

NEASPEC WORKING PAPER

Transboundary Cooperation for Nature Conservation

World Trends and Ways Forward in Northeast Asia

February 2015

This working paper was prepared by Alexandre Edwardes, intern for NEASPEC, under the supervision of Sangmin Nam, Deputy Head, East and North-East Asia Office of the ESCAP. The designations employed and the presentation of the material in this publication do not imply the expression of any opinion whatsoever on the part of the United Nations concerning the legal status of any country, territory, city or area, or of its authorities, or concerning the delimitation of its frontiers or boundaries. This paper follows United Nations practice in references to countries. Where there are space constraints, some country names have been abbreviated.

Transboundary Cooperation for Nature Conservation

World Trends and Ways Forward in Northeast Asia (May 2015)

Table of Contents

1. Introduction.....	3
2. Transboundary Conservation Initiatives Worldwide.....	4
a. Brief history and current trends in transboundary conservation.....	4
b. Definitions and designations of transboundary conservation initiatives.....	5
• Transboundary Protected Areas.....	5
• Parks for Peace	6
• Transboundary Conservation and Development Areas.....	6
• Transboundary Migration Corridors.....	6
• Other definitions and designations	6
c. Objectives, Benefits and constraints of TBC.....	7
• Ecological objectives and benefits.....	7
• Political objectives and benefits	8
• Other benefits.....	9
• Difficulties and constraints to transboundary cooperation	9
d. Levels of Transboundary cooperation.....	10
• High level initiatives.....	11
• Local level initiatives.....	11
• Third-party initiatives.....	12
• IUCN Levels of cooperation	12
e. Case study of existing transboundary nature conservation: the Prespa Lakes (Albania, Macedonia, Greece).....	13
Overview	14
Key developments of transboundary cooperation in the Prespa Lake.....	14
Projects and Activities in the Prespa Lakes.....	15

Benefits and challenges of transboundary cooperation in the Prespa Lakes.....	16
3. Nature Conservation Mechanisms in Northeast Asia: a Case Study of the Lower Tumen River Basin.....	17
a. Overview of the Lower Tumen River Basin (LTRB)	17
b. Overview of NEASPEC’s flagship species	18
• The Amur Tiger (<i>Panthera tigris ssp. Altaica</i>)	18
• The Amur Leopard (<i>Panthera pardus orientalis</i>)	20
• Black-faced Spoonbill (<i>Platalea minor</i>).....	21
• Hooded Crane (<i>Grus monacha</i>)	22
• White-naped Crane (<i>Antigone vipio</i>).....	22
c. Existing protected areas in the LTRB.....	23
d. Current transboundary cooperation mechanisms in the LTRB	26
e. Observations, trends and needs for transboundary conservation in the LTRB.....	29
4. Transboundary Conservation of Wetlands: Towards Greater Environmental Diplomacy in Northeast Asia?.....	30
a. Value of wetlands for biodiversity conservation	30
b. Two experiences of transboundary wetland conservation: the Wadden Sea area and the Saloum-Niumi Complex.....	32
• The Wadden Sea (Germany, Netherlands and Denmark)	32
c. The case for ecotourism.....	43
Definitions and objectives of ecotourism	44
Transboundary mechanisms to promote ecotourism: examples from the Sava River Basin.....	45
Proposed activities for the development of transboundary ecotourism	45
d. Recommendations.....	48
Conclusions	50
Bibliography	52

1. Introduction

The borders that delineate our sovereign states are part of the foundations of our modern world. They evolved through historical processes shaped by conflicts, revolutions, wars and peace. These borders can range from a virtual division of space with no physical presence on the ground, to very clear separations marked by fences, walls and more. This very human world is in contradiction with the inherent characteristics of the natural world that does not adapt to these human borders and cannot be constrained by administrative and political divisions. Hence, some ecosystems extend over the borders of two or more states, migratory species move freely across them and the water cycles disregard them too.

And yet despite this situation, transboundary conservation areas are still relatively rare and only compose a minority of the otherwise fast growing number of natural protected areas throughout the world. As we will see in this report, transboundary cooperation is a challenging and complex process that requires a lot of effort and trust from all stakeholders involved. However, the benefits of cooperation are significant and range from improving biodiversity and ecosystem conservation, creating opportunities for an ease in diplomatic relations between states, providing sustainable development for local communities through activities such as ecotourism, or creating cultural exchanges between local communities.

The central aim of this report is to provide an overview on the situation of transboundary nature conservation on the international scale in order to highlight its benefits, challenges, mechanisms and processes in the hope of bringing relevant information and examples to stakeholders wanting to engage in transboundary conservation. The more specific aim is to provide an overview of transboundary cooperation activities in East and Northeast Asia and the potential for their development by looking at transboundary wetland conservation worldwide and in the Lower Tumen River Basin.

By providing general information and case studies of transboundary cooperation, this report hopes to put forward ideas of frameworks and mechanisms for a variety of stakeholders to promote and engage in transboundary cooperation for nature conservation. As such, this report is divided into three different parts: the first section will look at transboundary conservation trends worldwide, its various definitions, objectives, benefits, challenges and levels of cooperation. The second section will focus on transboundary cooperation taking place in East and Northeast Asia, and more specifically in the Lower Tumen River Basin. Here we will look at the work of NEASPEC in the subregion and giving an update on their most recent projects and activities and thinking of ways to move forward. The third section will look at the value of transboundary wetland conservation for biodiversity protection and environmental diplomacy. Here we will analyze some case studies from abroad and the value of ecotourism for promoting conservation and enhancing local livelihoods.

2. Transboundary Conservation Initiatives Worldwide

The development of transboundary conservation initiatives came as a response to the observation that nature has no regard for our human created national borders. As all human creations, TBCs exist in an abundance of forms, have a variety of definitions, objectives and even names. This section will attempt to provide an overview of this complex landscape by looking at the history and current trends of TBCs, their various definitions and categories and finally their objectives and benefits.

a. Brief history and current trends in transboundary conservation

The brief history of transboundary cooperation for nature conservation can be dated back to the early 20th century when, in 1924, Poland and Czechoslovakia signed the Krakow Protocol that “pioneered the concept of international cooperation in establishing border parks”.¹ At this stage in time, these parks had no other specific goal other than the preservation of natural landscapes, which happened to cross over an international border. If this project did serve to mitigate some left over border conflicts from the First World War, it wasn’t until the creation of the Glacier-Waterton International Peace Park on the Canadian-US border in 1932 that a declared transboundary park focused on nature conservation and the promotion of peace. This park was to be a living testimony to the bonds of peace and friendship built between the two nations. It was the “Convention Relative to the Preservation of Fauna and Flora in their Natural State”, signed by the European powers in London in 1933, which took a more explicit stance for cross border consultation and cooperation when establishing protected areas that are contiguous and adjacent to those of other nation states.² More recently, these parks have come to be generally known as “Transboundary Protected Areas” (TBPA) or “Parks for Peace” and are designed to promote goodwill, peace and cooperation amongst sovereign nations through the action of conserving nature.

Under the current era of globalization the number of TBPAs has increased from only 59 in 1988 to 169 in 2001. The most recent revision of the list on transboundary conservation areas was based on the review of WDPA maps by the United Nations Environmental Program, World Conservation Monitoring Centre in 2007. The result took into account both Transboundary Protected Areas and Internationally Adjoining Protected Areas and based on the IUCN’s definition of a protected area. The result was 227 transboundary complexes (representing 3 043 individual protected areas or internationally designated sites).³ If these numbers are good indicators of the global trends in the evolution of transboundary protected areas, the latest database does present some challenges in terms of definitions and what area is included or excluded from the list. For example, it does not distinguish in between the TBPAs and IAPAs, nor does it include several protected areas found

¹ Michael Schoon, “A brief History of Transboundary Protected Areas”, Global Transboundary Conservation Network website, accessed on the 26th of March 2015, <http://www.tbpa.net/page.php?ndx=17>

² *Ibid.*

³ *Ibid.*

within transboundary complexes.⁴ Some more recent initiatives such as the Protected Planet website managed by the WCMC, does provide another opportunity to collect in-depth information concerning transboundary conservation areas on a global basis.

In any case, the general conclusion that can be taken from these numbers is that transboundary conservation is an appealing process worldwide and that there is an interest to develop cooperation for nature conservation across borders in order to foster the ecological, political, social and economic benefits that cooperation can create. But before assessing these potential objectives and benefits of cooperation, an overview of the various definitions and categories will be explained in the following section.

b. Definitions and designations of transboundary conservation initiatives

In its most simple form, transboundary conservation implies working across boundaries to achieve conservation objectives.⁵ Still today there is a vast array of terms to denote this process such as “international peace parks”, “transfrontier protected areas”, “peace parks” and many others, resulting in confusion as to their meaning and objectives. This section will look at the key categories put forward by the IUCN as well as those of the EUROPARC Foundation and UNESCO.

It wasn't until the early years of the 21st century that there was any substantial effort to harmonize and standardize the definitions and terminologies used for transboundary conservation areas. The International Union for the Conservation of Nature (IUCN) has worked throughout the years to try and bring clarity to this otherwise rather grey area of nature conservation. It was in 2006, with the publication of the IUCN's “Managing Protected Areas: A Global Guide” that comprehensive definitions and categories were presented and offered to act as the basis for future cooperation efforts. As such, four main categories of transboundary conservation practice were put forwards: Transboundary Protected Areas, Parks for Peace, Transboundary Conservation and Protected Areas and Transboundary Migratory Corridors. We will look into each of these categories in turn.

- **Transboundary Protected Areas**

Defined as “*An area of land and/or sea that straddles one or more borders between states, subnational units such as provinces and regions, autonomous areas and/or areas beyond the limit of national sovereignty or jurisdiction, whose constituent parts are especially dedicated to the protection and maintenance of biological diversity, and of natural and associated cultural resources, and managed cooperatively through legal or other effective means.*”⁶

⁴ B. Vasilijevic and M. McKinney, “Initiating effective transboundary conservation, a practitioner's guideline based on the experience from the Dinaric Arc”, published by the International Union for the Conservation of Nature and Natural Resources, 2012, p14.

⁵ *Ibid.*

⁶ International Union for the Conservation of Nature and Natural Resources website, World Commission of Protected Areas, Transboundary Conservation Specialist Group, accessed on the 25th of March 2015, <http://www.tbpa.net/page.php?ndx=83>

Some examples include: The Fertő-Neusiedler See in Hungary and Austria, La Amistad International Park in Costa Rica and Panama, and the Kgaladi Transfrontier Park in Botswana and South Africa.

- **Parks for Peace**

Defined as “*transboundary protected areas that are formally dedicated to the protection and maintenance of biological diversity and of natural and associated cultural resources, and to the promotion of peace and cooperation.*”⁷

Some examples include: Waterton-Glacier International Peace Park in USA and Canada and the Cordillera del Cóndor in Ecuador and Peru.

- **Transboundary Conservation and Development Areas**

Defined as “*Areas of land and/or sea that straddle one or more borders between states, subnational units such as province and regions, autonomous areas and/or areas beyond the limit of national sovereignty or jurisdiction, whose constituent parts form a matrix that contributes to the protection and maintenance of biological diversity and of natural and associated cultural resources, as well as the promotion of social and economic development and which are managed cooperatively through legal or other effective means.*”⁸

Some examples include: the Maloti Drakensberg Transfrontier Conservation and Development Area in Lesotho and South Africa and the Pfälzerwald – Vosges du Nord in France and Germany.

