

# TOURISM POLICY AND MANAGEMENT FOR CONSERVATION OF BIODIVERSITY IN THE LAKE ENGURE CATCHMENT AREA

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Communicated by Māris Kļaviņš

*Tourism services are beginning to offer an increasing array of new niche product including ecotourism in protected nature reserves that contain many rare and protected animal and plant species. Consequently, even ecotourism, which is generally considered as being environmentally friendly, may threaten the maintenance of natural biodiversity. In order to avoid possible risks it is necessary to examine the existing and prospective environmental impact caused by tourism and to analyse relevant policy, with the goal to develop an effective tourism model in which protection of the environment has priority over economic interests. It is important to integrate such a policy into this model, which will serve to reduce social and economic pressures on biodiversity and will promote responsible actions in support of environmentally friendly technologies and approaches. The selected area for this study was the Lake Engure catchment area, which includes a diverse range of ecosystems and developed tourism facilities. The results of this investigation revealed comparatively little tourism activity, which is mostly seasonal and with low environmental impact. The area is attractive for its biodiversity and culture heritage. Further improvement of the tourism infrastructure and information flow will most certainly increase the number of visitors, thus making it necessary to develop sustainable management of tourism resources.*

**Key words:** biodiversity, environmental management, legal acts, tourism, ecotourism, protected nature territories, cultural heritage.

## INTRODUCTION

The protection of biodiversity is a difficult but essential process to ensure ecosystem services and to guarantee sustainable development. In modern society economic activities increasingly tend to deplete natural resources and to degrade the environment, the restoration of which will ultimately be disproportionately expensive. In most cases, as global experience has shown, environmental degradation tends to be irreversible (Anonymous, 2005). To avoid this possibility and to develop a balanced approach between environmental protection and economic development it is necessary to undertake a policy analysis of the appropriate sector and to study the situation *in the field*, in order to identify factors such as e.g. anthropogenic pressure and to reduce their impact by developing recommendations for policy improvement and implementation. The definition of ecotourism is: a responsible travel to natural areas, which conserves the environment and improves the well-being of local people (Anonymous, 2009). The directions of planning and development in ecotourism are characterised by the following principles: minimize impact; build environmental and cultural awareness and respect; provide positive experiences for both visitors and hosts; provide direct financial benefits for conservation; provide financial benefits and empower-

ment for local people; raise sensitivity to host countries' political, environmental, and social climate (Anonymous, 2010). It should be added that the *Latvian Ecotourism Development Strategy* (Latvijas Ekotūrisma attīstības stratēģija), elaborated in 2001, is still the most complete ecotourism policy-planning document in our country and as such is the first detailed ecotourism planning document that also takes into account global experience and the prospects for ecotourism in Latvia. The document prescribes a development strategy and has identified measures that need to be taken to implement this strategy. The results of studies from around the world reveal that ecotourism, if properly planned and implemented, has a minimal impact and does not carry with it any long-term residue on the wildlife in protected nature territories (Sharpley, 2000; Garcia-Frapolli *et al.*, 2007; Guillemain *et al.*, 2007; Perkins and Grace, 2009; Krider *et al.*, 2010).

The principal aim of Latvian Environmental Policy is to provide the community with an opportunity to live in a clean and harmonised environment by implementing sustainable development, maintaining environmental quality and biodiversity, by ensuring the sustainable use of natural resources, as well as by providing up-to-date environmental information and encouraging public participation in deci-

sion-making processes. At present, the main document in the field of environmental policy is the *Environmental Policy Strategy 2009–2015* which will continue to form the basis for environmental quality preservation and renewal, as well as for the sustainable use of natural resources, while limiting adverse impacts on the environment and to human health. The developers of policy (including with regard to ecotourism) should understand that biodiversity, as an essential value, is rarely taken into account in the context of cost-benefit analysis. The economic potential of ecosystem services has not yet been recognized (Hanley and Barbier, 2009).

Latvia has ratified several international conventions and passed many laws and regulations with regard to biodiversity protection in the Lake Engure catchment area. *Convention on Biological Diversity*, *Convention on Wetlands of International Importance (Ramsar Convention)*, *Convention on the Conservation of European Wildlife and Natural Habitats*, and *Convention on the Conservation of Migratory Species of Wild Animals*, by their acknowledgment of biodiversity and wildlife, ecological, genetic, social, economic, scientific, cultural, recreational, aesthetic and educational potential, are aimed to protect biological resources in accordance with cultural traditions that are compatible with the needs of natural conservation and sustainable utilisation. The EU *Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora* and *Council Directive 79/409/EEC on the conservation of wild birds* provides a similar biodiversity conservation framework. The new EU *Biodiversity Strategy for 2020* adopted by the European Commission to halt the loss of biodiversity and ecosystem services, has, among its other goals, prescribed the implementation of an EU legal framework for the environment so as to protect biodiversity as well as to provide a better defence of the ecosystem and a broader application of a green infrastructure, which may thus be considered as an even stronger commitment to the system of biodiversity protection in the future (Anonymous, 2011).

