such as European Charter for Sustainable Tourism<sup>9</sup> (EUROPARC Federation). Such positive changes have already been visible in Medvednica and Lonja Field nature parks and in Kornati National Park. Also, the challenges of tourism could also be mitigated by applying RAPPAM recommendations<sup>3</sup> (Rapid Assessment and Prioritisation of Protected Area Management) and METT methodology (Management Effectiveness Tracking Tool) developed for Croatian parks.

EUR 45.8 MILLION  
OF PROFIT HAS BEEN  
MADE BY PARKS  
FROM  
ACTIVITIES ASSOCIA-  
ED WITH TOURISM  
IN 2012<sup>7</sup>



ALL PROTECTED  
AREAS IN CROATIA  
CONTRIBUTE TO  
CROATIAN GDP WITH  
ECOSYSTEM SERVICES  
FOR TOURISM SECTOR

<sup>7</sup> Draft report on the status of nature in the Republic of Croatia for the period of 2008 – 2012, State Institute for Nature Protection, Zagreb, 2014

<sup>8</sup> Brijuni, Kornati, Krka, Paklenica, Medvednica, Biokovo, Lastovo, Mljet, Telašćica, Velebit, Vrana Lake, Plitvice Lakes

<sup>9</sup> <http://www.european-charter.org/home/>





EUR 60 MILLION  
PER YEAR IS  
THE PROFIT OF  
TWO BIG  
HYDROELECTRIC  
POWER PLANTS  
DEPENDING ON  
THE WATER FROM  
VELEBIT

## Water

Water as a natural resource is not present in all PAs, but it is the most valued ecosystem service both in Croatia and in the region. In 14 PAs (77%) water has an existential benefit for the local community, while government and business sector make considerable economic profit in seven PAs (39%) from the commercial use of water (e.g. bottling plants, drinking water supply, hydroelectric power plants). PAs are important for water quality and quantity (e.g. filtration, groundwater renewal, maintenance of natural flows), which enables a commercial use of water but without any profit for the PAs. Although water clearly has an economic value for some sectors, water infrastructure such as hydroelectric power plants can possibly have a serious negative impact on nature and environment across the region.

### EXAMPLE OF BUSINESS SECTOR USING WATER FROM PROTECTED AREAS

#### • drinking water

Velebit Nature Park provides a large amount of water from its 200,000 ha of forests to the inhabitants in and around the protected areas, as well as to the people living on the adjacent islands (Rab, Pag). Two bottling companies and a brewery use water from Velebit National Park.

#### • electric power production

Two large hydroelectric power plants with an annual revenue of EUR 60 million depend on the water from the protected parts of Velebit, but at the same time they do not contribute to the protection of forest ecosystem and the management of these protected areas.

#### • usage of positive protected area image

Business sector uses the perception of clean and quality water from protected areas as a part of their marketing strategy, but they do not protect water as their basic resource by supporting the protection and better management of the natural resource they depend on.

# Jobs and Nature Protection

Local communities in 17 PAs benefit from jobs associated with nature protection, while in seven PAs<sup>10</sup>(39%) this is the major source of profit. **National parks and nature parks have 1307 employees, out of which 195 are in the nature protection sector (77 employees in administrative and technical service, and 118 in supervision)**<sup>7</sup>. However, protected area management jobs<sup>7</sup> in rural areas are of great importance and can have a considerable impact on retaining young families and on the support to local community (e.g. young families do not leave the area and help support local services such as schools, shops etc.). Nature protection has a major existential value for all stakeholder groups, mostly because the PAs offer additional value for the resources used by the stakeholders. Scientists and experts<sup>11</sup> have been evaluating protected areas because of the nature that has been preserved.

The economic values from nature protection and the existence of protected areas go to the public sector (manager), business sector and local community. However, the main profit for the stakeholders has been recorded in only six PAs.<sup>12</sup>

## Employment in protected areas:

**Krka National Park has 130 full-time employees and 50 seasonal workers<sup>13</sup>, which is quite a large contribution to Šibenik-Knin County which has the highest unemployment rate and the highest number of pensioners in Croatia.**

The only financially autonomous protected areas are national parks Brijuni (205)\*, Plitvice Lakes (673) and Krka (123), with less than 10% employed<sup>7</sup> in the nature protection sector. Most of them work in tourism.