- **Transboundary Migration Corridors**

Defined as “*areas of land and/or sea in two or more countries, which are not necessarily contiguous, but are required to sustain a biological migratory pathway and where cooperative management has been secured through legal or other effective means*”.⁹

Some examples include: the European Green Belt, the Meso-American Biological Corridor and the Sredneussuriisky Wildlife Refuge in between Russia and China.

- **Other definitions and designations**

These definitions are those put forward by the IUCN and WCPA, however it is important to note that there are other definitions used that were developed and are still used by other prominent organizations in the field of conservation. For example the EUROPARC Federation, one of the leading organizations promoting transboundary conservation in Europe, defined a Transboundary Protected Area as “an area composed of two or more protected areas located within the territories of two or more Parties, adjacent to the state border, each remaining under the jurisdiction of

⁷ International Union for the Conservation of Nature and Natural Resources website, World Commission of Protected Areas, Transboundary Conservation Specialist Group, accessed on the 25th of March 2015, <http://www.tbpa.net/page.php?ndx=83>

⁸ *Ibid.*

⁹ *Ibid.*

respective Party”.¹⁰ Another example can be the definition put forward by the Peace Parks Foundation of South Africa where a Transfrontier Conservation Area is “part of a large ecological region that straddles the national borders of states, including protected areas and multiple resource use areas”.¹¹

It is important to note that in addition to IUCN’s four categories of TBC initiatives, there are three other designations that exist, which can be superimposed on any of the four types above:

- The first is UNESCO’s Transboundary World Heritage Site, where protected areas on either side of an international boundary fall collectively into the designation of the area as a World Heritage site.¹²
- The second is also under UNESCO patronage and known as Transboundary Biosphere Reserves under the Man and the Biosphere program.
- The third falls under the Ramsar convention, where Contracting Parties agree to establish a Ramsar Site on their territory as part of a bigger Transboundary Ramsar Site. The authorities on both sides of the border agree to collaborate in the management of the Transboundary site and to notify the Secretariat of their intents.

c. Objectives, Benefits and constraints of TBC

As we have just seen there is a considerable amount of ways to define and categorize transboundary nature conservation initiatives. However, the same cannot be said of the objectives and potential benefits of TBCs who generally tend towards the enhancement of biodiversity conservation and greater international cooperation and integration. In order to best understand the relative success of TBCs worldwide and to reinforce the need of such cooperation in Northeast Asia, this section will look at the key ecological and political benefits of TBCs (the economic benefits will be assessed later in this paper).

- **Ecological objectives and benefits**

The core objectives of TBCs are the protection and maintenance of biological diversity, which can be achieved through improved spatial scales and connectivity as well as through better cross-border management cooperation.

Firstly, the creation of a TBC area can connect to initially divided natural habitats and hence increase the core habitat. Indeed, habitat fragmentation is a leading cause of biodiversity destruction and measures to create larger and unified protected areas can help conserve a whole ecosystem and its various inhabitants. The benefits for biodiversity arise from a more varied and

¹⁰ B. Vasiljevic and M. McKinney, “Initiating effective transboundary conservation, a practitioner’s guideline based on the experience from the Dinaric Arc”, published by the International Union for the Conservation of Nature and Natural Resources, 2012, p9.

¹¹ Ibid.

¹² Trevor Sandwith and Charles Besançon, Trade-Offs Among Multiple Goals for Transboundary Conservation, published by the Wilson Center, August 2005, http://wilsoncenter.org/sites/default/files/Besancon_Sandwith.pdf

undisturbed habitat, native vegetation, a larger home range for certain species who need expansive territories or have migratory requirements. More space also means minimizing the chances of overpopulation, genetic drift, human and animal conflict and species driven habitat destruction.

Secondly, conservation and management strategies that are based on natural delineations rather than political ones are more likely to manage ecosystems in a holistic and conservation focused manner. Undertaking joint activities can also enable to pool together limited resources and to maximize efficiency and productivity by avoiding replication for example. Such resources can include personnel, local knowledge, field techniques, funding, material, infrastructure and equipment. These increased capacities can help in the planning and implementation of conservation strategies, leading to the improved management of ecosystems and thus of its biodiversity. Other activities such as research to increase the understanding and knowledge of ecosystems and species can help towards their management, breeding, reintroduction programs and the sustainable exploitation of natural resources. Increased cooperation can also improve the control of illegal human activities such as poaching and smuggling, invasive species, disease control and wildfires. Finally, in a time when climate change mitigation and adaptation are so important, it is vital to expand the protection of large areas that conserve carbon rich habitats, which ultimately help towards increasing the resilience to adjust to climate change.¹³

- **Political objectives and benefits**

The creation of a TBC is a highly political initiative and requires basic to very complex forms of cooperation, administrative, legal and technical integration in between two or more political entities. By creating a TBC two countries can foster better relations and reinforce confidence and trust through the joint management of a TBC. By working together, officials from adjacent countries learn to understand, trust and empathize with their counterparts, hence reducing the chances for misunderstandings and enabling further cooperation on areas that can be more politically sensitive. Indeed, there are many levels to transboundary nature conservation, the most complex try to harmonize certain administrative and legal procedures with regards to nature conservation and can help build greater stability and move towards economic cooperation and social development.

More specifically, some areas can be called “Parks for Peace” which, as the name suggests, have a more direct commitment to the promotion of peace and cooperation. Through the establishment of a Peace Park the objectives are to build trust, understanding, reconciliation and cooperation between and among countries, communities, agencies and stakeholders; to prevent or resolve tensions, including over access to natural resources; promoting the resolution of armed conflict, sharing biodiversity and cultural resource management skills and experience, including cooperative research and information management, enhancing the benefits of conservation and

¹³ B. Vasilijevic and M. McKinney, “Initiating effective transboundary conservation, a practitioner’s guideline based on the experience from the Dinaric Arc”, published by the International Union for the Conservation of Nature and Natural Resources, 2012, p 17.

promoting benefit sharing across boundaries and stakeholder.¹⁴ The overall idea being that by cooperating over less politically contentious issues such as nature conservation, Peace Parks can increase trust and build up friendship, thus reducing tensions in between two or more states.

- **Other benefits**

Other benefits from transboundary cooperation can include the pooling of scientific resources such as knowledge, experience and data. This can increase understanding of an ecological unit and thus benefit its effective conservation. Another benefit can be the joint management of resources which can avoid conflicts of interest and a duplication of efforts. It can also help raise awareness of issues by involving high-level officials who can raise their prominence and facilitate their resolution. Transboundary sites usually attract higher levels of investment and have a greater fundraising capacity and potential as trust and effective cooperation between stakeholders gives greater confidence in the longevity of activities and projects. A transboundary protected area can attract higher levels of visitors and increase rates of tourism in the area because of its natural value and state of conservation. This is a strong economic incentive for states to cooperate over transboundary nature conservation, which can play a significant economic and social role in the area, whilst providing more funds to improve conservation and protection. Finally, extending cooperation across borders can create some cultural and social benefits by enhancing and promoting exchanges between communities. This can create greater trust and friendships among neighboring communities, create cultural exchanges, education and other activities that downplay the risks of conflict.

- **Difficulties and constraints to transboundary cooperation¹⁵**

There are many constraints to the development of transboundary nature conservation, as attested by the very low number of transboundary sites throughout the world. If we must not take these constraints as insurmountable obstacles, their impacts should not be downplayed and need to be addressed by all stakeholders participating in the elaboration of transboundary cooperation project.

Political tensions and mistrust

Tensions such as these can reside at the local level and rise all the way to the national and governmental level. In many cases, historical tensions over issues such as border disputes, wars, misunderstandings can be significant barriers to cooperation as the lack of trust and willingness to engage in joint activities are close to zero.

Economic, legal and administrative disparities

Disparities such as these are very common in the case of neighboring countries with different historical backgrounds, making the implementation of joint measures difficult. In cases such as

¹⁴ Trevor Sandwith, Clare Shine et al., *Transboundary Protected Areas for Peace and Cooperation*, published by the World Commission on Protected Areas and the IUCN, Best Practice Protected Areas Guidelines Series n°7, 2001, pp. 4-5.

¹⁵ This section is based on the 5th European Regional Meeting on the Implementation and Effectiveness of the Ramsar Convention, Workshop D, "Shared catchments and wetlands – increasing transboundary cooperation" , 4-8 December 2004, pp 10-11.

these, efforts must be focused on harmonizing, where possible, the necessary tools in order to facilitate cooperation.

Different concepts of nature conservation

Not all countries share the same understanding of nature conservation, nor do they necessarily attach it with the same amount of importance in terms of national priorities. Thus the prevalence of the issue and ways to deal with it can vary greatly from country to country.

Language and cultural differences

The ability to communicate directly at all levels of society is an essential prerequisite for transboundary cooperation. However, communication is often hampered by adjacent countries not sharing a common language. If we look at one of this report's case studies, Prespa Park which crosses over the territory of three states (Albania, Macedonia and Greece), each and every document has to be translated into four languages, whilst every meeting requires simultaneous translation. This can obviously cause delays, high costs and in certain situations, can lead to misunderstandings. Finally, using English as a "lingua franca" is not always acceptable or viable to resolve this issue.

Frontiers

By nature, transboundary nature conservation will always be confronted with national frontiers. The aim of developing transboundary conservation is mainly to go beyond these human boundaries and manage a natural ecosystem as a unit. However, in some cases crossing a frontier is a difficult, costly and time consuming process that hampers contact in between staff of adjacent parks. In Europe, cases of "hardening" frontiers, to control terrorism, smuggling and other forms of crime, have disrupted cooperation patterns. Moreover, the physical infrastructure that is required to monitor and control national borders can be a serious issue for migrating species and biodiversity at large, by fragmenting their habitat.

Lack of funds

This is possibly one of the most significant barriers when stakeholders want to initiate cooperation or have already started forms of joint activities. As we will see in some of the case studies in this report, transboundary cooperation requires funds, especially in its early stages in order to provide for the organization of meetings, ensuring secretarial services, covering costs of modest activities before the more major projects are launched. A sustainable and predictable flow of funds is also required to enable the longevity of cooperation and its ensuing projects and activities. In some cases, the lack of funds has significantly slowed down the development of cooperation, if not stopped it all together. Finding strategies to attract funds from donors is a significant challenge for projects that go beyond local exchanges and joint activities.

d. Levels of Transboundary cooperation

The elaboration of transboundary conservation initiatives is a politically complex undertaking and can take many forms, involve various stakeholders and imply different levels of implication from

national authorities. If there is no “one size fits all” model to follow, this section will put forward the different levels of involvement these initiatives can take in order to provide some form of benchmark to give the reader an idea of the level of cooperation taking place in Northeast Asia and the rest of the world.