Environmental policy and biodiversity protection is guaranteed by national legislation, including the *Law on Specially Protected Nature Territories*, the *Law on the Conservation of Species and Biotopes*, the *Environmental Protection Law*, the *Cabinet Regulation No. 264 (16.03.2010) „General Regulations on Protection and Use of Specially Protected Nature Territories”* and a number of other Cabinet regulations that describe aspects of governance planning, management and environmental impact assessment procedures. It should be added that there are two special Cabinet regulations that directly govern the protection and management of the Lake Engure Nature Park. It should also be noted that a major contribution to biological conservation throughout the entire country, as well as in the Lake Engure catchment area, during the previous period was provided by national environmental policy documents such as the *Latvian Sustainable Development Strategy (2002)* and the *National Environmental Policy Plan (2004–2008)*, which set a significant role for tourism development and highlighted strategic

resources such as cultural heritage, abundant landscape and diverse nature, sustainable management and integration of environmentally friendly technologies within the tourism enterprise. The draft National Environmental Policy Plan for the next period foresees the participation of a broad range of stakeholders and thus, the promotion and elaboration of the concept of environmentally friendly tourism is a major component of this paper. Consequently, there is a reason to believe that the legislative framework for ecotourism development and its management already exists. However, the tangible implementation of ecotourism practice has, to date, been insufficiently studied and evaluated. The purpose of this study is to analyse environmental and tourism policy, in regard to the impact on biodiversity caused by tourism, which is one of the most intensive social-economic activities in the protected nature territory of Engure Lake Nature Park and its catchment area. Further, a study aim was to propose recommendations for sustainable management as well as for lessening impact of the human tourist footprint in this territory.

## METHODS

Methods employed included an analysis of the existing tourism and environmental policy, as well as of the relevant normative acts. Questionnaires and structured interviews were carried out on the following target groups: tourism management institutions, NGOs, entrepreneurs and members of the local population. These groups covered the types of *tourism-introduced* impact on the Engure lake catchment area. Interviews and questionnaires were designed with the aim to identify the role of tourism within the local economy and to evaluate the prospects for the industry regarding improvement of environmental protection and reduction of the existing anthropogenic impact, as well as to develop a capacity to elaborate a sustainable model for good tourism management in the Lake Engure catchment area. The type of questions used for interviews and questionnaires allowed respondents to define their particular participation in the processes of tourism development, to indicate environmental risks caused by tourism and to suggest possibilities for their reduction. A case study was carried out in the Lake Engure catchment area with regard to the current status of tourism infrastructure and maintenance problems, tourism attractions, determination of tourist flows, motivations of interested parties, soil erosion, noise, waste disposal, environmental impact, administrative capacity and opportunities for local participation. Policy analysis and examination of reports and statistics employed qualitative and quantitative methods that are recognised as among the most significant tools in research practice (Greenberg, 2007; Bardach, 2009; McKittrick, 2011). These techniques have contributed to the explication of the problem and to the development of the best possible solution. The policy analysis focused on sustainable development indicators and reviewed the activities of officials, entrepreneurs and NGOs with regard to possible benefits and/or barriers to policy implementation.

## RESULTS

**Tourism and environmental policy.** A key objective of Latvian tourism policy is to promote the development of tourism and its importance within the national economy. Currently, the most important tourism policy document is the *Latvian tourism marketing strategy (2010–2015)*, which defines the vision and goals of tourism development, and prescribes the principle of sustainability for the products / services being offered. The indicated core values of the strategy — benefits to the local community and economy (jobs, infrastructure), protection of the natural and cultural-historical values — are all fully consistent with the interests of conservation of biodiversity in the Lake Engure catchment area. It is worth noting that such strategic tourism products to which the document refers, i.e. *culture* tourism and *nature* tourism, and their service/product resources — cultural heritage, the coastline, inland waters, the wetlands (the Engure lake is recognized as one of the most typical wetland areas in the country), diversity of species and habitats and protected nature territories (NATURA 2000) — are all directly connected to the development of environmentally-friendly tourism in the Engure lake catchment area. The *Law on Tourism* and the relevant Cabinet Regulations govern tourism development policy.