<sup>10</sup> Brijuni, Krka, Mljet, Paklenica, Plitvice Lakes, Risnjak, Telašćica

<sup>11</sup> Krka, Risnjak, Northern Velebit, Medvednica, Biokovo, Kopački rit, Lastovo, Lonja Field, Papuk, Telašćica, Velebit, Plitvice Lakes

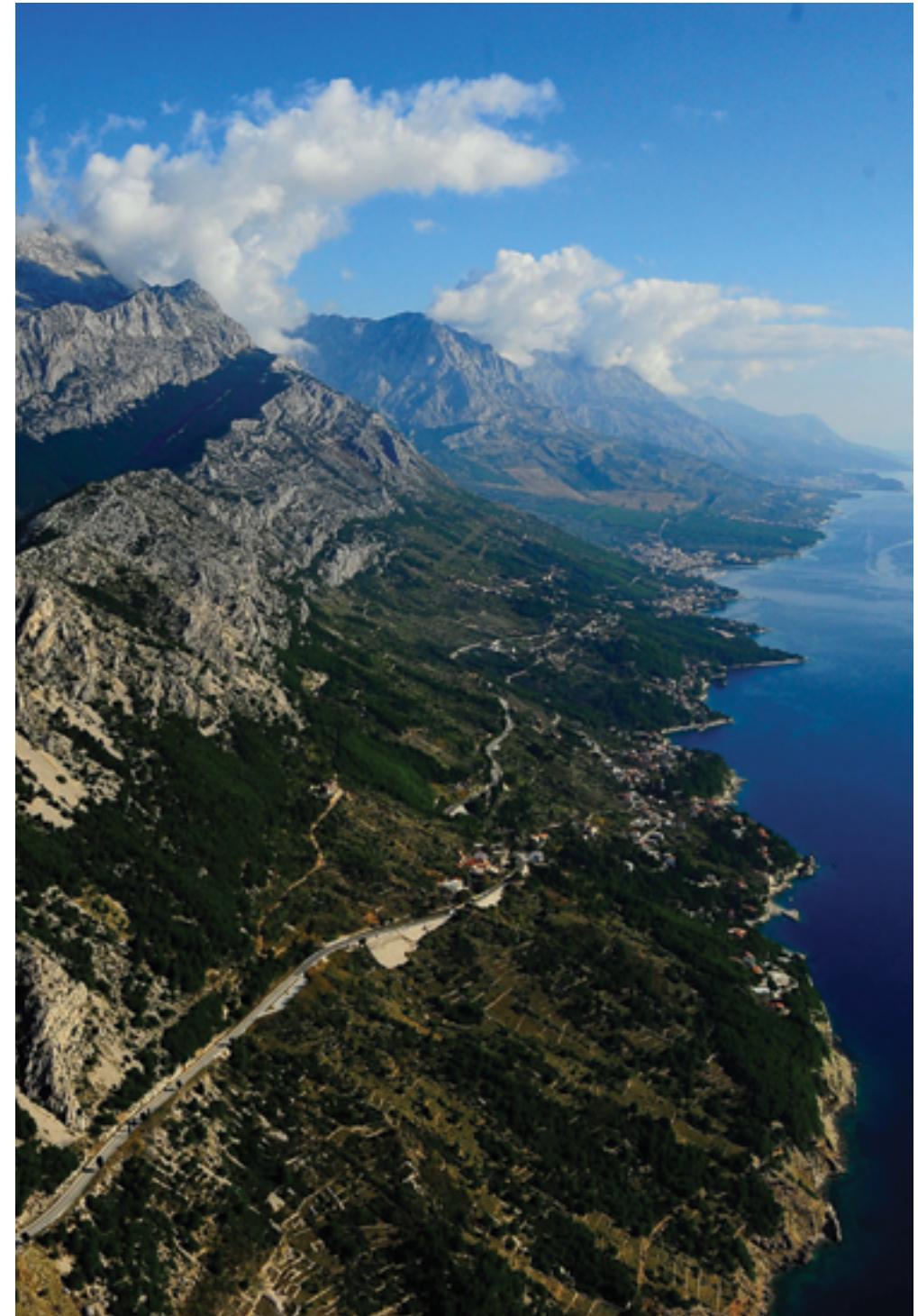
<sup>12</sup> Kornati, Krka, Kopački rit, Lastovo, Mljet, Plitvice Lakes