- **High level initiatives**

In many cases TBCs are implemented at a high political level involving agency heads, ministries and in some cases Heads of State. The proposal to create a TBC is sent to the relevant authorities the other side of the border and can result in a formal agreement signed at high level in each country. These agreements can encompass a few key features such as a unifying theme, mutual assistance in emergencies, an oversight body and a suggested institutional framework that can evolve over time.¹⁶ One famous example can be the general Memorandum of Understanding between the United States and Canada, where they agreed to cooperate in the management, protection, conservation, research and presentation of national parks and national historic sites. These agreements do not have to be done exclusively on a bilateral basis: they can also be signed and negotiated with the help of an international organization such as UNESCO (Man and Biosphere Program or Transboundary World Heritage site) or Ramsar. These types of agreement can lead to what is referred to as “co-management” where “government agencies, local communities and resource users, NGOs and other stakeholders negotiate, as appropriate to each context, the authority and responsibility for the management of a specific area or set of resources.”¹⁷ As such, co-management implies consultation, collaboration and coordination of planning graded between lowest and highest levels.

- **Local level initiatives**

On the other hand, local level initiatives require much less coordination at such high political levels. Indeed, it may take place in between two individual staff members who cooperate over specific tasks such as fire prevention and suppression. As their collaboration expands to other tasks it may also spread to other members of staff in the park and make its way up to the directors. In such situations, efficient transboundary conservation can take place with little formal agreement in between two countries. If this can be ideal in certain specific situations, it is better for them to have the policy support from a higher level. As such cooperation between two park directors can take place in the context of an interagency agreement for example.¹⁸

¹⁶ Trevor Sandwith, Clare Shine et al., *Transboundary Protected Areas for Peace and Cooperation*, published by the World Commission on Protected Areas and the IUCN, Best Practice Protected Areas Guidelines Series n°7, 2001, pp. 4-5.

¹⁷ B. Vasilijevic and M. McKinney, “Initiating effective transboundary conservation, a practitioner’s guideline based on the experience from the Dinaric Arc”, published by the International Union for the Conservation of Nature and Natural Resources, 2012, p7.

¹⁸ B. Vasilijevic and M. McKinney, “Initiating effective transboundary conservation, a practitioner’s guideline based on the experience from the Dinaric Arc”, published by the International Union for the Conservation of Nature and Natural Resources, 2012, p11.

- **Third-party initiatives**

A third alternative put forward by the IUCN is that cooperation takes place through a third party such as an international organization or a non-governmental organization (NGO) that effectively encourages and supports joint transboundary management. To give an example, the Waterton-Glacier International Peace Park established in between the United States and Canada in 1932, was initiated by Rotary International, an NGO. Other forms of encouragement can come as funding and grants, loans and technical assistance that support transboundary cooperation and give an extra impetus to national governments to enter a more formal agreement towards the establishment of TBC.¹⁹ The support given by UNESCO, Ramsar and NEASPEC are good examples of the role that third parties can play in encouraging states to cooperate in transboundary nature conservation.

- **IUCN Levels of cooperation**

The table below summarizes the key different levels of cooperation between internationally adjoining protected areas going from no cooperation to full cooperation. This information can serve as a benchmark to assess the current level of cooperation taking place in Northeast Asia and help determine future potential steps in order to move towards level 5.

Table 1: IUCN levels of cooperation for transboundary nature conservation.

Levels of Cooperation	Characteristics
Level 0: No cooperation	<ul style="list-style-type: none"> • Staff from two protected areas (PA) never communicate or meet • There is no sharing of information or cooperation on any specific issues
Level 1: Communication	<ul style="list-style-type: none"> • There is some two-way communication between the PA's • Meetings/communication takes place at least once a year • Information is sometimes shared • Notification of actions which may affect the other PA will sometimes take place
Level 2: Consultation	<ul style="list-style-type: none"> • Communication is more frequent (at least three times a year) • Cooperation occurs on at least two different activities • The two sides usually share information • Notification of actions affecting the adjoining PA usually occurs
Level 3: Collaboration	<ul style="list-style-type: none"> • Communication is frequent (at least every two months)

¹⁹ B. Vasilijevic and M. McKinney, "Initiating effective transboundary conservation, a practitioner's guideline based on the experience from the Dinaric Arc", published by the International Union for the Conservation of Nature and Natural Resources, 2012, p12.

	<ul style="list-style-type: none"> • Meetings take place at least three times a year • The two PA's actively cooperate on at least four activities, sometimes coordinating their planning and consulting with the other PA before taking action
Level 4: Coordination of planning	<ul style="list-style-type: none"> • The two PA's communicate often and coordinate actions in some areas, especially planning • The two PA's work together on at least five activities, holding regular meetings and notifying each other in case of emergency • PA's usually coordinate their planning, often treating whole areas as one single ecological unit
Level 5: Full cooperation	<ul style="list-style-type: none"> • Planning for the two PA's is fully integrated and if appropriate, ecosystem based, with implied joint decision making and common goals • Joint planning occurs and, if the two share an ecosystem, this planning usually treats the two PA's as a whole • Joint management sometimes occurs, with cooperation on at least six activities • A joint committee exists for advising on transboundary cooperation

Source: Sandwith et al. 2001 (Sandwith, T., Shine, C., Hamilton, L. and Sheppard, D. (2001). Transboundary Protected Areas for Peace and Co-operation. IUCN, Gland, Switzerland and Cambridge, UK).

e. Case study of existing transboundary nature conservation: the Prespa Lakes (Albania, Macedonia, Greece)

The Prespa Lakes is a region composed of two lakes (Great and Small Prespa Lakes) and lies within the sovereign territories of three states: Albania, Macedonia and Greece. These three countries present a very different economic status, do not share a common language, and have varying levels of environmental awareness and policies. However, since the year 2000, these three countries have shown a bold initiative to integrate transboundary ecosystem management and protection within their environmental policies, despite an often tense political and diplomatic background. The Prespa Lakes is a perfect example of how transboundary nature conservation can act as an effective diplomatic tool and contribute to greater conservation and protection of an ecosystem.

Overview

The Prespa Lake is composed of two lakes, the Greater and the Smaller Preska Lake that span three countries: Albania, Macedonia and Greece. The total area of the Prespa basin is approximately 1600 square kilometers, of which 62% lies in Macedonia, 17% in Albania and 21% in Greece.²⁰ The lakes present a wide diversity of geomorphologic forms, distinctive hydrology and unique biodiversity that give them huge ecological value. It has a unique assemblage of species and habitats which reflects the adaptation of flora and fauna to the different conditions found on each mountain surrounding the lakes. The almost total isolation of the aquatic fauna and flora over the past 12 million years and relative isolation of high altitude fauna and flora make the Prespa Lake a truly unique ecosystem. It is important to note that approximately 29 343 people live in the Prespa Lakes basin, with 57% of this population located in Macedonia, 36% in Albania and the remaining 7% in Greece. Their main source of income comes from agriculture for 75% of the population in the basin.²¹

On the Albanian side, the Prespa Lake is designated as a 13500 ha Prespa National Park (designated in 1999). There are three protected areas within Macedonia: the Galičica National Park (designated in 1958), the Pelister National Park (1948) and the Ezerani Strict Nature Reserve (1996). On the Greek side, the Prespa National Forest was designated in 1974, followed in 2009 by the designation of the Prespa National Park to protect the majority of the area of Great and Small Prespa Lakes, focusing on the terrestrial part. In addition to this, the overall area of the Prespa Lakes is a Wetland of International Importance under the Ramsar Convention, but not a Transboundary Ramsar Site. Despite this situation, the three states have opened the path for trilateral cooperation and the development of agreements to promote cooperation and conservation of this outstanding ecosystem.

Key developments of transboundary cooperation in the Prespa Lake

If we compare the cooperation taking place in the Prespa Lake basin to the IUCN levels of cooperation, we can see that cooperation is towards level 4 and 5 and takes place at the highest political level in each state. The decision to initiate transboundary cooperation was taken on the 2 February 2000 by the Prime Ministers of the three countries, who signed a Joint Declaration (the Prespa Agreement), creating the Prespa Park and formalizing their intentions to cooperation over conservation. One of the key resolution of the declaration promised “enhanced cooperation among competent authorities in the three littoral countries with regard to environmental matters. In this context, joint actions would be considered in order to maintain and protect the unique ecological values of the Prespa Park...”²²

In 2002, the three Ministers responsible for the environment established the Prespa Park coordination Committee (PPCC) as a non-legally binding entity whose members are appointed by

²⁰ Maja Vasilijevic and Tomase Pezold, Crossing Border for Nature, European Examples of Transboundary Conservation, published by the IUCN Office for South Eastern Europe, 2011, p18

²¹ *Ibid* p19.

²² *Ibid*.

the three ministers. Membership of the PPCC is composed of one representative from each of the following institutions from each of the three countries: Ministry responsible for the environment, NGO, local government and a permanent MedWet observer. However, its non-binding nature means that the governments have no legal commitment to support the PPCC, making its decisions closer to advice rather than legally binding commitments. A PPCC secretariat was formed by three NGOs, one from each country and is hosted by the Society for the Protection of the Prespa (funded by WWF Greece).

Finally in 2010, after ten years of trilateral cooperation, Ministers from each country signed the Tripartite Agreement for the Protection and Sustainable Development of the Prespa Park Area. On this day the “International Agreement for the Protection and Sustainable Development of the Prespa Park Region” was signed by the Environment Ministers of the three countries and the EU, paving the way for a new era of transboundary cooperation in the Prespa Park. For indeed, under this agreement, the states are now legally bound to establish permanent structures for collaboration in order to develop a joint strategy and implement measures to conserve the environment and protect human activities within the park. Despite the diplomatic tensions in between Greece and Macedonia that have frozen most relations in between the two countries for the past fifteen years, this agreement, free of politics, brings the legal commitment of the countries to protect the Prespa Lakes and reinforces their willingness to cooperate over nature conservation issues.

Projects and Activities in the Prespa Lakes²³

<i>Area of Activity</i>	<i>Detail of activities</i>
Development of a transboundary monitoring system	This activity was jointly undertaken by UNDP-GEF Transboundary Prespa Project, the Society of Protection of Prespa and Tour de Vallat. The monitoring system encompasses monitoring of land use, water quality and quantity, forests and other terrestrial habitats, birds, fish and fisheries, aquatic habitats and vegetation. The building of this consensus-based transboundary monitoring system is guided by the trilateral Monitoring and Conservation Working Group (MCWG), coordinated by the Transboundary Prespa Project. Tour du Vallat provides the technical assistance required for the development of the system.
Transboundary water management	In 2008, the three countries completed an assessment of the state of play of water

²³ B. Vasilijevic and M. McKinney, “Initiating effective transboundary conservation, a practitioner’s guideline based on the experience from the Dinaric Arc”, published by the International Union for the Conservation of Nature and Natural Resources, 2012, pp. 20-21.

	management in each country. The commission on Water that included Greece and Albania was expanded to include Macedonia. The aim is to establish and formally appoint a Prespa Water Management working group.
Transboundary fish and fisheries – conservation and management planning	Development of a situation analysis and proposal for future steps towards the establishment of a transboundary fish and fisheries management planning. Concrete steps will be discussed and endorsed by the relevant stakeholders in each country to achieve full implementation.
Crosscutting transboundary communications	Completion of the PPCC website and Prespa Project website. Other materials were produced such as the Communications, Education and Public Awareness Strategy.
Transboundary habitat and species conservation action planning process	Aim is to improve monitoring, targeted research and enable protected areas to serve as effective refuges for biodiversity. An initiative was launched to identify priority transboundary species and habitats and to launch small-scale measures for their conservation and to develop action plans for selected species and habitats.
Transboundary diagnostic analysis and strategic action planning process	Elaboration of a second new Transboundary Diagnostic Analysis and Strategic Action Planning Process for Prespa.