The analysis of the most important national environmental and tourism policy-planning documents indicates that they fully support the development of environmentally-friendly tourism in Latvia. The *Latvian National Development Plan (2007–2013)* points out that natural, cultural and historical heritage offers an opportunity to develop tourism more rapidly and to create new jobs in rural areas, because tourism resources are available throughout the country. Better public awareness can facilitate rational and sustainable use and recovery of natural resources, and to decrease the burden on nature by addressing the following tasks:

- (1) to facilitate the preservation and reasonable use of biological diversity and protected areas;
- (2) to promote the inclusion of protected areas in economic development, while defining different zones of economic activity restrictions and substantiating socio-economic decisions made in their determination, as well as to attract financial resources for protected area management;
- (3) to encourage public participation in environmental protection and preservation by providing timely and true information to the population about environmental quality and natural resources;
- (4) to facilitate the development of environmental education, and to foster education for sustainable development and to raise environmental awareness among the population;
- (5) to support sustainable development of the natural environment for recreation purposes and to promote ecotourism. The draft *Sustainable Development Strategy of Latvia up to 2030* points out that tourism plays an important role and de-

finis means for the development of environmentally friendly tourism and for the exploitation of natural capital. There is also a need to maintain a consciousness of Latvian identity and to preserve its landscapes, its nature and its cultural historical heritage sites.

Planning documents, such as long-term development programmes and spatial plans of planning regions, play a significant role in environmental and tourism management in the Lake Engure catchment area. The *Kurzeme Planning Region Action Plan (2010–2013)* indicates that natural diversity and a relatively unspoiled environment are among the most important treasures of the region, but as a resource they are little used — mainly for tourism and recreation development. The *Kurzeme Planning Region long-term development (2010–2030)* lists development of the cultural environment sports and tourism as priorities.

The priorities of the *Kurzeme Planning Region Spatial Plan (2006–2026)* include distinctive rural and urban landscapes and unique and cultural-historically rich attractions for leisure and for tourism, which are built on the natural and cultural values of the region.

The draft *Coastal Spatial Development Strategy (2011–2017)* emphasizes the development of sustainable tourism throughout the Baltic Sea Region. Since 1 January 2011, Landscape Policy, which is critical for the Tourism industry, continues to be developed by the newly established Ministry for Environmental Protection and Regional Development (which combines the Ministry for the Environment and the Ministry of Regional Development and Local Government).

Spatial plans and development programmes of the local governments designed in accord with the national regulatory framework have been shown to have a direct affect on the conservation of biodiversity in the Engure lake catchment area. As a result of the 2009 administrative territorial reforms in Latvia, previous rural communities were integrated into newly created amalgamated municipalities. Consequently, an amendment process is now in progress for many of these local government plans and programmes, thus allowing for the incorporation of appropriate recommendations on the conservation of biodiversity into the drafts of these documents. The draft *Mērsrags municipal development programme* notes that the municipality is tourist-friendly, easily accessible and that the present economic development is in accord with a caring attitude towards nature and traditions. The development of tourism infrastructure (including bicycle route “Around Lake Engure”) in the Lake Engure Nature Park and coastal area must take place in close co-operation with neighbouring municipalities. Suggestions for major opportunities for recreation and sustainable tourism development in the *Engure municipal spatial plan (2003–2015)* plan anticipate areas with an already developed recreational infrastructure (bathing, comfortable camping and parking) and thus with the potential to conserve nature sites to a maximum. The most important tourism resources in the municipality of Engure are the Lake



Engure Nature Park, the Gulf of Riga (the sea, dune area and sandy beaches), forests, other natural objects and also the surrounding cultural historical heritage. Due to the seasonal influx of tourists it is anticipated that several organised parking, camping sites and cycling routes will be created along the Gulf of Riga and along the *Engure – Kolka* route. Preparatory work for a new *Engure municipal development programme (2012–2018)* has commenced. Even before the above-mentioned administrative-territorial reform, almost all of territorial plans of municipalities located in the Lake Engure catchment area, as pointed out by the *Zentene municipal spatial plan*, had identified their tourism and recreational facilities. An evaluation of the Talsi, Tukums and Kandava municipal spatial plans and development programmes reveals that these documents do not identify any special contribution to the conservation of biodiversity from tourism, however, the observed tourist activity is considered to be environmentally-friendly.

