



Lessons learned and transferability within the Baltic Green Belt Region

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Abstract

The priority objective of the Baltic Green Belt project was to observe how the region from Lübeck to St. Petersburg deals with the challenges of the 21st centuries under a special heritage setting.. This region, i.e. the neighboring countries of Russia, Estonia, Latvia, Lithuania, Poland and Germany, still have a great potential of natural and cultural heritage from the times of the Iron Curtain. Sustainable development of these coastal regions thus requires wise decisions towards heritage preservation on the one hand and towards mastering the challenges of rapid tourism development, eutrophication, climate change etc. on the other. Insight on good practice examples across borders and exchanging experiences on lessons learned is a promising approach which the Baltic Green Belt project has pointed out over more than three years.

1 Experience and outputs Viewing and adopting

Over the last 20 years the former border region along the Baltic Sea coast has been converted into a zone where natural landscape features are still an essential element of modern coastal development. Thus, this region can truly be termed a Baltic Green Belt. Nevertheless, this Green Belt's coastal zone is undergoing rapid changes most of which are the result of urban sprawl, a rapid growth in the tourism sector and a marked intensification of agricultural land use in the Baltic hinterland. While sharing a similar 20th century history, the nations and subregions between Lübeck and St. Petersburg have experienced a variety of changes and adaptation processes in the social, economic and ecologic systems of their coasts. It was a priority goal of the Baltic Green Belt project to closely look into the individual transformation processes that the south-eastern Baltic countries have undergone since the early 1990s. In accordance with the EU INTERREG philosophy the project aimed at finding good practice examples for sustainable regional development and to analyze the suitability of these practises for trans-national application.

This evaluation is summarized here with respect to lessons learned across borders. It should be noted, however, that due to differences in the regional development processes and the underlying system characteristics, serious limitations do exist with regard to the transferability of some project results and outputs. Obviously, the greatest deviations exist between the regions which are parts of Russia (Kaliningrad Oblast and St. Petersburg region) and the other Baltic Green Belt segments, belonging to the EU. But even within and between the EU Baltic Sea regions significant variations are to be observed with respect to economic, social and ecologic developments and to the state of nature conservation. The BGB project attempted to highlight some noticeable common experiences and lessons.

2 Tourism

Seaside tourism has seen a rather rapid development all along the Baltic Green Belt and this sector has made the coastal zone the most booming region in all Baltic nations. While in Germany, i.e. in the

new state of Mecklenburg-Vorpommern, the onset of the tourism boom came around as early as 1990, the major changes in the tourism sector of the other countries were brought about by their later EU membership. As a result, progress came at a somewhat slower pace, thus leaving room for the consideration of factors with potential conflict to the tourism situation at the local level. One potential conflict area for tourism development is the prevalence of military installations, established during cold war times at the Baltic waterfront by defensive socialistic governments. Careful problem consideration and discussion - as enforced by the Baltic Green belt project - has recently initiated the discovery of the cultural heritage, and thus touristic values of military objects and leftovers. On Russian territory (Kaliningrad, St. Petersburg) this process is in its very early stage only.

Another discussion was recently launched on the effects of climate change in the Baltic Green Belt region. According to the so-called PESETA study commissioned by the EU, tourism in Northern Europe could be one of the few sectors and regions to profit from climate change trends, as signalled by regional climate models (EU JRC 2009). Whilst tourism business might get stimulated by shifts in the climate regime (such as extended warm periods during summer months), adverse effect from climatic and meteorological changes on the marine, littoral and terrestrial ecosystems cannot be excluded (e.g. increased algae blooms or beach erosion). In combination this kind of trends might enhance or even multiply tourism-related problems along the Baltic Green Belt.