<sup>13</sup> <http://www.mint.hr/default.aspx?id=5266>

\* Brackets contain the number of employees in protected areas



**TELAŠĆICA NATURE PARK HAS 24 FULL-TIME EMPLOYEES AND 50 SEASONAL WORKERS, WHICH MAKES IT THE SECOND LARGEST EMPLOYER ON THE ISLAND AFTER THE FISH PROCESSING FACTORY MARDEŠIĆ**





## Forestry

Commercial use of forests is forbidden in national parks. Forests as a resource, mostly used for firewood, provide existential value for local population in 15 PAs (83%). Out of remaining three parks, two do not have forests within the park boundaries (Kornati and Vrana Lake), while in Brijuni National Park it is prohibited to cut trees for firewood and there are no local residents within the PA.

Firewood has a major existential value for locals in 7 PAs<sup>14</sup> (38%).

**Wood has a major economic value for the business sector (Hrvatske šume) in three nature parks (Biokovo, Lonja Field, Papuk). Only in Velebit Nature Park do the business sector and locals make a major economic profit from forest and wood related activities.**

Employment in the primary production of forest resources in Europe is declining. Instead, protected forests offer multiple and diverse jobs in tourism and recreation, as well as products that do not include timber. A similar trend and a change of priorities is taking place in Croatia as well.



Mediterranean forest in Northern Velebit National Park © Gerald Hibon / WWF

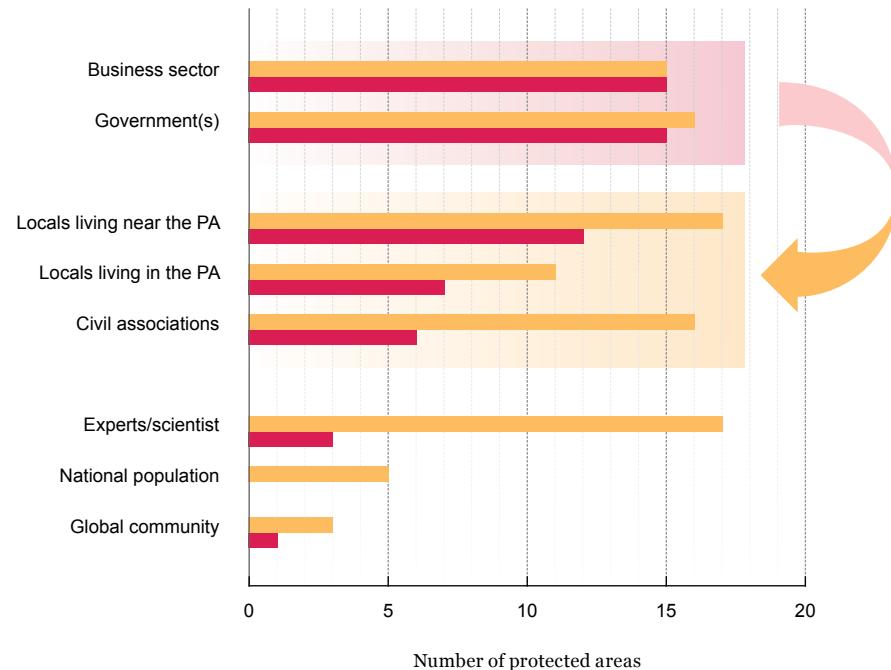
<sup>14</sup> Medvednica, Biokovo, Lastovo, Lonja Field, Papuk, Velebit, Plitvice Lakes

# Income flow to protected area stakeholders

Business and public sectors are getting the most of economic values, and then follow the local people living in the vicinity of protected areas.

The main profit for the business and private sector comes from tourism, commercial use of water and forestry. The local people earn their profit mostly from tourism, jobs in protected areas and from local food products.

**Very little profit is given back for the conservation and better management of natural resources within the protected areas.**