The most important areas for conservation of biodiversity and for development of environmentally-friendly tourism in the Lake Engure catchment area and the Lake Engure Nature Park are specified in legislative regulations and management plans created for their protection. Cabinet Regulation (04/08/2004) No. 268, “The Lake Engure Nature Park individual protection and use regulation”, defines the different levels of protection for zones — controlled regime, the nature reserve, natural park and neutral zones, in which activities such as exploratory tourism, e.g., is properly regulated so as to ensure the natural environment and a habitat for waterfowl and other specially protected birds, and to maintain sustainable access to these resources in general. The Regulations allow for an environmentally-friendly approach to the enjoyment of nature parks for cognitive, educational, recreational and tourism purposes. Cabinet Regulation (09/16/2003) No. 524, “The Lake Engure Nature Park Consultative Council bylaws” prescribes the creation of a collegial advisory body with the aim of promoting the protection, management and sustainable use of the wetlands, which are considered to be of international significance, and for the protection of the Lake Engure Nature Park by improving co-operation among local governments, NGOs and citizens as well as by the co-ordination and development of the nature protection plans, scientific research and tourism activities in the territory of the park. The *Lake Engure Nature Park Nature Protection Plan (2000)* has defined a series of measures for nature-friendly tourism and recreational development by involving the local community and promoting the development of a tourism infrastructure in line with nature conservation interests, thus also creating new jobs. The *Lake Engure Nature Park tourism development plan (2006–2015)* is based on three principles of sustainable development. This plan anticipates the establishment of new nature trails, bicycle routes, bird-watching blinds and towers, an extension of the tourist season, an establishment of a local museum in the Ķūļciems village. It also proposes significant activity in the organising of seminars, research on the environmental carrying capacity and monitoring of environmental impact, in regard to development of environmen-

tally friendly tourism. It must be added that this tourism development plan proposes the building of various eco-bicycle tour trips through the Lake Engure catchment area as part of the *Lake Engure Nature Park tourism development plan (2006–2015)*. At present, the draft *Lake Engure Nature Park Nature Protection Plan (2011–2025)* proposes that one of the targets is to develop nature-sound tourism in the park in accordance with the stated interests of nature conservation. The plan points to the Lake Engure Nature Park as one of the most diverse habitat areas in Latvia, which could be exploited for tourism and recreational activities. For example, freshwater habitats which are an especially popular destination for birdwatchers and the marsh and coastal habitats are important for science, education, tourism and recreation. The preservation of natural biodiversity should be integrated into the draft *Lake Engure Nature Park tourism strategy (2015–2025)* as a priority. Of particular significance is the regulation that sets not only the maximum load allowable in different natural park areas but also sets the measures for implementation of a tourism infrastructure. It is important here to continue to monitor the anthropogenic pressures and environmental capacity with intent to justify the regulation of tourism flow, in spite of the potential increase of income that might be generated by tourism. This draft nature protection plan also anticipates a continuation of the maintenance of the bird-watching towers and blinds and installation of environmentally-friendly tourism facilities.

The above-mentioned plans are an important tool for the sustainable development of the Lake Engure catchment area. Another critical factor for the implementation of these plans is the cost factor and desired participation by the broader community.

**Tourism activities in Lake Engure catchment area.** Important information on the overall situation together with an environmental impact assessment was obtained as a result of interviews and on-site observations. It should be noted that there are many significant natural and cultural objects in the Lake Engure catchment area, but that these are scattered over a large area. The attractiveness and perception of these objects is measurable across a diverse spectrum, from the almost visually imperceptive archaeological objects to fully appreciable architectural ensembles, landscapes and natural attractions. A variety of archaeological, architectural, artistic, historical and even monuments of industrial heritage are to be discovered in the Lake Engure catchment area. Religious architecture is reflected by churches of various denominations — Lutheran, Roman Catholic and Orthodox. Lutheran congregations have historically been dominant throughout the region. Also there are many secular architectural monuments — manor houses with park ensembles, which represent a variety of styles and construction periods.

There are many state-protected heritage sites within the Lake Engure catchment area that are important for tourism development and which offer in-depth educational materials about the historical origins of the region and about its cul-