The BGB project has triggered some actions related to sustainable tourism and accompanied the tourism development process. Focal areas in this respect were, among others, in Latvia (such as at the Bay of Riga and Slitere National Park) and Estonia (e.g. Lahemaa NP, Vormsi Island). A few lessons learned might be deduced from these regional activities. Generally speaking, a cross-border transferability makes good-practice examples in tourism even more valuable. The following project findings are seen to provide added values to present and future work on tourism development:

1. Coastal tourism relies strongly on attractive landscape settings and healthy environments and ecosystems. Conserving these settings and environmental qualities thus provides the basic capital for "nature-friendly" tourism. Tourism development examples from coastal regions in eastern Germany show that harmonizing these developments with nature conservation efforts open up an alley for a sustainable approach in the tourism sector. Thus, ecologically oriented tourism seems to be a promising track to follow in all BGB regions. Within the project, some common terms (definition, target groups, desired and undesired effects) for Green Belt Tourism in the Baltic were compiled from experience in other parts of the Green Belt (see Sterzel and Maack, this volume).
2. As a result of non-sustainable tourism in other parts of Europe, e.g. in the Mediterranean, and perhaps due to climate change effects elsewhere, the tourism sector in the Baltic region is expanding rapidly, more than most other segments of the national economies. This means that the need and demand for coastal space dedicated to tourism and recreation increases constantly. In order to avoid further infringement of touristic infrastructure developments on valuable landscapes and seascapes, wise land use planning practises must be supported in all of the BGB coastal zone. Primarily, sell-out of environmentally attractive coastal areas to private owners (for summer housing or tourism entrepreneurship) is to be avoided; in addition land use planning by state (national or regional) authorities ought to be connected to nature conservation objectives by means of (more) rigid planning instruments such as environmental impact assessments. This increases chances for the touristic focal areas in Poland, Lithuania, Latvia and Estonia to avoid some malpractises such as "wild expansion" of tourism infrastructure into formerly intact landscapes and seascapes (e.g. like on Hel peninsula in Poland).
3. The planning of tourism development with strong concerns for nature and environment conservation is a difficult task. Often planners are faced with harsh pressure for land use and building permits from the tourism industry. The Baltic Green Belt experience shows that a close cooperation between planning authorities and regional NGOs may improve chances for nature-friendly decision-making. The Latvian NGO for rural tourism development Lauku Celotaijs

provides such an example for a positive alliance of planning authorities and an NGO with focus on tourism (see chapt. 6 of this volume). In other regions such as in Germany strong environmentally oriented NGOs do exist, e.g. BUND, WWF, NABU and others. Their intervention in tourism development, however, is often seen as biased in favour of ecologic and against economic development. Regardless of the actual working focus of these NGOs it seems necessary that they improve their image by making constructive offers towards guidance in tourism and land use planning.

4. The BGB project work has revealed that today chances exist to reconcile formerly adverse and conflicting uses of the coastal zone for recreation on the one hand and on military observation and defence on the other hand. All along the “Iron Curtain coast” military installations exist from the time before 1990. Whilst these military objects, such as bunkers, watch towers, shooting ranges, telescopes etc., are not aesthetically attractive per se, they are remains of an historic past that only the older generation of coastal dwellers has personally experienced. Younger people and inhabitants or visitors from inland regions may have no or little knowledge about these remains from the World War II and Soviet era. Therefore, it makes good sense to step up efforts for incorporating the military, i.e. former time cultural heritage into regional tourism development action. This calls for ways and tools to make the military heritage known to the public and available for tourism marketing. Such tools were designed in the course of the BGB project, e.g. in Latvia a map showing all military objects that might be of interest to visitors to the region; in Estonia a GIS-based inventory of military objects has been established and is now also available on the internet (chapt. 6). These tools assist the local and regional tourism managers in their efforts to wisely preserve and utilize military heritage. Similar efforts must now be extended to the coastal zone of Poland and parts of the German BGB region so as to increase fringe benefits from previously disgested military installations.
5. With all BGB nations being EU members states except for Russia it is obvious that the development of the tourism in Russia deviates strongly from that in the other areas. In the coastal zone of Kaliningrad Oblast and St. Petersburg region inland tourism prevails (except for the metropolitan part of the city) and military installations very often are still in use. At this point it appears difficult to convey lessons learned with respect to tourism development in neighbouring EU regions to planners and tourism managers in Russia. However, the BGB project has succeeded to establish close links to Russian NGOs dedicated to nature conservation and environmental concerns. In addition several BGB conferences and workshops with focus on tourism issues have been organized under participation of Russian academic partners, such as Emanuel Kant University in Kaliningrad. These personal as well as professional ties between tourism authorities, NGOs and academics are seen as suitable vehicle for transporting messages on nature-friendly tourism development and touristic use of military heritage to decision-makers in Russia.