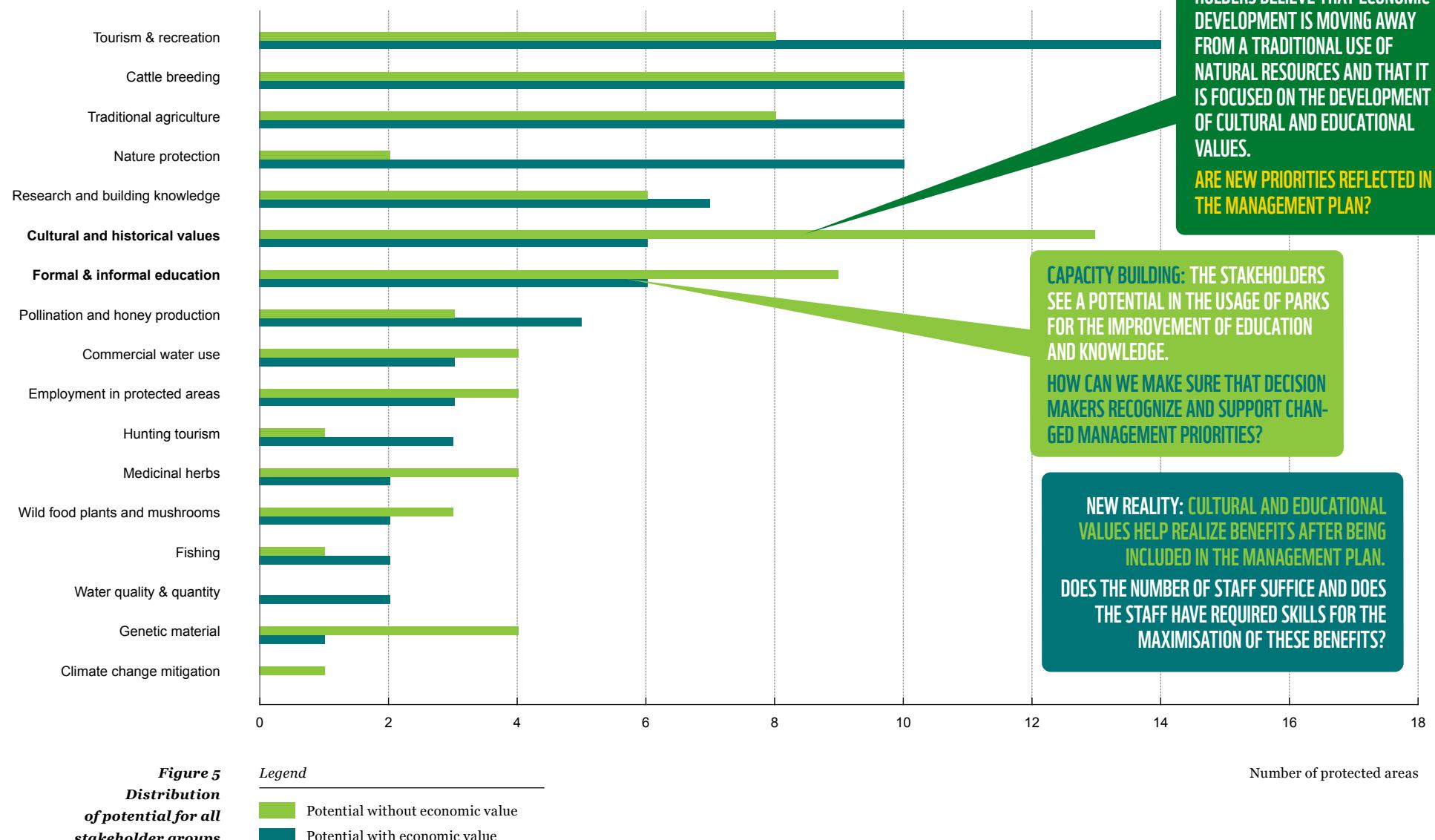
**Figure 4**  
Flow of major economic values  
to different stakeholder groups  
in protected areas

Legenda

- Minor economic value
- Major economic value



# Main Potentials



**Figure 5**  
**Distribution**  
**of potential for all**  
**stakeholder groups**

Legend

- [Light Green Box] Potential without economic value
- [Dark Teal Box] Potential with economic value

Number of protected areas

# Importance of dialogue with stakeholders

The stakeholders have assessed that the main values with the potential for increasing economic values are tourism<sup>15</sup> (77%) and nature protection<sup>16</sup> (56%). Local products from stock-farming<sup>17</sup> (56%) and traditional agriculture<sup>18</sup> (56%) have already provided economic benefits, but also have the potential for increased income generation not only for the public and business sector, but also for local communities and civil society organizations. The result of PA BAT assessment shows that stakeholders believe that economic development is moving away from a traditional use of natural resources (wood, water, minerals) and that it is focused on cultural<sup>19</sup> and educational<sup>20</sup> values.