tural environment. These include: the rectory of the Talsi Lutheran Church, located in a picturesque setting near the town and which provides a link to the historical activities by the pastor and violinist Karl Ferdinand Amenda, who was also a close friend of the composer Ludwig van Beethoven; the Nurmuiža medieval castle ensemble — an archaeological, architectural and artistic monument (16<sup>th</sup>–20<sup>th</sup> centuries), as well as the Nurmuiža Lutheran Church which is representative of the Courland wood-carving school of mannerism interiors (16<sup>th</sup> century), a true monument of architecture and art; the ancient Curonian fort of the Mežīte castle hill, an archaeological treasure; the Balgale Lutheran Church and the Galtene Manor House, whose interior decorations (18<sup>th</sup> century) are absolute works of art; one of the oldest wooden church structures in Latvia — the Iģene Lutheran Church (1751), a national architectural and art heritage monument which might be considered as a rarity in terms of local sacral architecture in wood; the Laidze Manor house and park formation (from the mid 19<sup>th</sup> century) is extraordinarily interesting for its many trees and shrubs that had been introduced from abroad; the origins of the Parish of Strazde may have origin, based on historical documents, dating to the year 1291; the Lutheran Church (1591, 1872) is a monument of architecture; the Strazde Castle mound — an archaeological site of great importance; an environmental installation „The Green Sun” by contemporary sculptor Vilnis Titāns; the Dziedri Lutheran Church, the St. Arsenius Orthodox Church and the Kūļciems local history museum in which the exhibition is devoted to the history of Lake Engure and the surrounding area; the Mērsrags Lutheran Church (19<sup>th</sup> century) — the interior of which is an acknowledged work of art; the Mērsrags private museum “Saieta Nams” (Meeting House) (1811), represents a typical ethnographically correct model house of the fishing village; the Mērsrags lighthouse serves as a example of industrial era heritage; the Engure fishermen’s villages „Skaras” and “Lielkristi” — true monuments of authenticity (19<sup>th</sup>–20<sup>th</sup> centuries); the Engure Castle mound, a significant archaeological site, and the Engure Maritime School (1875) founded by Krišjānis Valdemārs, educator, economist, politician and famous spiritual leader of the First Latvian National Awakening and representative of the historical, educational and economical activities along the entire coastal region; the Dursupe village mentioned in historical records as far back as in 1390, other records reveal the relationship between Governor Altenbokum of Tobago and the owner-family of Dursupe Manor; the Zentene Manor House and Park ensemble (19<sup>th</sup> century) serves as a monument of architecture and art and represents one of the most prominent examples of a classicist manor house in Latvia, the Parkland features a unique collection of some fifteen trees and shrubs introduced from abroad, including the largest Yew tree in Latvia; the Dzirciems Lutheran church (19<sup>th</sup> century); the Rindzele Manor House ensemble (1866), a sample of late Classical style and “Bisnieki” (1971), the family home of the writer Ernests Birznieks-Upītis — a historical monument, which nowadays is frequently visited and known as the *Pastariņš* Museum. The above-mentioned state protected heritage sites are all enhanced by the more than 25

existing sites of archaeological significance, all of which serve as a regional identity and evidence that the cultural roots of this region are to be found as far back as in the 10<sup>th</sup> century and possibly earlier. It should be taken into account that the Lake Engure catchment area tourism routes, in the context of their relationship with immediate and distant regions, reveal much deeper historical links than any other administrative territorial divisions currently being used as the basic criterion for the recording of these cultural objects.

There are also several biodynamic farms and a local wine production facility in the Lake Engure catchment area, all of which are most certainly identifiable as tourist destination sites.

An important role in the tourism business is given to the scenery of Lake Engure with its protected habitats, its natural, agricultural and industrial landscapes, its historic tree rows along roads, the many protected geological and geo-morphological monuments, its dendrological parks and the many habitats with natural wildlife and natural bird watching opportunities. An abundance of cultural activities — amateur choirs, theatre, dance groups and sports festivals also present tourism in this region. Municipality libraries provide cost-free Wireless Internet (WiFi) access around the clock. Aesthetic landscapes only serve to enhance the rich cultural heritage. All of these factors are considered as positive incentives to the development of tourism. In accordance with the planning process it is necessary to improve the tourism infrastructure. The present lack of a functional resource-encompassing infrastructure is an obstacle for tourism development and this issue must be addressed.

## DISCUSSION

In order to gain a better impression of the trends of tourism flow, the number of visitors to the Engure Lake Nature Park was compared with the number of visitors to Cape Kolka (Fig. 1).

The Engure Lake Nature Park, although located along a favourite tourist route, is, however, visited a lot less than Cape Kolka, which might be influenced by the difference in attractions and available infrastructure. The Talsi Tourism Information Centre statistics (Anonīms, 2011), gathered

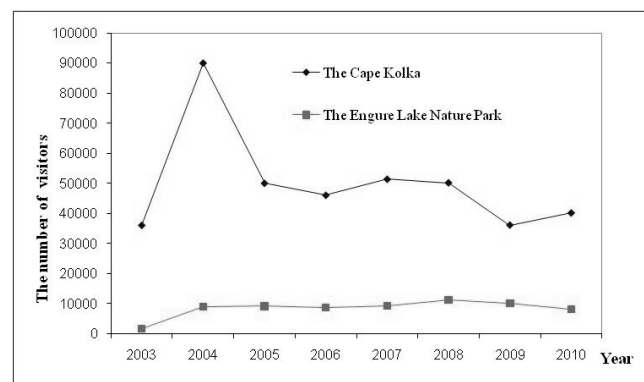


Fig. 1. Comparative numbers of visitors to the Cape Kolka and to the Engure Lake Nature Park.

from tour operators of the Lake Engure Nature Park and from the Visitors Centre at Kolka, are able to provide an approximate picture of the tourist flow, but they do not reflect precise visitor data, because of an undeveloped methodology in the collection of the data on site.