Besides the lessons learned that are described here there is a variety of tourism-related issues that are still undergoing intensive discussions within the tourism, academic and NGO community. This discussion process needs to be continued for many years, well beyond the Baltic Green Belt project phase.

3 Eutrophication

There is a direct link between the status-quo of the Baltic Sea ecosystem and its effect on or appeal for coastal tourism and recreation. The quality of the marine and littoral environment closely depends on the trophic water conditions in the various parts and basins of the Baltic Sea (Figure 1). In spite of longer-term international efforts the influx and immission of nutrients into the Baltic increased constantly until the end of the 20th century. Since then HELCOM and EU regulations on nutrient fluxes have brought about a noticeable decrease of nitrogen and phosphorus loads. Between 2001 and

2006 an average annual influx of about 650,000 t of N and about 30,000 t of P from the drainage basin into the Baltic have been registered – a decrease of approximately 15% compared with the annual input rates between 1995 and 2000. Nevertheless, the eutrophication state of the Baltic Sea is critical and recognized as the number one threat to the marine environment as a whole. Even though, the critical situation is mainly a result of the almost fully enclosed situation of this sea and its complex and irregular hydrographical conditions, characterized by only sporadic, limited exchange of water with the North Sea, the anthropogenic impact – mainly through agricultural nutrient inputs, partly through sewage and industrial effluents – must not be neglected. The most significant effects of strong eutrophication are massive algae blooms which decrease the transparency of the water column, limit the growth of benthic macrophytic plants in the photic zone and enhance oxygen depletion or even the release of toxic H₂S gas in bottom sediments. Moreover, repeated algae blooms inhibit the bathing water quality in the nearshore zone whilst toxic algae (e.g. cyanobacteria) can even be harmful to the health of beach users.

When looking at the total drainage basin area, it becomes obvious that the regional pattern of nutrient input and degree of eutrophication is rather heterogeneous (Figure 1). Nutrient influx strongly depends on the water volume of inflowing rivers as well as on the type of land use in their respective drainage areas. Most often, nitrogen is emitted from diffuse sources, mainly washout or blowout from agricultural areas whereas point sources, such as urban sewage release, play a greater role in phosphorus emissions.

It is to be expected that regional warming as a result of 21st century climate change will still enhance the serious eutrophication problems of the Baltic Sea. Modelling of marine ecosystems suggest that warmer water temperatures and a decrease in ice cover will amount to algae blooms that are more extended both in space and in time (BACC Report 2008, see chapt. 3).

Recent surveys, some carried out by the Polish partner of the Baltic Green Belt project, reveal that comprehensive actions and measures must be taken to curb the negative impacts of the high degree of Baltic Sea eutrophication. Among the partner regions the following coastal segments are most strongly affected: the Gulf of Gdansk in general and the Vistula Lagoon in particular, the Curonian Lagoon and the Gulf of Riga. Russia/Kaliningrad has a share both of the Vistula Lagoon and of the Curonian Lagoon and therefore needs to be involved in trans-border policy-making and water management actions. The key player in this respect is HELCOM as the umbrella organization not only for the BGB partner countries but for all Baltic Basin neighboring states. Therefore, guidance provided by HELCOM on improvement policies have transferable quality and should be effective in all BGB regions and neighboring areas.