Benefits and challenges of transboundary cooperation in the Prespa Lakes²⁴

The development of transboundary cooperation for nature conservation in the Prespa Lakes made a definite break with past conditions and practices. Indeed, before the transboundary initiative was started unsustainable resource management practices, from water and land-use planning to agriculture, forestry and fisheries, failed to maintain and restore and conserve the ecosystems of the Prespa Lake. Moreover, the lack of communication in between stakeholders led to significant barriers in knowledge and experience sharing, subsequently diminishing people's ability to understand and adopt new practices. The lack of effective and adapted protection and conservation policies was leading to the degradation of habitats and biodiversity in the Prespa Lake basin. However, the development of transboundary cooperation came to challenge this situation.

The lack of harmonization and communication of management was responded to by the elaboration of the Strategic Action Plan for the Sustainable Development of the Prespa Park, with the aim of developing a common vision for conservation and sustainable development in the

²⁴ B. Vasilijevic and M. McKinney, "Initiating effective transboundary conservation, a practitioner's guideline based on the experience from the Dinaric Arc", published by the International Union for the Conservation of Nature and Natural Resources, 2012, pp. 19-21.

basin. The plan also aimed to share information with stakeholders to facilitate future discussions and to be as transparent as possible on initiatives and procedures that should be taken to achieve environmental objectives. Moreover, the implementation of the UNDP-GEF “Transboundary Prespa Project” starting in 2006 came to consolidate the development of cooperation and the integration of ecological, economic and social goals. By strengthening the capacity of states to restore ecosystem health at the national level, the project laid the foundations for more effective transboundary cooperation by empowering the relevant national stakeholders to take part in joint activities and planning, which in turn strengthens transboundary institutions in the management of transboundary conservation.

Some challenges do remain: as of early 2015, Greece has still not ratified the International Agreement for the Protection and Sustainable Development of the Prespa Park Area, making it inactive.²⁵ Trilateral cooperation is still lacking, making the protection of the area dependent on initiatives taken by local and international actors. In the context of the “World Wetlands Day”, seven environmental organizations met on the Greek side of Prespa in February 2015, to discuss common targets and priorities of action for the protection of the park. Calls have also been sent out to the new Greek government to ratify the Trilateral Agreement in order truly move forward on the agenda of transboundary conservation in the area. Macedonia and Albania have recently established a “Transboundary Biosphere Reserve” under the auspice of UNESCO, to which they have invited Greece to join.

Despite this situation, transboundary cooperation has had a positive effect on nature conservation in the Prespa Park. In fact, beyond conservation issues, this initiative has also proven the role that transboundary nature conservation can play in international diplomacy and the easing of tense political contexts. For indeed, by focusing on purely environmental conservation issues, which are significantly less politically contentious than other potential topics, governments managed to cooperate, exchange and most importantly build trust amongst each other. It is this trust that has been the fuel for success of this project, by acting as a magnet for national and international donors to allocate resources on this firmly built cooperation in between the three states.

3. Nature Conservation Mechanisms in Northeast Asia: a Case Study of the Lower Tumen River Basin

a. Overview of the Lower Tumen River Basin (LTRB)

The Tumen River originates in Shi Yishui in China’s Jilin Province and flows in to the East Sea. The river is 525km long, its lower basin covers 13 000km² and borders China, the Democratic People’s Republic of Korea (DPRK) and the Russian Federation. This river is an important

²⁵ [Society for the Protection of Prespa website](#), World Wetlands Day: It’s Time for the Ratification of the Agreement on the Transboundary Prespa, 2nd February 2015, accessed on the 28th of April 2015.

provider of water resources to the adjacent areas of the three riparian countries, also helping to preserve global significant endemic biodiversity. As such, this transboundary area encompasses some of the most diverse ecosystems in the world, characterized by its steppes, temperate forests, coastal wetlands and offshore areas. The basin provides habitat for eighty-six mammals, including endangered species such as the Siberian Tiger, the Far Eastern Leopard and the Asiatic Black Bear. The lower reaches of the river also provide habitat and serve as major migratory paths for the East Asian-Australasian Flyway and support over two-hundred species of migratory birds including thirty-six global endangered species listed on the IUCNs Red List. These include the red-crowned crane, the white-naped crane and the black faced spoonbill. Large populations of ducks, geese and moorhens are also observed in spring and autumn and other large bird populations are observed during the summer season, counting close to 370 species of birds.²⁶

According to previous studies the water of the river is seriously polluted by industrial and urban sewage, making it unfit for natural reserves, drinking, domestic, industrial and agricultural uses. Resource exploitation with the Tumen region has resulted in serious deforestation and soil erosion.²⁷ Other forms of human activity have led to a significant amount of land use change for agriculture, urban expansion and road construction. Moreover illegal logging is also a large problem in the Russian Far East.²⁸ This environmental degradation is a threat to the survival of these ecosystems and their biodiversity and call for cooperation between the relevant stakeholders to minimize environmental degradation and maximize the conservation of the Lower Tumen River Basin. Before turning to the transboundary initiatives taking place in the area, we will now turn in more detail to the flagship species chosen by NEASPEC to further its transboundary conservation programs in the subregion.

b. Overview of NEASPEC's flagship species

The two key NEASPEC flagship species are the Amur Tiger and Amur Leopard for large mammals and the Black-faced Spoonbill, the hooded Crane and the White-naped Crane for migratory birds. We will give a general overview of each of these species to best understand the activities taking place in the subregion and the need to deepen transboundary nature conservation in the subregion.

- **The Amur Tiger (*Panthera tigris ssp. Altaica*)**

The estimates concerning the Amur tiger population vary but are generally found within the range of 350 to 450 adults found in the wild. In 2013 the WWF estimated that there were approximately 450 tigers remaining in the wild, up from 40 in 1940 and down from 500 in the 1980s.

²⁶ UNESCO, Proceedings of the 8th Meeting of UNESCO-MAB East Asian Biosphere Reserve Network, 18-23 August 2003, Mongolia, p. 29, <http://unesdoc.unesco.org/images/0014/001403/140376e.pdf>

²⁷ Greater Tumen River Initiative website, Feasibility Study on Tumen River Water Protection, completed in March 2013, accessible here: <http://tumenprogramme.org/?info-612-1.html>

²⁸ World Wild Life Fund website, Amur Tiger Overview, accessed on the 2nd of April 2015, <http://www.worldwildlife.org/species/amur-tiger>

Within the LTRB, NEASPEC has an international “Study on Transborder Movement of Amur Tigers and Leopards using Camera Trapping and Molecular Genetic Analysis” involving Chinese and Russian scientists. Taking place in April 2014, the study was undertaken in the Kedrovaya Pad Nature Reserve and the Land of the Leopard National Park. The study identified 32 Amur Tigers via camera traps and 86 by molecular genetic analysis.²⁹ Chinese researchers have also witnessed two wild Amur tigers near the Sino-Russian border in Suiyand (Heilongjiang province) in March 2014. Moreover, the number of wild Amur tigers in China has been increasing after a decade long campaign to restore the species by banning hunting and trapping. In Russia, researchers have been undertaking the reintroduction of Amur tigers into the Bastak Nature Reserve in Primorski Krai, in the Zhelundinsky Wildlife Refuge in Northwest Amurskaya oblast and the Whuravliny Wildlife Refuge. As of June 2014, six tigers (three males and three females) had been reintroduced.³⁰

Despite a slow come back, the Amur tiger remains on the IUCN’s Red List of Threatened Species as “endangered”.³¹ 95% of this population is located around the Sikhote-Alin range in the Primorski and Khabarovski provinces in the Russian Far East and to small pockets in the border areas of China and possibly North Korea.³² They require large and intact forest ecosystems (deciduous broadleaf and coniferous-deciduous broadleaf) due to low prey density and act as general indicators of the overall state of the ecosystem. The distribution of the population is mainly due to the presence of prey such as red deer, wild boar and the habitat needed for these prey to survive in (Korean pine-deciduous forests).³³

The main threats to the survival of the Amur tigers are poaching, habitat loss and the illegal hunting of ungulates, which are the tiger’s main prey. The construction of infrastructure such as roads also increases the access for poachers, making them another significant threat to tigers. Other less understood threats are inbreeding depression and disease which are more likely to spread across such small populations. Habitat loss from illegal logging is widespread throughout the Russian Far East, where Korean pine and Mongolian oak are cut down, thus decreasing the presence of prey and thus the survival of the tigers. According to the WWF, at least 30% of all Russian forest exports are tainted by illegal logging. Although these trees have been added to Appendix III of Cites, requiring permits to export Korean pine abroad, the issue is still widespread.³⁴ Similarly, according to WCS Russia, poaching accounts for 75 to 85% of all Amur

²⁹ NEASPEC, 19th Senior Official Meeting, Review of Program Planning and Implementation, Development of the Cooperation Mechanisms for Nature Conservation in Transboundary Areas in Northeast Asia, 22-23 September 2014, Moscow (Russian Federation), p3.

³⁰ *Ibid* p6.

³¹ IUCN Red List of Threatened Species website, accessed April 215, <http://www.iucnredlist.org/details/15956/0>

³² World Wild Life Fund website, Amur Tiger Overview, accessed on the 2nd of April 2015,

³³ Wildlife Conservation Russia website, Wildlife – Amur Tiger section, accessed on the 2nd of April 2015, <http://www.wcsrussia.org/en-us/wildlife/amurtiger.aspx>

³⁴ World Wild Life Fund website, Amur Tiger Overview, accessed on the 2nd of April 2015, <http://www.worldwildlife.org/species/amur-tiger>

tiger deaths.³⁵ Coordinated transboundary efforts to reduce such activities could play a significant role in conserving and restoring Amur tigers within this subregion.

- **The Amur Leopard (*Panthera pardus orientalis*)**

The estimates for the Amur leopard vary considerably from 60 for the WWF³⁶, to 25-40 for the WCS³⁷ and hardly 30 for the IUCN.³⁸ This rare sub-species has been on the brink of extinction for decades and remains on the IUCN's Red List of Threatened Species as "Critically Endangered". However, a new census data reveals that Amur leopards in Russia's Land of the Leopard National Park now number 57 individuals, meaning that the population has doubled in just seven years (up from 30 in 2007).³⁹ An additional 8 to 12 leopards were counted in adjacent areas of China. The census saw the installation of camera traps over more than 900 000 acres of leopard habitat, taking close to 10 000 images, leading the team of scientists to count almost 60 individuals, judging by the distinctive pattern of spots on the leopard's fur.