Road traffic records, which indicate tourist interest in sites to be visited within the Lake Engure catchment area, can provide significant data in environmental impact assessment. At the same time, the analysis of road traffic records provides additional information on the impact of exhaust emissions, noise and light pollution and impact of transport on the existing flora in this nature park area. This indicator is a very important consideration in the planning of future tourism. It should be noted that the heaviest traffic route Riga–Kolka (P131) runs parallel to Lake Engure and is just some 1–2 km away from it. The impact of fuel emissions is lessened here by the broad forest belt, located between the road and lake. The Engure Ornithological Research Centre of the Institute of Biology of the University of Latvia, which is one of the most attractive sites in the park is located approximately 2.2 km from the highway, and is capable of accommodating about 8–10 cars at any one time, without adversely affecting the natural substrata. Any increase in tourist traffic may cause soil erosion. With regard to tourism-related waste, it has been observed that the most frequent types of waste found throughout the Lake Engure catchment area are packaging bags, aluminum tin cans and plastic bottles, less glass and other types of packages. Local authorities have set up a waste-sorting system for plastic, paper and glass. This waste management practice is considered as a positive step both by residents and tourists. Natural resources are also one of the most important tourism elements, the use of which, in an accordingly environmentally sound manner, requires competence. It is important to note here that the national legal framework in the field of the protection of natural resource also covers specific conservation of biodiversity. Existing tourism activities in the Lake Engure catchment area do not present serious risks to the conservation of biodiversity. The applicable laws and regulations, and state and local level planning documents, promote environmentally-friendly tourism development. The existing management structure of the Lake Engure Nature Park is presently able to carry out its mission, but a significant obstacle to the further attainment of the defined objectives is a lack of financial resources.

It is recommended that the existing tourism development and management model be expanded with broader participation in the planning and monitoring processes by stakeholders. It is no less important to supplement the current pattern of tourism activities by the demonstration of green technologies within the tourism infrastructure, as well as by other environmentally-friendly forms of tourism, especially ecotourism, which are most appropriate regarding the sustainable management conditions for this park and for the entire Lake Engure catchment area. The region's cultural and natural environment is a favourable incentive for tourism development in the Lake Engure catchment area. In assess-

ing tourism impact on the environment and on conservation of biodiversity there are some sub-categories that need to be addressed, such as: volume of tourist flow, seasonality, pressure of the tourism infrastructure on the environment at the sites of tourism facilities, seasonal factors, the role of integrated environmental technologies and the importance of practical approaches to alleviate these pressures.

In analysing statistical data and information obtained through interviews it is clear that the most intense tourist flow by volume in the Lake Engure catchment area is flow (mostly as transit) from Riga to Kolka along the northern coast roads of Kurzeme and in the opposite direction via motorways (P128 and P131), as well as around Lake Engure and nearby coastline. The tourist flow peaks during the summer in the holiday and swimming season, and is usually made up of multiple-day journeys. The second largest tourist flow takes place during the bird migration periods in spring and autumn and focuses mostly around the lakes of Engure, Kaņieru and Sloka and adjacent coastline, which in many cases may be regarded as day-trip destinations. The seasonal activity of the wildlife is reflected particularly among migratory bird watchers and their related supportive tourism. Tourists are attracted to bird-watching and boating opportunities. It should be noted that boating in the lake is strictly regulated due to bird nesting protection requirements and by the previously referred to Cabinet Regulation, „The Engure Lake Nature Park individual protection and use regulation”. A relatively intensive tourist traffic flow in both directions also runs along the road Jūrmala–Talsi (P128), which is located just outside this protected nature territory. Another factor that should also be taken into account is the tourist flow associated with cultural heritage objects — the manor building ensembles and sacred monuments, the *Pastariņš* museum and the Rideļi water mill located in the lake Engure catchment area. Access for visitors to these objects is provided by local and municipal roads Talsi–Upesgrīva (P127); Stende–Lauciene–Ķūlciems–Mērsrags; Kandava–Cēre–Dursupe, Zentene–Dzirciems–Rideļi–Sēme, as well as by the roads around Lake Engure. Many of the aforementioned tourist corridors are gravel roads that become very dusty and bumpy during dry conditions, thereby significantly reducing the numbers of tourist vehicles and cyclists. A specific type degradation of the local environment is dust load between Kandava and Cēre caused by transit of an estimated 50 trucks per day.