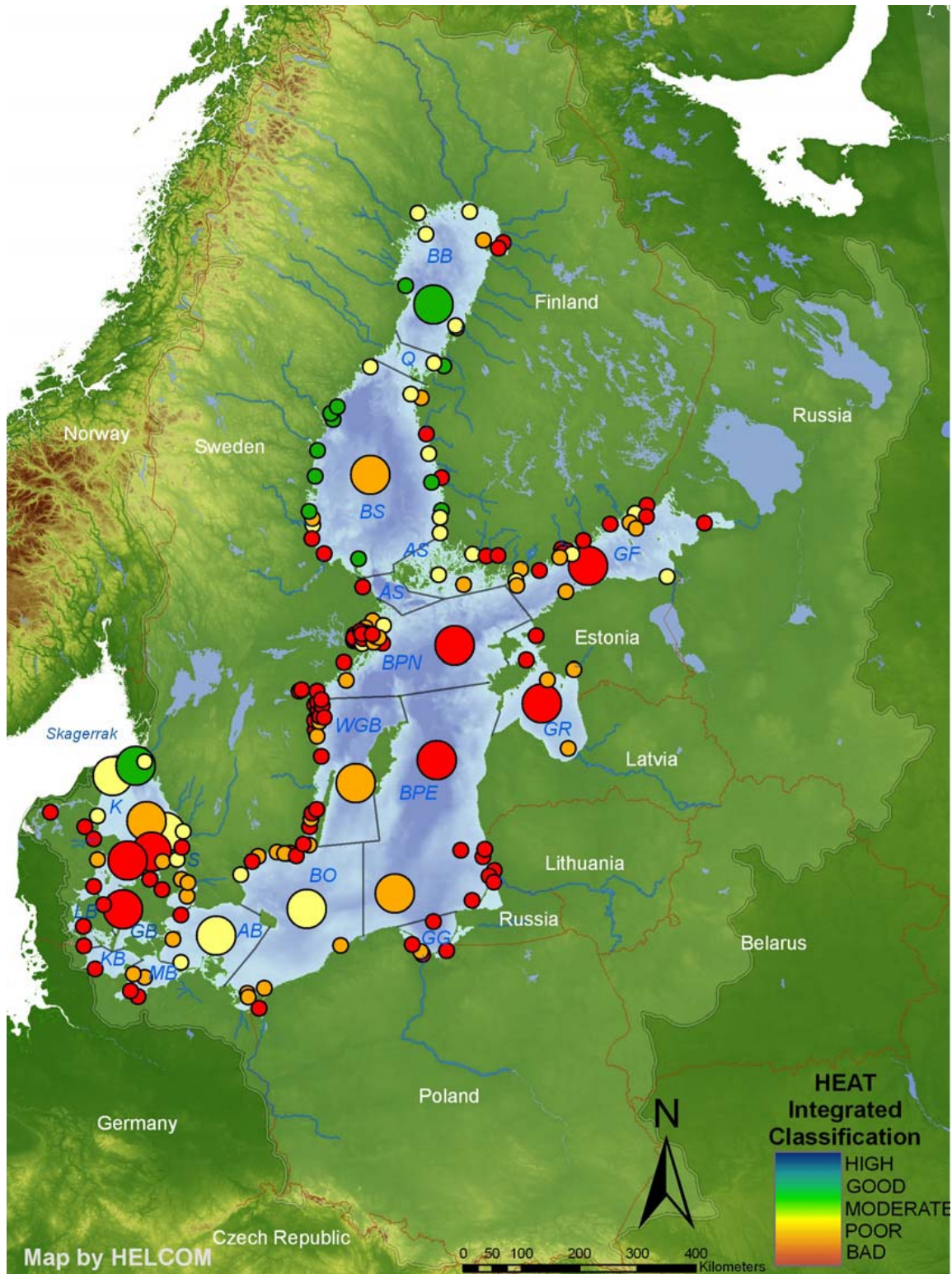


Figure 1: Integrated classification of eutrophication status based on 189 areas. Good status is equivalent to ‘areas not affected by eutrophication’, while moderate, poor and bad are equivalent to ‘areas affected by eutrophication’. Large circles represent open basins, while small circles represent coastal areas or stations. HEAT = HELCOM Eutrophication Assessment Tool. Abbreviations: BB=Bothnian Bay, Q=The Quark, BS=Bothnian Sea, AS=Archipelago Sea, ÅS=Åland Sea, BPN= Northern Baltic Proper, GF=Gulf of Finland, BPE= Baltic Proper, Eastern Gotland Basin, GR=Gulf of Riga, WGB=Western Gotland Basin, GG=Gulf of Gdansk, BO=Bornholm Basin, AB=Arkona Basin, MB=Mecklenburg Bight, KB=Kiel Bight, GB=Great Belt, LB=Little Belt, S=The Sound, K=Kattegat. (From HELCOM 2009).

The lessons learned on alleviating eutrophication problems may be summarized as follows:

1. Although reductions in nutrient loadings have been achieved by most partner countries and the long-term results are good, the short-term development is not as encouraging. Therefore, N and P reductions have not yet resulted in a Baltic Sea unaffected by eutrophication. This holds true particularly for Poland where nutrient influx from industrial farming prevents other measures such as urban sewage treatment to become noticeable to the full extent.
2. Thus, additional reductions are needed. They will be driven by proper implementation of national action plans and HELCOM recommendations, as well as by a number of legally binding international agreements and EU directives, including the Marine Strategy Framework Directive, the Urban Waste Water Treatment Directive, the Nitrates Directive, and the Water Framework Directive (WFD).
3. A consistent classification scheme, the HELCOM Eutrophication Assessment Tool (HEAT) has been proposed by HELCOM which should be regarded as baseline for eutrophication assessments in all countries. It applies for an overall assessment and classification of the eutrophication status on a regional and also local level (Figure 1).