As with the Amur tiger, NEASPEC's "Study on Transborder Movement of Amur Tigers and Leopards using Camera Trapping and Molecular Genetic Analysis", held in April 2014, counted 32 Amur leopards via camera trapping and 48 by molecular genetic analysis (according to preliminary results).⁴⁰ Chinese researchers have camera trap footage of a female leopard with two cubs near the Wangqing National Nature Reserve, 30km away from Hunchun. This very rare appearance shows that Amur leopards are breeding in China. Additionally, a rare couple of Amur leopards was spotted in the Hunchun Nature Reserve in Jilin Province.⁴¹

The Amur leopard is mostly found in the Southwest Primorye in the Russian Far East and along the Russian border with Heilongjiang Province and Jilin Province in Northeast China. Some leopards may also exist in North Korea but no available surveys have yet been undertaken. The Amur leopard is the northernmost of all leopard subspecies, with his historic habitat ranging throughout Northeastern China and the Southern part of Primorsky Krai in Russia and the Korean Peninsula.⁴² Today this range has shrunk to Southwest Primorsky Krai along the Chinese border. In terms of habitat, forest cover is important for the survival of the leopards, where they

³⁵ Wildlife Conservation Russia website, Wildlife – Amur Tiger section, accessed on the 2nd of April 2015, <http://www.wcsrussia.org/en-us/wildlife/amurtiger.aspx>

³⁶ World Wildlife Fund, Amur Leopard section, accessed on the 3rd of April 2015, <https://www.worldwildlife.org/species/amur-leopard>

³⁷ World Conservation Society Russia website, Far Eastern Leopard section, accessed on the 3rd of April 2015, <http://www.wcsrussia.org/en-us/wildlife/fareasternleopard.aspx>

³⁸ IUCN Red List for Threatened Species (2014), *Panthera Pardus Orientalis*, accessed on the 3rd of April 2015, <http://www.iucnredlist.org/details/15957/0>

³⁹ World Wild Life Fund website, "Amur Leopard, World's Rarest Cat, Doubles in Population", published on WWF website, 23 February 2015, <https://www.worldwildlife.org/stories/amur-leopard-world-s-rarest-cat-doubles-in-population>

⁴⁰ NEASPEC, 19th Senior Official Meeting, Review of Program Planning and Implementation, Development of the Cooperation Mechanisms for Nature Conservation in Transboundary Areas in Northeast Asia, 22-23 September 2014, Moscow (Russian Federation), p3.

⁴¹ *Ibid* p5.

⁴² Amur Leopard and Tiger Alliance, Amur Leopard Fact file, accessed on the 3rd of April 2015, <http://www.altaconservation.org/amur-leopard/amur-leopard-factfile/>

find their prey, which consists of sika deer, roe deer, and small mammals such as weasels, badgers and mice.

The key threats to the Amur leopards are habitat degradation, poaching, prey depletion, inbreeding and disease. In terms of habitat degradation, annual human-caused fires are turning forests into grasslands and savannahs that are not suitable for leopards. Research undertaken from 1996 to 2003 by WCS and the Tigris Foundation, found that 46% of leopard habitat was burned at least once and between 12 and 22% of this territory was burned each year.⁴³ In terms of poaching the leopards are mainly sought for their skins and bones, but also to eliminate competition for deer and boar. However, it is the poaching of leopard prey that could end up being more destructive than poaching the leopards themselves.⁴⁴ Efforts to continue supporting the rising Amur leopard population must take into account that habitat conservation and prey populations recovery will be vital to achieve success.

- **Black-faced Spoonbill (*Platalea minor*)**

A recent census by the IUCN, established that in 2012, the population of Black-faced Spoonbill's (BFS) achieved a new high with 2 693 birds, making the total number of mature individuals to be around 1 600 as adults appear to account for 60% of the total population.⁴⁵ This number has increased from 288 individuals in 1988 with a recent study inferring that their historical population was of 10 300 individuals.⁴⁶ The BFS is listed on the IUCN's Red List of Threatened Species as "Endangered" because the population is very small and is expected to undergo a certain decline due to loss of habitat to industrial development, land reclamation and pollution. A lack of data makes the identification of any population trends difficult, however the observed recent increases could warrant a downlisting by the IUCN if found correct.

The BFS breed off the West coast of North Korea, South Korea and the Liaoning Province in mainland China. Birds have also been reported in the Tumen estuary in Russia and breeding was first reported in the South Primorye for the first time in 2006. The three major wintering sites are the Tsengwen estuary of Taiwan, the Deep Bay area of Hong-Kong and the Chinese mainland and Hainan Island. Other places include Jeju Island, South Korea, Kyushu and Okinawa in Japan and the Red River delta in Vietnam.⁴⁷ BFS usually breed in mixed colonies on small islands from March to August. They are crepuscular feeders, finding their food in mudflats and fields whilst resting on a variety of sites (trees, man-made structures, shallow water) within 2-3 km from the feeding area. The main threats are pollution and habitat destruction from industrial development

⁴³ World Conservation Society Russia website, Far Eastern Leopard section, accessed on the 3rd of April 2015, <http://www.wcsrussia.org/en-us/wildlife/fareasternleopard.aspx>

⁴⁴ World Wildlife Fund, Amur Leopard section, accessed on the 3rd of April 2015, <https://www.worldwildlife.org/species/amur-leopard>

⁴⁵ IUCN Red List of Threatened Species (2014), *Platalea minor*, accessed on the 3rd of April 2015, <http://www.iucnredlist.org/details/22697568/0>

⁴⁶ *Ibid.*

⁴⁷ *Ibid.*

that threaten feeding, breeding and resting sites. Other threats include increased disturbance by fisherman and tourists and increasing hunting activities in China and Vietnam.⁴⁸

- **Hooded Crane (*Grus monacha*)**

The global population was estimated at 6 900 mature individuals in 2006, but as of 2012, it was estimated to around 11 600 based on winter estimates in China (1 050 to 1 150 individuals), Japan (10 500 individuals) and South Korea (114 individuals).⁴⁹ The relatively small population and the threats to the natural habitat of the Hooded Crane have added it to the IUCN's Red List of Threatened Species as "Vulnerable", expecting a decline in population due to these factors.⁵⁰

The breeding grounds of the Hooded Crane are located in Southeast Russia and Northeast China. There are also non-breeding flocks to be found near the Russia-Mongolia-China border region, as well as in South Korea and Yashiro in Southern Japan. The majority of the population spends their winter at the Izumi Feeding Station on the Japanese island of Kyushu.⁵¹ In terms of habitat Hooded Cranes nest and feed in isolated sphagnum bogs scattered through the taiga in Southeastern Russia, and in forested wetlands and mountain valleys in China. Non-breeding birds can also be found in shallow open wetlands, natural grasslands and agricultural fields in Southern Siberia and Northeastern Mongolia. All cranes are omnivorous and feed on a diet that includes aquatic plants, berries, insects, frogs, salamanders, seeds, grass. At artificial feeding stations in Korea and Japan the cranes also eat rice, wheat and other cereal grain.

The key threats to the Hooded Cranes are the developments taking place near and on their wintering grounds in Japan, South Korea and China. The pressure from human activities such as the draining of wetlands, intensified logging, conversion of wintering grounds to agriculture and dam constructions are also threatening the cranes. The artificially high concentration of cranes at Izumi can also cause outbreaks of disease.⁵²

- **White-naped Crane (*Antigone vipio*)**

The total population of White-naped Cranes is estimated to be around 5 500 to 6 500 individuals based on surveys undertaken in 2012. This population breaks down into 1000 to 1 500 individual wintering in China, 1 920 in South Korea and 3 142 at Izumi in Japan.⁵³ As with the Hooded Crane, the threats from agriculture and economic development to the natural habitat of the White-naped Cranes have justified their addition to the IUCN's Red List of Threatened Species as "Vulnerable" because of the ensuing population decline.

⁴⁸ *Ibid.*

⁴⁹ IUCN Red List of Threatened Species (2014), *Grus monacha*, accessed on the 3rd of April 2015, <http://www.iucnredlist.org/details/22692151/0>

⁵⁰ *Ibid.*

⁵¹ International Crane Foundation website, accessed on the 3rd of April 2015, <http://www.savingcranes.org/hooded-crane.html>

⁵² Birdlife International website, accessed on the 3rd of April 2015, <http://www.birdlife.org/datazone/species/factsheet/22692151>

⁵³ IUCN Red List of Threatened Species (2014), *Grus monacha*, accessed on the 3rd of April 2015, <http://www.iucnredlist.org/details/22692151/0>

The White-naped Crane breeds in Dauria, on the border of Russia, Mongolia and China, in the Amur and Ussuri basins on the Sino-Russian border and the Songnen and Sanjiang plains in China. They migrate along the Songnen plain and Gulf of Bohai to their wintering grounds in the Yangtse basin, mainly located at Poyang Hu, along the Korean peninsula to the Demilitarized Zone (mainly Cholwon) and to the Southern Kyushu in Japan. In terms of habitat, the cranes breed in shallow wetlands and wet meadows in broad river valleys, along lake edges and in lowland steppes or mixed forest-steppe areas. They nest, roost and feed in shallow wetlands and along wetland edges, foraging in adjacent grasslands or farmlands. During migration they use rice paddies, mudflats and other wetlands and agricultural fields as resting grounds. Their diet is similar to that of the Hooded Crane.⁵⁴

The main threats come from agricultural expansion and the subsequent destruction of wetlands and other habitats where White-naped cranes breed, nest and feed. Some other threats come from the proposed construction of dams in the Amur River basin.⁵⁵

c. Existing protected areas in the LTRB

Table 2: Existing protected areas in the LTRB.

Name	Location	Category and Status	Year of Establishment	Area (ha)
CHINA				
Hunchun	Hunchun Municipality, Yanbian Korean Autonomous Prefecture, Jilin Province	National Nature Reserve	October 2001 established as provincial nature reserve and in July 2005 upgraded to national level	108,700
Dongfanghong	Wandashan forest near Ussuri river, Heilongjiang Province	National Nature Reserve	Dec 2009	31,516
Laoyeling Forestry Protected Distric	Borders Russia in the East and is on the South of the hunchun Nature Rerserve (Heilongjian Province).	Amur Tiger Protected Areas	2011	70 000
Wandashan Forestry Protected District	Heilongjiang Province	Amur Tiger Protected Area	2011	80 000 – 100 000

⁵⁴ International Crane Foundation website, accessed on the 6th of April 2015, <http://www.savingcranes.org/white-naped-crane.html>

⁵⁵ IUCN Red List of Threatened Species (2014), accessed on the 6th of April 2015, <http://www.iucnredlist.org/details/22692073/0>

Wangqing Nature Reserve	Jilin Province	Natural Reserve	2012	67 437
RUSSIA				
Dalnevostochny Morskoi (Far East State Marine Reserve)	Offshore from Khasan-sky Raion, Primorsky Territory, in a cluster of four separate zones (Peter the Great Bay)	<ul style="list-style-type: none"> • Zapovednik (strictly protected area) • Man Biosphere Program (2003) 	1978	63,000
Kedrovaya Pad	The south of Primorsky (Khasan-sky Raion) and centered around a valley and small mountain ridge	<ul style="list-style-type: none"> • Zapovednik (strictly protected area) • Man & Biosphere Program (2004) 	1916	17,890
Barsovy	Barabash-Slavyanka & along Chinese border, Khasan-sky District	Federal Zakaznik (special purpose reserve)	1979	106,000
Borisovskoye Plato (Plateau)	Southwestern Primorsky, stretching along the Chinese-Russian border	Regional Zakaznik (special purpose reserve)	1996	63,429
Khasansky Park	Part of vast Tumen wetlands along the southeastern border of the Krai.	<ul style="list-style-type: none"> • Nature Park • Man Biosphere Program (2005) 	1997	35,000
Land of the Leopard National Park	Combines three existing protected areas of Kedrovaya Pad Reserve, Barsovy Federal Wildlife Refuge and Borisovkoe Plateau Regional Wildlife Refuge as well as additional previously unprotected lands along the Chinese border and in the Northeast portion of the leopard's range.	National Park	2012	262 000
DPRK				
Sonbong Migratory Bird Reserve	Bonpo Wetland	Municipal level-status bird reserve	1959	3,200
Unmu Island Sea-Bird Breeding Site	Natural Monument	strictly protected area	1976	85
TRANSBOUNDARY				
Sredneussuriisky Wildlife Refuge	New transboundary corridor that gives access between Russia's Sikhote-Alin mountains and China's Wandashan mountains.	Transboundary Corridor	2012	180 000