In addition to the above-mentioned roads and bicycle routes, and as mentioned in planning documents, a small flow of tourists may also occur through the reconstructed yacht ports in the towns of Mērsrags, Engure and Roja. It should be recorded here that the Mērsrags Yacht Center has accepted the challenge of fulfilling the requirements for the marina eco-label “The Blue Flag”, which is an important consideration for this centre, as it is located in the marine protected territory. Such an environmentally friendly approach can be highly valued, as the emerging yachting centre model may well become the first project demonstration of eco-friendly technology across the Lake Engure catchment area. The tourist location “Rideļi Historical Water



Mill", an industrial monument, launched an experiment in 1996 in the production of organic produce to be used in the bakery of the company shop and cafe. Due to economic difficulties, these activities have not continued. The demo project — an installed hydropower turbine for electricity generation by this mill — can be considered as the installation of renewable energy technology as well as an indication of environmental responsibility by local entrepreneurs. Company representatives point to the great number of visitors (including cycling tourists) during the summer season and to their determination to expand environmentally friendly product offerings.

It is necessary to undertake in-depth analytical studies of all pilot-enterprises that focus on integration of environmentally-friendly production, and to determine factors promoting and which hindering the processes of a green economy, all of which are very important for tourism throughout the entire region and tourism development in general. It should be highlighted that one of the most attractive tourist elements in the Lake Engure catchment area, which creates business interests, is the possibility for facilitating wildlife and bird observation all year round.

Direct human and wildlife interaction and exposure limits must be carefully balanced in order to minimise the effect of the presence of visitors, while ensuring a sufficient cognitive richness and diversity for visitors, which is often the major purpose and mission of their trip. Noise reduction is one of approaches with which to reduce any possible negative impact on wildlife caused by tourism, including ecotourism. Studies and observations made at different distances and angles have shown that an increased level of stress affects nesting birds and hatching. This increased stress can be the result of nature tourism and ecotourism, as it is particularly interesting to observe and study rare and endangered bird species, thereby also creating a risk to the protection of these same birds (Karp and Root, 2009). Park visitors were polled and expressed an increased interest in the possibility of photographing birds and animals from hidden observation positions, thus respecting and not disturbing the natural environment and also being able to take an interest in environmental education and the whole nature experience. It is recommended that such hidden observatories should be built around the lake, to provide visitors with relevant information and at the same time to establish a code of conduct when in these observatories. To appreciate more fully the impact of such tourism, there is a need for research on the particular animal species as they are affected by the presence of tourists, as well as on the establishment of a local government model in order to optimise the socio-cultural impacts, econometric focus on various performance-enhancing effects and ethical dimensions of ecotourism (Weaver and Lawton, 2007). Repair and maintenance of infrastructure, as well as the introduction of new, environmentally-friendly installations are now among the main issues being debated by the Lake Engure Nature Park administration, as well as throughout the entire Lake Engure catchment area.

The *Engure Lake Nature Park Tourism Strategy (2006–2015)* assessment on the impact of tourism concluded that

the Lake Engure Nature Park and its surrounding area is less popular as a tourism destination compared to other parks in Latvia, with the exception of the „Orchid trail” which is especially popular among tourists. Tourism attractions in this area are comparatively specific and they are more deliberately suitable for ecotourism, and for active nature tourism. This study outcome obtained from interviews and from the survey reveals that there is a relatively small number of visitors to the Engure Lake Nature Park, and still less to the surrounding Lake Engure catchment area. Therefore, due to the small amount of tourists, it is more difficult to justify and obtain the necessary funds to improve infrastructure other than by resorting to the introduction of park attendance fees. A possible solution to this situation is to access EU Life Programme and Structural Funds or other similar sources of co-financing. Studies on the involvement of local government in protection of biodiversity, promotion of economic benefits for local community and planning of ecotourism all point to successful solutions for the conservation of natural resources and cultural traditions and for the strengthening of local communities (Lai and Nepal, 2006). The Lake Engure catchment area tourism product demand has emerged mainly in two directions: recreational (vacation, beach, sun, swimming, surfing, kiting package) and cognitive (hiking, canoeing, cycling, wildlife and bird watching). The questionnaire and interview processes assisted in the gathering of information on respondent attitudes towards mass tourism and environmentally-friendly tourism, on consumer patterns and on the preferred comfort level — all which are important details for the development of a valid tourism policy. Management strategy and the decision-making procedures are all essential factors in determining measures to protect the existing biodiversity, volume of use of natural resources, choice of adequate infrastructure and fundraising (Ars and Bohanec, 2010). Tourism policy thus now appears with a new attitude to the industry in its efforts to reduce environmental impact and to promote the economic welfare of the local community. The relative proportion of socio-economic gains and losses, as prescribed by these tourism policies, is to be reviewed through the prism of impact and response (Haberl *et al.*, 2009).

Tourism, with particular emphasis on environmentally-friendly ecotourism, should become an effective tool to reduce anthropogenic pressure in the territory of the Lake Engure catchment area. It is important in this case to expand government and local government, public and private sector cooperation by involving the scientific sector, in order to improve the level of qualitative indicators of environmental and tourism policies.