**Nature parks Lonja Field, Kopački rit, Velebit and Biokovo have a great ecological and economic value due to a traditional system of pasturing and to the preservation of indigenous Croatian breeds and they represent a potential for the economic growth of the local community.**

The gap between potentials with and without economic values (Figure 5) is due to the lack of identification of a full range of PA values and benefits (e.g. socio-economic), lack of stakeholder engagement, inadequate PA management and inadequate number and skills of existing PA staff that are necessary for achieving the potentials.

<sup>15</sup> Krka, Biokovo, Lastovo, Lonja Field, Žumberak-Samobor Mountains, Risnjak, Northern Velebit

<sup>16</sup> Kornati, Northern Velebit, Kopački rit, Mljet, Papuk, Lonja Field, Risnjak, Medvednica, Paklenica, Vrana Lake

<sup>17</sup> Kornati, Krka, Biokovo, Lastovo, Lonja Field, Velebit, Plitvice Lakes, Northern Velebit, Telašćica, Vrana Lake

<sup>18</sup> Kornati, Krka, Northern Velebit, Mljet, Papuk, Telašćica, Vrana Lake, Biokovo, Lastovo, Lonja Field

<sup>19</sup> Krka, Medvednica, Žumberak-Samobor Mountains, Papuk, Lonja Field, Telašćica

<sup>20</sup> Kopački rit, Papuk, Paklenica, Vrana Lake, Plitvice Lakes, Medvednica

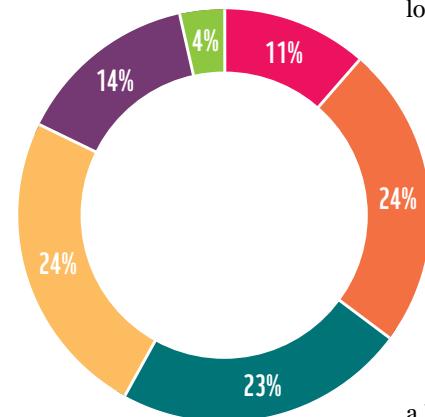
TOURISM AND PROTECTED NATURE ARE THE BIGGEST POTENTIALS TOGETHER WITH TRADITIONAL LOCAL PRODUCTS



After each workshop, an anonymous survey with 10 questions was conducted showing stakeholders' level of engagement in the PA management and of cooperation with other stakeholders, as well as the knowledge of PA benefits and values and the potential to use them. 92% of the participants stated they had met more than five new people during the workshop and 60% of them were ready to start a collaboration with other stakeholders. More than 88% of the participants stated that they could use the knowledge gained at the workshops. The results have shown that the (workshop) assessment process was as important as the PA value assessment results. **The process itself enables the stakeholders to understand the role, values and benefits of the PAs; they have been given the opportunity to network and to make a direct contact with the PA management.** At the same time, PA management received direct and valuable data from the stakeholders.

For some stakeholders, especially from the local community, the PA-BAT workshop was their first contact with PA employees and they were given the opportunity to discuss the importance of natural resources and the connection with those areas. Local stakeholders shared their comments, suggestions and problems with the PA management. The workshops highlighted a lack of communication between PA management and local communities. The PA-BAT workshops also helped stakeholders understand the values and benefits that a PA provides and stakeholders' connection with the ecosystem that they provide.

**Figure 6**  
*What have the stakeholders learned during the PA assessment workshops?*



## Legend

- Specifics of the park
- Value of the park
- Benefits of the park
- I have met other stakeholders
- Ecosystem value
- Other

# Challenges

A valuable element of the workshops were the discussions among the stakeholders. These helped identify a number of challenges which impede management efficiency and the achievement of benefits. Some of the challenges are the following:

1. Insufficient use and implementation of basic nature protection mechanisms at PA and national level (e.g. implementation of PA management plans);
2. Lack of financial resources and inadequate management of the PAs;
3. Lack of professional staff in PAs and incapacity to incorporate new priorities (ecology, education, tourism, culture, interpretation & communication, rural development experts, project development and management experts, community outreach experts, marketing experts) in management plans;
4. Inadequate national education system for achieving capacity and competences required for the PA management (e.g. interdisciplinary educational approach);
5. Governance models : Insufficient stakeholder engagement (e.g. dialogue among different sectors) and poor management models.
6. Weak public support for PAs and nature conservation due to the poor understanding of ecosystem services and natural resources; business sector is using ecosystem services but without any revenue for the PAs.
7. Lack of understanding of the socio-economic role of PAs in issues such as job creation in rural areas with a negative depopulation trend, and of the benefits for the public health.