The Russian Federation took the lead in development of protected areas, by establishing five protected areas in the Lower Tumen River area. Two of five are strictly protected areas at the national level, the Far East State Marine Reserve and Kedrovaya Pad, the latter of which was established as early as 1916, during the World War I. The Barsovy Nature Reserve is a federal reserve, specially created to protect the Far Eastern Leopards. The Khasansky Park is the only Nature Park in Primorsky Krai to protect part of the vast Tumen wetlands along the southeastern border of the Krai. China has also made remarkable progress in promoting biodiversity conservation in the Lower Tumen basin over the past decades. First, institutional mechanisms have raised the level of protection. The Jilin Hunchun Nature Reserve established in 2001 as a provincial level reserve has already achieved a State-level Nature Reserve status in 2005. Second, the number of protected areas in the Lower Tumen basin has grown gradually since 2000. In December 2009, Dongfanghong wetland was declared a state-level Nature Reserve, a habitat for 1,671 species of the wild fauna and flora, with the variety of species accounting for 40% of the entire Heilongjiang province. DPRK has also designated two major protected areas in the Lower Tumen River, the Sonbong Migratory Bird Reserve and Unmu island sea-bird breeding site while lacking infrastructure, management institutions, and reliable full-range surveying.

More recently in 2008, the barsovy and Borisovskoye Plato were made one nature reserve called “Leopardovy”, which is under the supervision of the Ministry of Natural Resources. In May 2012, the conservation structure received its official name from the Russian Ministry: “Federal State Organization of Joint Direction of Kedrovaya Pad State Biosphere Nature Reserve and Leopard’s Land National Park”. In January 2013, the areas adjacent to the nature reserve were granted the status of protective zones.⁵⁶ In China’s Jilin Province is planning to expand present tiger and leopard protection areas to cover ten forestry protected districts. Moreover, ecological corridors will also be developed to link these districts to facilitate migration of tigers and leopards.⁵⁷ In April 2012, the Jilin Province completed a project plan on “Amur Tiger and Leopard Protection and Habitats Development in Changbai Mountain”, emphasizing the restoration of habitats, sustaining instant wild population and increasing ungulate resources in the area. The plan aims to restore over 1.2 million hectares of habitat and develop ecological corridors that cover 100 000 hectares along the borders of China, Russia and the DPRK.⁵⁸ Still within the Jilin Province, the Wangqin Nature Reserve was approved to be upgraded to a national level reserve as it has been established as a major habitat for Amur tigers and leopards. In 2011, the Heilongjiang Province in China adopted the “Heilongjiang Action Plan for Amur Tigers in Forestry Protected Districts” with the aim of doubling their population in the area in the next forty years. As such, three districts were identified to further the plan (Laoyeling, Wandashan and Zhangguangcailing) and will work collectively to strengthen tiger protection work in the Province. Moreover, three to four

⁵⁶ Land of the Leopard website, Accessed on the 6th of April 2015, <http://leopard-land.ru/about/history>

⁵⁷ NEASPEC, 17th Senior Officials Meeting, Review of Program Planning and Implementation, meeting on Development of Cooperation Mechanisms for Nature Conservation in Transboundary Areas in Northeast Asia, 20-21 December 2012, Chengdu, China, p3.

⁵⁸ *Ibid.*

ecological corridors will be established with the Russian Far East to facilitate tiger migration from Russia into China.⁵⁹

d. Current transboundary cooperation mechanisms in the LTRB

As we have seen in the previous section, states in the subregion are very active in the conservation of habitats and flagship species on their own sovereign territory, however what is the level of cooperation that takes place on a transboundary level? This section will look into the key transboundary mechanisms that are in place to further nature conservation.

- **In 2010, China’s Jilin Province and Russia’s Primorsky Krai agreed to establish the first transboundary protection zone for Amur tigers.** The main measure of the agreement is to enforce anti-poaching measures on both sides of the border and to increase the level of information shared in between the two bodies as well as to adopt identical monitoring systems for the tigers and their prey.⁶⁰
- **Experts from the two countries have also put forward the idea of creating a joint expert group to enhance the conservation of the Amur tiger in transboundary areas.** Indeed, during the 6th International Ecological Forum “Nature Without Borders”, the experts agreed that the main point of the group would be to initiate a Sino-Russian Transboundary Area Network. The key aims of this network would be to enhance information and experience exchange on Amur tigers and their habitat, to improve Amur tiger and Amur leopard monitoring, to strengthen ecological protection of the Amur tiger and leopard in the Sino-Russia border area and finally, to promote environmental education and public awareness.
- **NEASPEC project “Study on Transborder Movement of Amur Tigers and Leopards using Camera Trapping and Molecular Genetic Analysis” taking place from April 2014 to November 2015.** This proposal from the Russian Federation was endorsed during NEASPEC’s Senior Officials Meeting (SOM) 17 held in December 2012. The proposed activities are to monitor Sino-Russian transborder movement of target species using state of the art methods that are available for tracking. This project involves non-tiger ranger countries such as Japan and South Korea who contribute by giving technical advice. A first Expert Group Meeting (EGM) was held in April 2014 bringing together experts from China, Japan, South Korea and the Russian Federation to review existing experience on camera trapping and molecular genetic analysis techniques, discuss scientific and technical approaches to the project and make a detailed project work plan including timeframe,

⁵⁹ *Ibid* p4.

⁶⁰ *Ibid* p5.

institutional arrangements and budgetary matters.⁶¹ During this first meeting, the experts emphasized the necessity for transregional cooperation by utilizing advanced monitoring technologies as well as unified scientific data, standardized monitoring techniques and the need for technology and information exchanges among experts. Some challenges were put forward such as the lack of skilled personnel, funding and regular technical training. The project is currently ongoing and will be adopting its final report of its findings in November 2015.

- **NEASPEC project “Conservation and rehabilitation of habitats for key migratory birds in Northeast Asia”.** The project was approved during NEASPEC’s SOM 18 in 2013 and was formulated by the first EGM held later that year. The key aims of the project are to carry out scoping surveys and joint studies on the state of conservation of flagship migratory birds and their habitats. The Project is to strengthen subregional cooperation at different levels on migratory birds conservation and generate knowledge which contributes to achieving goals of the NEASPEC Nature Conservation Strategy as well as the Aichi Biodiversity Targets. As part of this Project, the Field Survey of Habitats of Migratory Birds organized by ESCAP-ENEA and the Korean Society of Environment and Ecology will gather national experts from North-East Asia and international organizations. The Field Survey will involve detailed habitat mapping, habitat and biodiversity assessment and meeting with the local communities with the aim of enhancing conservation management in North-East Asia.⁶² The EGM agreed that the chosen target sites would have scientific significance, a strong relevance to international cooperation and implications of local community participation. Based on these criteria eight sites were chosen across China, South Korea, Japan, Mongolia and the Russia Federation. The projects are still ongoing and the project update is to be presented to the 20th SOM in July 2015.
- **NEASPEC field survey at the Rason Migratory Bird Reserve, 27-30 March 2014.** Following the EGM held in 2013, UNESCAP ENEA and the Hanns Seidel Foundation decided to carry out a field survey with a team of international experts at the Rason Migratory Reserve. The reserve is located east of the Rason Special Economic Zone and borders with China and the Russian Federation and is adjacent to the Tumen River estuary. As such this reserve has been identified as vital in the transboundary conservation in the overall river delta. The field survey has provided baseline information of the habitat and confirmed that the Reserve meets Ramsar criteria as an “internationally important

⁶¹ NEASPEC, 19th Senior Official Meeting, Review of Program Planning and Implementation, Development of the Cooperation Mechanisms for Nature Conservation in Transboundary Areas in Northeast Asia, 22-23 September 2014, Moscow (Russian Federation), p3.

⁶² Northeast Asian Subregional Program for Environmental Cooperation website, “NEASPEC Nature Conservation Project on Habitats for Key Migratory Birds”, accessed on the 8th of April, <http://www.neaspec.org/article/neaspec-nature-conservation-project-habitats-key-migratory-birds>

wetland". This field survey and future follow-up work will provide the technical basis for international cooperation in conserving this habitat.⁶³

- **The Great Tumen River Initiative (GTI)** is the successor to the Tumen River Economic Development Area. The conservation of the environment is one of the objectives of the initiatives and is also the subject of a Memorandum of Understanding on Environmental Principles Governing the Tumen River Economic Development Area and Northeast Asia, signed by all member countries in New York in 1995. The GTI thus aims to coordinate regional activities that promote environmental sustainability in the Greater Tumen Region.⁶⁴

There have been other proposals to further the conservation of these flagship species in this transboundary area. Updates on the state of these proposals have not been found. It must therefore be assumed that they have been abandoned or are still under negotiation.

- **UNDP/UNESCO: Lower Tumen River Area Transboundary Biosphere Reserve Proposal.** The United Nations Educational, Scientific and Cultural Organization (UNESCO) together with the United Nations Development Program (UNDP) conducted a feasibility study on the establishment of the Lower Tumen River Area Transboundary Biosphere Reserve in 2001. Based on the review of conservation work from June 2002 to April 2004, UNDP/UNESCO proposed to establish a Transboundary Biosphere Reserve in the Lower Tumen River basin within China, DPRK, and the Russian Federation in its project final report. This proposal defined the boundaries and zonation for the protected area and suggested that the Transboundary Biosphere Reserve (TBR) was developed to coordinate conservation of ecological zones and corridors divided by international borders. This proposal also recommended organizing a Lower Tumen River Area TBR Coordination Council, in order to organize some crucial follow-up activities including fund raising, field study coaching, public education programs, anti-poaching programs, monitoring programs and forestry management programs.
- **UNDP/GEF: Tumen River Strategic Action Program- Transboundary Diagnostic Analysis.** The UNDP/GEF Tumen River Strategic Action Program was proposed specially to ensure the preservation and protection of the region's unique environmental assets for future generations, while at the same time allowing for the ecologically sustainable economic development in the area. This action program proposed five principle interventions for nature conservation in TumenNET area. The interventions are coordination of environmental protection with international plans, coordination of

⁶³ NEASPEC, 19th Senior Official Meeting, Review of Program Planning and Implementation, Development of the Cooperation Mechanisms for Nature Conservation in Transboundary Areas in Northeast Asia, 22-23 September 2014, Moscow (Russian Federation), p10.