Ecotourism development in relation to the protection of biodiversity depends on a successful strategy, on administrative normative regulation, and on a well-informed and educated partnership between the community and private enterprise. An analysis of all of the above-mentioned Conventions, EU directives and regulations, national legal acts and policy documents indicates these frameworks have significantly contributed to the conservation of biodiversity and heritage, reduction of anthropogenic impact, integration

of environmentally-friendly technologies and approaches in the Lake Engure catchment area.

Tourism activities in the Lake Engure catchment area, excepting some sites along Lake Engure and the coastal area (Rideļi water mill and the *Pastariņš* museum), are relatively small with a low level of anthropogenic impact on biodiversity. However, it is necessary to take into account the potential trends of tourism growth and to introduce appropriate management and environmentally-friendly infrastructure. It should be recognised that ecotourism promotes sustainable development in general and conservation of biodiversity in particular. This form of environmentally sound tourism is able to carry out projects demonstrating good environmental management, social responsibility, sustainable economics and to provide a positive example for the entire industry, not only in the Lake Engure catchment area region, but throughout the country as a whole. More in-depth exploration of ecosystem services is recommended and this should be included as a part of the tourism value system for the Lake Engure catchment area.

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Received 9 November 2011

#### TŪRISMA POLITIKA UN PĀRVALDĪBA BIOĢISKĀS DAUDZVEIDĪBAS SAGLABĀŠANAI ENGURES EZERA SATECES BASEINĀ

Pētījuma mērķis bija veikt tūrisma izraisītās ietekmes uz bioloģisko daudzveidību izvērtējumu īpaši aizsargājamā dabas teritorijā — dabas parkā „Engures ezers” un tā sateces baseinā (EESB), kā arī izstrādāt rekomendācijas šīs teritorijas ilgtspējīgā apsaimniekošanā ar mērķi mazināt tūrisma nozares ietekmi uz vidi. Pētījumā izmantotās metodes ietver tūrisma un vides politikas, kā arī attiecīgo normatīvo aktu analīzi, strukturētas intervijas un aptaujas tūristu radītās ietekmes uz vidi identificēšanai un novērtēšanai, kā arī novērojumus un foto fiksāciju tūrisma objektos EESB. Mūsu valsts politikas plānošanas dokumenti satur formulējumus, kas ir videi draudzīgam tūrismam atbalstoši, veicina dabas resursu ilgtspējīgu izmantošanu un atjaunošanu, kā arī samazina slodzi uz aizsargājamām teritorijām. Bioloģiskās daudzveidības aizsardzību nodrošina arī nacionāla līmeņa normatīvie akti, t.sk. MK noteikumi par dabas parku „Engures ezers”, kas regulē aizsardzības, plānošanas, apsaimniekošanas un ietekmes uz vidi novērtēšanas procedūras. Kā īpaša dokumentu grupa ir izdalāmi pašvaldību teritoriju plānojumi un attīstības programmas, kā arī dabas parka „Engures ezers” dabas aizsardzības plāns, kas vistiešākā veidā ietekmē EESB bioloģiskās daudzveidības aizsardzību un ir nozīmīgs instruments ilgtspējīgās attīstības nodrošināšanā EESB. Būtisks šo plānojumu realizēšanas faktors ir finansējums un plašāka vietējās sabiedrības līdzdalība. EESB esošie dabas un kultūras resursi ir labvēlīgs stimuls tūrisma attīstībai EESB reģionā. Vērtējot tūrisma ietekmi uz vidi un bioloģiskās daudzveidības saglabāšanu, ir izdalāmi sekojoši kritēriji — tūrisma plūsmas apjoms, sezonālitate, tūrisma infrastruktūras spiediens uz vidi tūrisma objektos, tūrismā integrēto videi draudzīgo tehnoloģiju un pieeju nozīme šī spiediena mazināšanā. Tūrisma aktivitātes EESB reģionā ir salīdzinoši nelielas un tām ir zema antropogēnā ietekme uz bioloģisko daudzveidību. Tomēr jāņem vērā tūrisma intensitātes pieauguma tendences un jāplāno attiecīga videi draudzīga infrastruktūra un pārvaldība — tam visvairāk atbilst ekotūrisms kā elastīgs un pēc savas būtības šiem principiem tieši atbilstošs instruments, kas ir spējīgs realizēt pilotprojektus labas vides pārvaldības, sociālās atbildības un līdzsvarotas ekonomikas jomā, demonstrējot pozitīvu piemēru visai industrijai ne tikai EESB reģionā, bet visā valstī kopumā. Rekomendējama ir ekosistēmu pakalpojumu padziļināta izpēte, kuras rezultātus būtu jāiekļauj EESB tūrismā, īpaši ekotūrisma vērtību sistēmā.