4. Because most of the marine and coastal areas assessed were classified as ‘areas affected by eutrophication’, current actions and measures also need to be reviewed and strengthened immediately to prevent further degradation on a short-term basis and, in the longer term, to meet the objectives of the HELCOM Baltic Sea Action Plan (BSAP), the WFD, and the Marine Strategy Framework Directive.
5. HELCOM should conduct an annual review of progress in the reduction of nutrient loads to the Baltic Sea by its member countries as part of the BSAP implementation process.
6. The results from thematic assessment (Figure 1) represent a progression from a single-indicator based assessment of eutrophication status toward an integrated indicator-based assessment. HEAT distinguishes ‘areas affected by eutrophication’ from ‘areas not affected by eutrophication’. In addition, HEAT produces a provisional ‘accuracy assessment’ of the classification results in order to assess the reliability of the final classification.
7. The HELCOM strategy strives to harmonize the evaluation of the eutrophication status across all borders by applying a transferable methodology (Figure 2).
8. This strategy calls for water quality characteristics that are binding for each member state and its territorial waters. Quality criteria are: high water transparency, no excessive algae blooms, no oxygen depletion areas, abundance of typical marine species.
9. In order to achieve these objectives a framework for a Baltic Sea-wide nutrient management should be adopted. Its primary goal is the reduction of nutrients and pollutants from diffuse as well as from point sources.

With respect to the issue and problem of eutrophication the Baltic Green Belt region and project has been facing a serious challenge: to maintain or reestablish the beauties of the BGB landscape with the original good quality of the Baltic seascape and marine environment. This challenge, however, has a magnitude that goes well beyond the possibilities of Green Belt stakeholders. It rather needs to be on the minds and agendas of all policy-makers between Lübeck and St. Petersburg, and even beyond.