## ONE RANGER IN VELEBIT NATURE PARK MONITORS 33.9 KM<sup>2</sup> OF PRO- TECTED AREA



## WATER IS AN IM- PORTANT NATURAL RESOURCE AVAIL- ABLE IN MANY PROTECTED AREAS, BUT ITS ROLE IS NOT VALUED BY MAJOR BUSINESS USERS

## MEDVEDNICA NATURE PARK, IN THE DIRECT VICINITY OF CAPITAL ZAGREB, HAS AN IMPOR- TANT ROLE FOR THE POPULATION REGARDING RECRE- ATION AND HEALTH AND ALSO CARRIES THE FUNCTION OF “THE LUNGS” OF THE CITY

8. Overlapping of legislation and managing authority within the same protected area (fishery, forestry, agriculture and water sector), and thus frequent existence of harmful incentives.
9. Lack of tourism visitor monitoring system regarding the effects on the protection goals and distinctive features of a protected area (biodiversity, habitats, landscape).
10. Landownership and property issues, complicated procedures and bureaucracy are a burden for local stakeholders and PA management, additional problem being also public procurement.



## Recommendation for using PA-BAT results

The nature protection sector in Croatia has at its disposal the results of individual workshops, a set of guidelines for using the results and this report with recommendations developed in cooperation with experts and relevant bodies from nature protection sector<sup>2</sup>.

Guidelines have been developed for the following: 1. Management planning (management plans and other documents for managing PAs), 2. Development of ecosystem service assessment, 3. Communication plans, 4. Business plan, 5. Interpretation and education plan, 6. Rural development plans, 7. Project development.

At a PA level, the guidelines could be used for the following:

1. Understanding benefits and all values within different stakeholder groups can be very important for PA management planning and monitoring.
2. Detailed assessments provide a useful good practice and management system improvement material, and the like.
3. PA-BAT assessment results are also the first step in any assessment of economic values because actual and potential economic values are being defined.
4. Drafting rural development projects (communicating the role of protected areas, linking nature conservation and development, adding value to local resources, overcoming 'market failures', strengthening local capacity, facilitating local communities);
5. Development of interpretation and education programme in PA (learning from stakeholders: contributing to interpretation; links with education programmes: using PAs in education);
6. Informing the local community, visitors and business sector on potentials and values;
7. Understanding the perception of the local population on regulatory services, advocating the protection of regulatory services, using the results of the PA-BAT to understand, monitor and adapt to changes;
8. Integration in business plans and marketing strategies for a specific set of goods or services from which financial benefits can be gained.
9. Getting support from local business sector for PA, i.e. direct benefit resulting from ecosystem services within a PA.



Recommendations to address the identified challenges by using a whole range of PA values (natural, social, economic):

1. Inform politicians, decision makers and investors from different sectors (tourism, economy, finances) on most important values and benefits of a PA;
2. Create arguments for the protection and develop strategies to give the profit back to local people and protected areas, introduce repayment schemes.
3. Promote sustainable business practice in the sectors that use resources from a PA;
4. Ensure adequate number of skilled staff to enable better use of nature protection mechanisms at a PA level, including the improvement of PA management;
5. Increase understanding of a full range of PA values and PA staff competences to ensure financial resources for adequate management of the PAs, and development of projects to promote sustainable uses of all PA values;
6. Provide inputs from the nature conservation sector into the National framework curriculum, National Council for Science, Higher Education and Technological Development, and closely cooperate with national authorities for education and science, including universities;
7. Improve cooperation between PA management and local population through stakeholder councils/forum and review issues and possibilities for new PA management models (e.g. joint management);
8. Improve communication and interpretation of all values and roles of PAs to increase support for PAs by locals, business sector, public sector and general public;

9. Increase the understanding of the socio-economic role of PAs due to their key role for rural economies since they incorporate opportunities for biodiversity conservation and development. This 'new' rural development is also an important tool for reversing the trend of depopulation and rural area abandonment.