⁶⁴ Greater Tumen Initiative website, Priority Sections – Environment, accessed on the 8th of April 2015, <http://tumenprogramme.org/?list-1591.html>

environmental protection with national economic plans, improvement of biodiversity conservation, improvement of international cooperation in the management of Tumen River pollution, and policy measures to prevent and manage industrial pollution.

e. Observations, trends and needs for transboundary conservation in the LTRB

As we have seen in the previous section, progress is being made towards greater cooperation across boundaries, however a move towards a formal transboundary conservation area that is “managed cooperatively through legal or other means” is yet to be established. And yet considering the geographical location of the region and the fragility of its habitats and species, transboundary cooperation is absolutely necessary to achieve effective conservation but also to promote more peaceful relations.

By taking the IUCN’s levels of cooperation we saw in section 2.d and the projects taking place in section 3.d, we will assess the depth of cooperation that is taking place in the LTRB. Although the table in section two gives levels of cooperation in between natural reserve staff, it can be helpful to use as a more general benchmark of cooperation between various actors. The key observation is that the international activities that are taking place in the LTRB enter the IUCN’s local level and third party level initiatives, making them closer to consultation and collaboration than to coordination and co-management. Indeed, the nature of the cooperation taking place is focused on the exchange of information and experience in between experts and conservation practitioners. Moreover, activities evolve around joint research projects to monitor and gain further information on ecosystems and their biodiversity. If this type of activity does require coordination amongst participants (the experts, NGOs and international organizations) they do not require a high level of political coordination and cooperation that are the key characteristics of more formal transboundary conservation areas. On the other hand, these activities can act as the founding blocks of future, more coordinated projects that will hopefully build up towards forms of high level coordination as trust and mutual benefits are increased.

Despite the fact that progress has been made, many ecologically-sensitive areas still remain unprotected in the Lower Tumen River basin. One important reason is that this area has a long legacy of fragmented national and subregional environmental management. There has been an absence of co-coordinated planning and integration, poor legal frameworks, lack of enforcement and implementation of existing regulatory instruments, insufficient public involvement, inadequate financial mechanisms of support, as well as inadequate capacity to monitor and assess ecosystems. It has been approved that transboundary natural conservations have performed relatively well in securing representative samples of biodiversity pattern (distribution of species, communities, and ecosystems). Practical approaches for such cooperation are supposed to create coordination mechanisms among national protected areas adjoining international borders or unified protected areas (such as Transboundary Protected Areas or Transboundary Biosphere

Reserves), which will contribute not only to coordinated actions on biodiversity conservation, but also to building environmental confidence among States as well as local stakeholders sharing international borders. The following section will look into the role that wetlands in the LTRB can play in achieving greater cooperation in nature conservation in the subregion.

The need to work towards including the DPRK into activities and projects is also vital to the promotion of cooperation and peace in the region. As such, the international projects taking place in the subregion can act as effective tools of “environmental diplomacy” where cooperation over scientifically focused projects can help build trust and better relationships in between stakeholders.⁶⁵ As participants focus only on environmental matters, cooperation may be more acceptable for parties in conflict. As such, the projects taking place in the subregion are encouraging and a definite sign of progress towards the greater cooperation over nature conservation. We will see in the following section how transboundary wetlands can play an important role in fostering better environmental conservation and cooperation in the subregion.

4. Transboundary Conservation of Wetlands: Towards Greater Environmental Diplomacy in Northeast Asia?

This final section will look at the role that wetland conservation can play in promoting better environmental conservation and international cooperation in Northeast Asia. As such, we will first look at the importance of wetlands for biodiversity and international cooperation before looking at some recommendations for Northeast Asia.

a. Value of wetlands for biodiversity conservation

The Ramsar Convention defines wetlands as “*areas of marsh, fen, peatland or water, whether natural or artificial, permanent or temporary, with water that is static or flowing, fresh, brackish or salt, including areas of marine water the depth of which at low tide does not exceed six meters*”.⁶⁶ According to this definition, both inland wetlands (lakes, rivers and marshes) and coastal wetlands (tidal flats, mangroves, salt marshes and coral reefs) are included.

The value and benefits deriving from protected and healthy wetlands are numerous. Indeed, by the biodiversity they contain, these ecosystems play a vital role for human survival and are amongst the world’s most productive environments and are the cradles that provide the water and productivity upon which countless species of plants and animals depend on for their survival.⁶⁷ Wetlands are indispensable for the many ecosystem services they provide to humanity, a list of which has been made in the table below. Their degradation can lead to significant

⁶⁵ Pamela J. Griffin and Saleem H. Ali, Managing transboundary wetlands: the Ramsar Convention as a means of ecological diplomacy, *Journal of Environmental Studies and Science*, 10 June 2014, p5.

⁶⁶ Ramsar, *Ecosystems and Human Well-Being: Wetlands and Water Synthesis*, 2013, p. V.

⁶⁷ Ramsar website, “The Importance of Wetlands”, accessed on the 8th of April 2015, <http://www.ramsar.org/about/the-importance-of-wetlands>

biodiversity loss, changes to ecological functions and changes to ecosystem service flows, leading to the subsequent impacts on health, livelihoods and wellbeing of communities.

Table 3: Ecosystem Services Provided By or Derived from Wetlands⁶⁸

Services	Comments and Examples
Provisioning	
Food	Production of fish, wild game, fruits and grains
Fresh water	Storage and retention of water for domestic, industrial and agricultural use
Fiber and fuel	Production of logs, fuel wood, peat and fodder
Biochemical	Extraction of medicines and other materials from biota
Genetic materials	Genes for resistance to plant pathogens, ornamental species and so on
Regulating	
Climate regulation	Source of and sink for greenhouse gases; influence local and regional temperature, precipitation and other climatic processes
Water regulation (hydrological flows)	Groundwater recharge and discharge
Water purification and waste treatment	Retention, recovery and removal of excess nutrients and other pollutants
Erosion regulation	Retention of soils and sediments
Natural hazard regulation	Flood control and storm protection
Pollination	Habitat for pollinators
Cultural	
Spiritual and inspirational	Source of inspiration; many religions attach spiritual and religious values to aspects of wetland ecosystems
Recreational	Opportunities for recreational activities
Aesthetic	Beauty and aesthetic value that people can find in wetland ecosystems
Educational	Opportunities for formal and informal education and training
Supporting	
Soil formation	Sediment retention and accumulation of organic matter
Nutrient cycling	Storage, recycling, processing and acquisition of nutrients

It is estimated that the global extent of wetlands is in excess of 1 280 million hectares, although it is well established that this number is an underestimate. Over 50% of wetlands found in North

⁶⁸ Millennium Ecosystem Assessment, "Ecosystems and Human Wellbeing: Wetlands and Water (Synthesis)", World Resource Institute, Washington, 2005, p. 2.

America, Europe, Australia and New Zealand have been converted over the course of the 20th century.⁶⁹ The primary drivers of wetland degradation have been population growth and economic development. The direct drivers of degradation and loss include infrastructure development, land conversion, water withdrawal, pollution, overharvesting and overexploitation and the introduction of invasive species (for both inland and coastal wetlands). With regards to coastal wetlands more specifically, the drivers are the diversion of freshwater flows, nitrogen loading and species invasion.⁷⁰ The following section will look at two case studies of transboundary wetland conservation in order to assess the ways in which they proceeded and the ecological and political benefits they derived from cooperation.

b. Two experiences of transboundary wetland conservation: the Wadden Sea area and the Saloum-Niumi Complex

As we have just seen, natural ecosystems and in this case, wetlands and water systems do not easily fall into and respect administrative and legal divisions constructed by mankind. Moreover, the threats to their well-being such as pollution, excessive water consumption, aquifer depletion all transcend national borders and require the implementation of joint solutions. Despite this situation, within the 234 confirmed Transboundary Ramsar Sites (TRS) only 16 have formal transboundary agreements. The development of TRS is hence still at an early stage and although encouraged by international organizations such as Ramsar, it is up to each group of stakeholders involved to construct meaningful, achievable and effective cooperation mechanisms for nature conservation. We will now turn to two case studies in order to illustrate the evolution and cooperation mechanisms used to bolster transboundary wetland conservation.

- **The Wadden Sea (Germany, Netherlands and Denmark)**

The Trilateral Wadden Sea Cooperation in between Germany, the Netherlands and Denmark is possibly one of the oldest and well established examples of transboundary cooperation for wetland conservation in the world. Indeed, these three sovereign states have entered a formal but not legally binding treaty in order to develop a highly complex level of joint management towards the conservation of the Wadden Sea area. Although these states share a specific common history and political, economic and social contexts relevant to Europe, some lessons can be extracted from their



Figure 1 Map of the Wadden Sea (Source: Common Wadden Sea Secretariat)

⁶⁹ Millennium Ecosystem Assessment, "Ecosystems and Human Wellbeing: Wetlands and Water (Synthesis)", World Resource Institute, Washington, 2005, p. 3.

⁷⁰ *Ibid* p.6.

experience and possibly adapted to other parts of the world such as Northeast Asia.

Overview

The Wadden Sea is located in the South Eastern part of the North Sea. It stretches across the Southwest of the Netherlands, the German Bight and to the Northeast of the Danish coast. The Wadden Sea is one of the largest unbroken systems of intertidal sand and mud flats in the world and is rich in species specially adapted to these demanding environmental conditions. It is considered to be one of the most important areas in the world for migratory birds that use the East Atlantic Flyway but also plays a vital role in the conservation of African-Eurasian migratory water birds. The Wadden Sea area can be visited by up to 6.1 million birds at any one time and see an average of 10 to 12 million birds stopover per year.⁷¹ Because of this rich variety of life, the Wadden Sea has been protected by a variety of laws, directives, treaties and agreements that range from the national, regional and global spheres. After decades of conservation efforts, the Wadden Sea was nominated as a UNESCO World Heritage site in 2008, which was extended to include the Danish part of the Wadden Sea during the 38th World Heritage Committee in 2014. The Wadden Sea area is composed of eight sites which are all listed on the Ramsar List of International Importance. On the 29th of January 2015, the Wadden Sea Secretariat sent a joint request to the Ramsar secretariat to list the Wadden Sea sites as the Transboundary Ramsar Site “Wadden Sea” in order to “contribute to the ongoing efforts of the Ramsar Convention to promote the transboundary aspect of the protection and the management of wetlands” and emphasized their willingness to jointly manage these sites and accept shared responsibility.⁷² Despite the fact that the Wadden Sea is not yet an official Transboundary Ramsar Site, it presents us with an unparalleled example of transboundary cooperation for nature conservation, presenting many ideas on objectives and activities for other countries.

Cooperation and governance

The cooperation between the three countries to conserve and protect the Wadden Sea has been taking place at the ministerial level since 1978, forming what is called the “Trilateral Wadden Sea Cooperation”. The guiding principle is to “achieve, as far as possible, a natural and sustainable ecosystem in which natural processes proceed in an undisturbed way”.⁷³ The basis for cooperation is the “Joint Declaration on the Protection of the Wadden Sea”, first signed in 1982 and updated in 2010. This Joint Declaration outlines the objectives and areas of cooperation as well as institutional and financial arrangements. In the 2010 updated version these include nature conservation and management, sustainable use, landscape and cultural heritage, climate, sea level

⁷¹ Common Wadden Sea Secretariat website, About the Wadden Sea, accessed on the 10th of April 2015, <http://www.waddensea-secretariat.org/about-us/about-the-wadden-sea>

⁷² Wadden Sea Board, on the topic of the Wadden Sea Transboundary Ramsar Site, 28-29th of January 2015, Wilhelmshaven, Germany, p. 3.