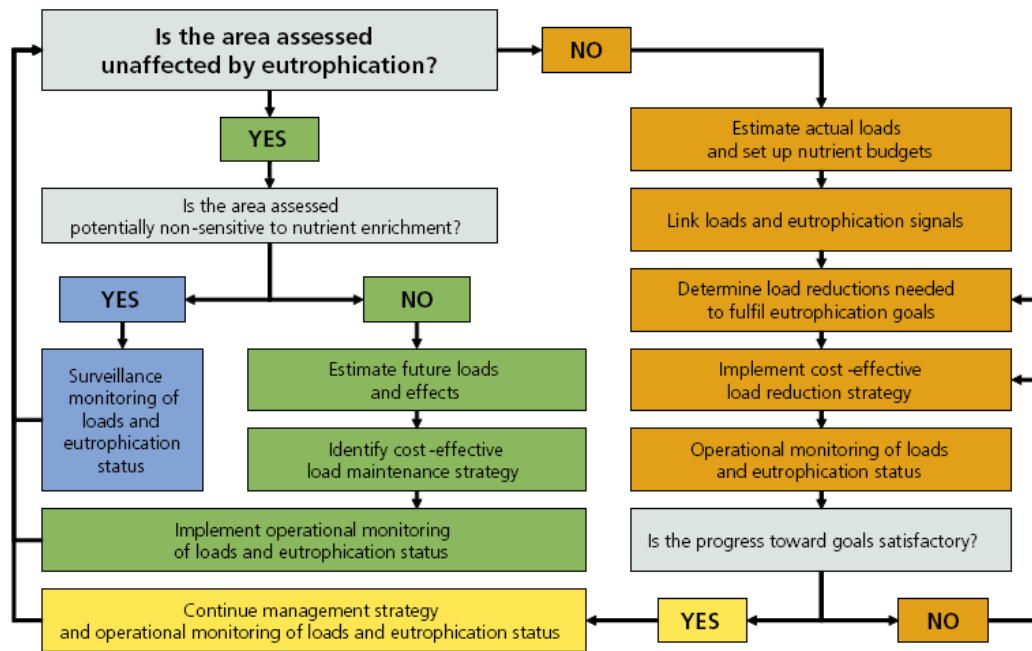


Figure 2: Framework for a Baltic Sea-wide nutrient management strategy (from HELCOM 2009).

4 Nature Conservation

The topic of nature conservation was part of almost all activities within the Baltic Green Belt project in various ways, as it is the driving motivation for the Green Belt initiative as such. In Germany and Lithuania, conservation was the main theme of project activities. Selected aspects of conservation, which offer potential for transnational transfer, are described here in relation to the overarching goals they contribute to.

Following the European Green Belt vision to establish an ecological network, three priority goals for conservation activities at the Green Belt can be distinguished, all of which were pursued in one way or the other during the Baltic Green Belt project:

1. Prevention of habitat loss through immediate threats,
2. Long-term preservation of areas for the major/exclusive purpose of nature conservation,
3. Improvement of the ecological status of individual habitats.

With respect to goal 1 (prevention of habitat loss), the most widespread threats to Baltic Green Belt habitats result from housing, traffic/traffic infrastructure development and recreation/ tourism, some of which are large scale development projects such as harbour extensions or offshore wind parks (Schmiedel, this volume). Within the project, the partner in Mecklenburg-Western Pomerania demonstrated that pro-active participation by NGOs in planning processes related to development projects is crucial to prevent major impacts on nature and should be one contribution of the Green Belt to coastal conservation efforts in the Baltic. For example substantial changes in the construction plans favouring animal wildlife were achieved by a group of NGOs in case of the North Stream pipeline connecting Russia and Germany.