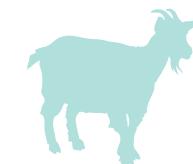
**- workplaces:** communicate to the ministries of finance and economy that jobs associated with nature conservation are one of the most important sources of income for the local population in 39% of the managed/assessed protected areas in Croatia;

**- education:** inform and educate local communities and visitors on the values and benefits of a protected area, involve local educational institutions in stakeholder councils

**- culture:** develop strategies for evaluating the culture in economic benefits for the PA and stakeholders;

**- local offer:** developing joint actions (family farms, associations), provide marketing support to local community, use historical and local knowledge (traditional crafts and practices), branding of local offer (local products, souvenirs, recreational services, accommodation and food);

**- access to EU funding:** incentives, agro-environmental measures;



Lonja Field and its surroundings area the last example of a landscape with cultural and biological values that result from a harmonious co-existence of a man and nature, lasting for several centuries. The river with its natural cycles dominates, and traditional values have been completely preserved.<sup>21</sup>

<sup>21</sup> Gugić, G. 2009 Managing Sustainability in Conditions of Change and Unpredictability - The Living Landscape and Floodplain Ecosystem of the Central Sava River Basin. Lonja Field, Nature Park Public Service.



NORTHERN VELEBIT  
NATIONAL PARK IS  
PAYING A  
**EUR 14,000,00**  
WATER REGULATION  
FEE

10. Strive to create a synergy of the legislation and competent bodies for the management of protected areas (spatial planning, transport, economy, agriculture, forestry, energy, tourism, fisheries, water sector) at national level, pilot solutions for reducing/eliminating harmful incentives (e.g. fees for water regulation for PAs).

**Despite the fact that it contributes to the quality and quantity of water, Northern Velebit National Park is annually paying the water regulation fee in the amount of EUR 14,000.00, while at the same time lacks funds for employing new people. Business sector is using the water from protected areas of Velebit in different ways, and none of the money is given back for the nature protection.**

11. Develop and implement tourist activities/visitors tracking system regarding the impacts on all distinctive PA features (biodiversity, habitats, landscape);
12. Make some room for people in PAs, work on PA-specific solutions with the goal of nature protection and subsistence needs of local communities:
  - remove administrative barriers,
  - improve implementation of legal and management framework regulating use of natural resources (material extraction, forest harvesting, hunting and fishing, wild edible and medicinal plants) from PAs and provide alternative methods for economic development,
  - make public procurement more 'green'.



Mljet National Park is a mixture of Mediterranean nature, tradition and culture. Despite a lack of dialogue with the local stakeholders, the park has a crucial role for the development of tourism and for the employment of local population.

The PA-BAT is a contribution to the fulfilment of country's obligation on Aichi Biodiversity Targets (goals for conservation and sustainable use of biological diversity) included in the CBD's Strategic Plan for Biodiversity 2011-2020<sup>22</sup>, EU Biodiversity strategy until 2020, and it directly supports the implementation of more than one Sustainable Development Goals adopted in 2015. Finally, the PA-BAT is a contribution to the "Big Win for Dinaric Arc 2" agreement<sup>23</sup> which Croatia committed in 2013 together with countries in the region.

Overall, our recommendation is to integrate natural/protected area values into development planning in partnerships with key stakeholders.

## Conclusion

Nature conservation science teaches us that ecosystems cannot be conserved only by setting up a protected area, but also by including all the actors in the planning and management of the protected areas, taking into account harmonised actions in the whole eco-region. A two-way communication between PA management, local population and business sector is needed for a better understanding of interests and needs of all the stakeholders in a PA and for ensuring solutions that would stimulate ecosystem conservation and protection.

At the same time, one needs to stress the benefits of a sustainable use of ecosystem for the people, which would have a long-term impact on the economic growth of the community. The results of the PA benefit assessment drafted for 18 protected areas in Croatia and the developed recommendations are at disposal to local administration and other stakeholders for the improvement of sustainable management of a protected area. It is recommended to incorporate them in management plans and other strategic documents.

<sup>22</sup> UN Convention on Biological Diversity

<sup>23</sup> Big Win for Dinaric Arc 2 in 2013 is a continuation of the agreement reached in 2008 between 6 countries in Western Balkans, plus two more countries (Albania, Bosnia and Herzegovina, Montenegro, Croatia, Kosovo\*, Macedonia, Slovenia and Serbia). In the next five years the Ministries of the specified countries will commit themselves to cooperate in order to strengthen the planning process for the nature protection, as well as to assess economic values of their natural resources by including the objectives of nature protection plans for the economic development of fisheries, forestry, agriculture, energy, urban planning and intersectoral collaboration. <http://bit.ly/1PKFcWG>



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