In most of the BGB countries such coastal planning process participation through NGOs currently takes place to a lesser extent than in Germany due to limited manpower, limited special qualification/experience and/or non-existence of public hearings. The project approach to establish a regional office and a position in an NGO with the main task to participate in planning projects can be transferred to all BGB countries, in which planning processes are currently carried out in an open, public manner such as Estonia or Lithuania. A second lesson learned is that fragmentation of

environmental NGOs often hinders effective action, e.g. in Russia and in Poland. In regions, in which several NGOs work for similar goals, the NGOs should try to find a way to unify in order to reduce organisational costs and to maximise contextual capacities. Such a development will be a long-term process within the ongoing diversification and professionalisation of civil society in the former Soviet Republics as well as Poland.

It is important to note here that for Russia we explicitly recommend to not actively push for more NGO involvement in planning processes, as the rule of law in Russia does not meet the minimum requirements for safe civil society action. In fact, involvement into planning processes by environmental NGOs in Russia frequently and even increasingly leads to personal physical threats to the health and lives of the environmentalists, as demonstrated also during the project period in the case of a member of Green World Russia in December 2011. In this matter, the project community calls to the European institutions to exert more political pressure on the Russian government in order to assure for the protection of human rights!

Goal 2 (long-term preservation) is usually - at other parts of the Green Belt pursued through land purchase (e.g. Germany) and lobbying for the establishment of new protected areas (e.g. Balkan Green Belt, Germany, Austria). Neither of these approaches is likely to result in spatially significant long-term preservation effects for the Baltic Green Belt, as land prices are comparatively much higher at the coast than in the hinterland, and capacities for new state protected areas are exhausted due to the designation of many protected areas over the past years as part of NATURA 2000. Therefore, the Baltic Green Belt tried to identify alternative means suitable for the long-term preservation of areas at the coast. Two approaches can be named: the designation as compensation areas for large development projects and public awareness campaigning for individual territories for the improvement or defence of protection statuses.

The long-term preservation of habitats as compensation measures can be a result of qualified NGO participation in planning processes. Of course, it is more desirable to avoid damage to nature altogether than to “compensate” for it elsewhere. This is particularly true, because one ecosystem cannot be replaced by another one in its function. However, if NGOs are well informed about the species and habitat status of the different habitats in their area, trade-offs with industrial players and authorities can lead to the preservation of the pearls of nature, while less valuable areas are “sacrificed” to development. In Germany, areas designated as compensation measures must not be touched for a period of 25 years – this is in fact, long-term preservation.

An active promotion of the values of a specific pristine territory can lead to broad support for improving the territory’s protection status. This was demonstrated by the Lithuanian partners. The campaign demonstrated that only limited financial resources (for making a film, leaflets and a mobile exhibition) are necessary, but continuous dedication of conservation experts and volunteers in film presentations, public exhibitions, field trips and media work. The great success was due to a clear focus of the campaign to one region over a period of three years. This approach can be transferred to all other countries at the Baltic Green Belt, except for Russia (explanation see above).

Goal 3 was part of side activities of the project (e.g. volunteer camps, beach clean-ups etc.), and therefore will not be described in detail here.

A special situation was found for conservation efforts at sea, which was the focus topic of one of the German partners. Two main points are noteworthy:

Marine conservation at its current stage takes place mainly the form of policy making on the EU/international level (e.g. Marine Strategy Framework Directive, Fisheries Policy etc.). The Green Belt initiative can try to influence these policies by qualified contributions. However, such international political lobbying is not among the core target activities of the GB. The Green Belt stakeholders will play a more important role in the future, once the international agreements need to be implemented in the field.

The capacities for conservation management in the marine environment are currently by far too small in all countries at the Baltic Green Belt. There is not enough personnel in the conservation agencies, there is too little expertise on marine management and there are not enough financial resources. The Baltic Green Belt initiative could in the future become a forum for knowledge exchange and involvement of non-governmental stakeholders into marine conservation.

5 Climate change and ICZM

The Baltic Green Belt region is facing a number of challenges as described within this synthesis report. The highly vulnerable coastal zone has to deal with serious problems such as eutrophication of the Baltic Sea, a decreasing biodiversity in marine and coastal environments as well as wastewater discharges originating from sources outside urban wastewater collection systems. Potentials for better on-site wastewater treatment and sustainable agriculture are often unused due to a lack of public awareness on environmental questions and related possible solutions in particular in the eastern BSR countries. Furthermore, after the fall of the Iron Curtain additional social and economic problems came up along this coastal strip, e.g. conflicts in management and use of coastal areas due to booming sea tourism and urbanization in the coastal zone.

The impacts of such ecological, social and economic problems are threatening the whole coastal area. Often opportunities for a coastal economic development without harming the coastal ecosystems are not used due to a lack of awareness concerning these transboundary challenges. In this respect a lack of understanding the principles of ICZM and of coherent ICZM implementation across Member States seem to be responsible for deficiencies in regional sustainable development.

Furthermore, the coastal system of the Baltic Green Belt region is facing additional risks and possible impacts related to climate change in the future. General warming trends, especially during the wintertime, stronger winds, sea level rise and coastal flooding, increasing costs for coastal protection as well as the invasion of foreign species are only some of the future transnational challenges within this region.

With regard to problems related climate change and ICZM some lessons learned from the BGB project may be summarized as follows:

- The understanding and implementation of ICZM across the member states have to be further improved, even though the Baltic Green Belt project managed to raise consideration of consequences of climate change and pointed out the need of ICZM plans or comparable national and regional planning schemes.
- The administrative personnel at regional and national level who often is trained insufficiently has to be further educated in this regard in order to ensure the adaptation and implementation of the HELCOM and VASAB recommendations and EU regulations on ICZM and marine environment. Furthermore, strengthening the competences of coastal stakeholders in ICZM is essential to assist with a sustainable development of local communities across political and administrative borders.
- The awareness concerning the issues of climate change is seen quite inhomogeneous. Several partners expressed that the issue did not affect their everyday work noticeably. Few partners (Lauku Celotajs, Zvejone) expressed interest in educational material for further distribution. Slitere National Park expressed interest in specific local studies concerning the impacts to be expected from climate change to the coastal area of Latvia (especially the national park). The general expectation was that the area of the Baltic States will profit more than suffer from climate change and related effects.
- Several BGB-stakeholders from different backgrounds have joined to initiate ICZM processes at the local level, exchanged their experience between different regions of different countries (e.g. on Vormsi island, in Slitere National Park, and the Lithuanian Seaside Regional Park) and hence contributed to an ICZM process even on the transnational level. Therefore, the cooperation

between NGOs, GOs, science and economy on transnational level has to be strengthened in the future.

The evaluated and improved coastal zone planning and management tools described in this report by Sterzel & Maack, Järv et al., Sachtleber & Ratkeviča and Suzdalev et al. are mainly focussing on national activities but also considering transboundary issues. Supported by several country reports with policy recommendations for a sustainable development of the coastal zone along the Baltic Green Belt these tools are a profound basis not only for politicians and decision-makers involved in project related activities but also for NGOs and private stakeholders. The experiences and best practices on transboundary cooperation for nature conservation and sustainable coastal development (e.g. tourism) within the Baltic Green Belt project shall serve as impulse for similar future activities.

Especially the coastal regions of Lithuania and Russia are facing a wide range of challenges regarding transboundary cooperation with regard to climate change and ICZM, in particular with respect to coastal protection as described in Suzdalev et al.. The studies during the Baltic Green Belt project show that cooperation at the political and at the personal level is among the best solutions to cope with the challenges in this area. The Curonian Area is a unique and diverse environmental, social and economic area. The future changes affecting this area are considerable and potentially harmful. Therefore, the Curonian Region will be able to keep its special status and attractiveness in the future only if wise, effective approaches to solve the pending problems are chosen. Indeed this holds true for most other border regions along the Baltic Green Belt as well.

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