⁷³ Common Wadden Sea Secretariat website, About the Wadden Sea, accessed on the 10th of April 2015, <http://www.waddensea-secretariat.org/about-us/about-the-wadden-sea>

rise and coastal protection, alien species, shipping and ship's safety, communication, monitoring, assessment and scientific research, international cooperation and so on.⁷⁴

In terms of governance the Trilateral Wadden Sea Cooperation has two levels of decision-making: the Council of Ministers and the Wadden Sea Board.

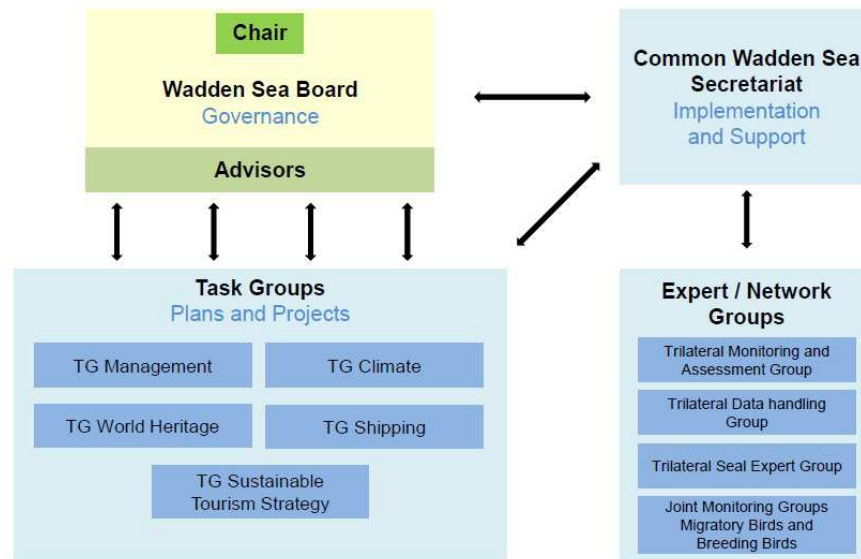


Figure 2 Governance Structure of the Trilateral Wadden Sea Cooperation (Source: Common Wadden Sea Secretariat website)

The Council of Ministers gathers the relevant responsible ministers for each country every three years. These conferences discuss Wadden Sea matters and provide the political leadership, harmonization and decision-making between the three governments. This could be called the legislative section of the Cooperation. On the other hand, the Wadden Sea Board is the governing body: it runs and oversees the work of the Cooperation in between the Ministerial Council meetings and prepares, adopts and implements the Strategies for the work of the Cooperation. The Board appoints task Groups to prepare and undertake specific tasks, plans or projects. The Board is chaired by a senior government official, who is appointed by the Council and generally rotates between the countries. Each country appoints four members and four advisors with expertise and experience relevant to the Cooperation. Finally, the Cooperation also has several Task and Expert Groups to carry out specific monitoring and scientific tasks.⁷⁵

Mission and activities

In general terms, the core mission of the Trilateral Wadden Sea Cooperation is to:

⁷⁴ Common Wadden Sea Secretariat, 2010 Sylt Declaration, Ministerial Council Declaration of the 11th Trilateral Governmental Conference on the Protection of the Wadden Sea, Wilhelmshaven, Germany.

⁷⁵ Common Wadden Sea Secretariat website, Organizational Structure, Accessed on the 10th of April 2015, <http://www.waddensea-secretariat.org/trilateral-cooperation/organisational-structure>

- Protect and conserve the Wadden Sea as an ecological entity through common policies and management.
- Monitor and assess the quality of the Wadden Sea ecosystem in collaboration with national and regional authorities and scientific institutions as a basis for effective protection and management.
- Promote international cooperation with other marine sites on protection, conservation and management of ecosystems.
- Engage the public in the protection of the Wadden Sea through awareness raising activities and environmental education.
- Secure the sustainable development of the Wadden Sea with respect to its natural and cultural values.

The Cooperation uses specific mechanisms to ensure that individual national conservation policies are coordinated and harmonized in order for the Cooperation to bring an added value to conservation. The key mechanisms for cooperation and harmonization are:

- Politically agreed upon targets (ecological, physico-chemical and cultural).
- The Trilateral Wadden Sea Plan.
- The harmonized monitoring program, “Trilateral Monitoring and Assessment Program” (TMAP).
- The Quality Status Report.
- Policy Assessment Report.
- The establishment of the Common Wadden Sea Secretariat and its website.
- The Trilateral Governmental Conference which includes Ministerial level meetings.

In more specific terms, the Trilateral Wadden Sea Plan (WSP) lays out the common policy and management plan for the protection, conservation and sustainable management of the area. It was adopted in 1997 at the 8th Wadden Sea Conference and was updated at the 11th session in 2010. The plan dissects the transboundary area into various habitats for which common targets have been adopted whilst putting forward the ways to achieve said targets in a trilateral fashion. Beyond clarifying the common vision, principles and policies of Trilateral Cooperation, the Plan is also an agreement on how the countries coordinate and integrate the management of the Wadden Sea area, with specific actions and common projects that can be carried out to achieve the commonly agreed Trilateral Targets.⁷⁶

An example can be the response to climate change and sea level rise, which is a serious threat to the Wadden Sea ecosystem. Starting in 1998, the Cooperation started by establishing a trilateral working group on Coastal Protection and Sea Level Rise. By 2010, the group had prepared three reports addressing the impacts of sea level rise on the Wadden Sea ecosystem, identifying the best

⁷⁶ Common Wadden Sea Secretariat website, Wadden Sea Plan 2010, Accessed on the 17th of April 2015, <http://www.waddensea-secretariat.org/management/wadden-sea-plan-2010>

practices to deal with sea level rise and the relevance of spatial planning for managing the impacts of climate change and the role of sand nourishment for compensating sea level rise.⁷⁷ By 2011, the Task Group Climate elaborated a Trilateral Climate Change Adaptation Strategy, which was subsequently adopted by the 12th Wadden Sea Conference in 2014. The suggested activities are as follows⁷⁸:

Best practice:

- Evaluate the effects of different measures (e.g. for coastal risk management) on natural dynamics.
- Secure and enhance the interconnectivity of habitats, both marine and terrestrial.
- Continue and further strengthen joint activities, including exchange of best practices.
- Promote and support trilateral pilot projects on integration of disciplines and sectors, including administrative layers.
- Evaluate site-specific solutions from the trilateral perspective of the Strategy.
- Promote and support the development of a common knowledge base that can be drawn upon locally and communicate these solutions broadly for eventual application at other sites.

Policy and management:

- Support trilateral scientific and planning cooperation on climate change adaptation (drivers, impacts and no-regret measures) as part of adaptive management.
- Promote the inclusion of climate change adaptation management as a central issue in long-term spatial planning and relevant policies and legislation
- Investigate and promote the implementation of so-called bench marks for action with respect to future developments in long-term planning.
- Support the option to promptly enhance long-term policies as appropriate.
- Provide advice on the implementation of the Wadden Sea Plan regarding these priorities.

Communication and education:

- Exchange and communicate practical field experience with restoration measures
- Strengthen the cooperation with the Wadden Sea Forum on communication and participation regarding climate change adaptation
- Include climate change adaptation in the overall trilateral communication strategy.
- Support the International Wadden Sea School in developing relevant education material.

Common Monitoring Program

The Trilateral Cooperation also has its own common monitoring program for the Wadden Sea called the “Trilateral Monitoring and Assessment Program” (TMAP). TMAP is considered as one

⁷⁷ Common Wadden Sea Secretariat website, Climate Change, accessed on the 21st of April 2015, <http://www.waddensea-secretariat.org/management/climate-change>

⁷⁸ Trilateral Wadden Sea Secretariat, Climate Change Adaptation Strategy, Annex 6, Climate Change Adaptation Strategy, 2010, pp. 6-7.

of the “cornerstones” of the Cooperation and covers a broad range of issues and is carried out by national and regional authorities in charge of monitoring.⁷⁹ The general vision of TMAP is “a harmonized and effective monitoring and assessment program, based on sound scientific evidence, that serves the needs of policy making at all levels, the commitments ensuing from relevant Directives and conventions, as well as the World Heritage status and that supports the management of the Wadden Sea as an ecological entity”.⁸⁰

The objectives of TMAP are to⁸¹:

- Facilitate adequate, cost effective monitoring and integrated scientifically based assessment of the Wadden Sea ecosystem taking into account Member States’ monitoring and reporting requirements under the relevant EC Directives and International Conventions.
- Better monitor new challenges, such as pressures on the Wadden Sea ecosystem (climate change and its impacts for example).
- Increase the value of the TMAP to users and to a wider range of stakeholders including the handling of data and presentation of information resulting from those data.

TMAP is a cornerstone of the Cooperation as it⁸²:

- Provides an important and scientifically sound evidence base for decision making and policy development at all levels.
- Provides essential contextual information to support the management of the Wadden Sea as a single ecological entity.
- Supports reporting against Directives and the World Heritage status.
- Enables integrated assessment of be undertaken which is an essential prerequisite for the application of the ecosystem approach.
- Provides information about progress towards trilateral targets and facilitates the discussion about the priorities for the period ahead.

⁷⁹ Common Wadden Sea Secretariat website, About TMAP, accessed on the 1st of May 2015,

<http://www.waddensea-secretariat.org/monitoring-tmap/about-tmap>

⁸⁰ *Ibid.*

⁸¹ *Ibid.*

⁸² *Ibid.*

- *The Saloum-Niumi Complex*

The Saloum-Niumi Complex is located in between Senegal and The Gambia and consists of two National Parks that are the Niumi National Park in The Gambia and the Saloum Delta National Park in Senegal. Both sites host many kinds of rare bird species and are generally rich in biodiversity, making them key national sites for biodiversity conservation. The presence of a national border in between the two sites that are of the same ecological unit mean that they have been treated with different management procedures, in different languages leading to them been seen as separate entities. In response to the rising issues of

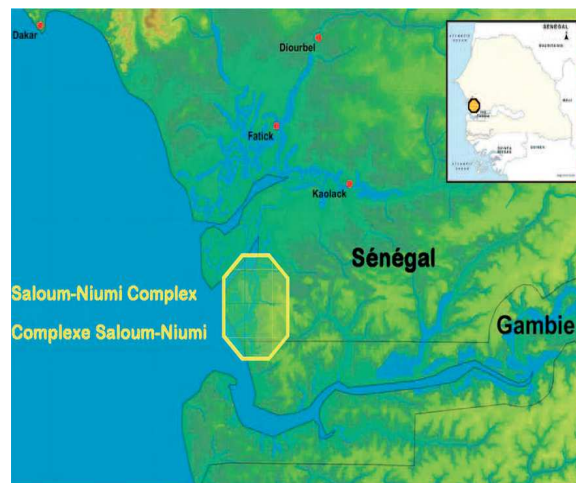


Figure 3 Map of Saloum-Niumi Complex (Source: IUCN)

separate conservation strategies, the Saloum-Niumi Complex was registered as a Transboundary Ramsar Site on the 1st January 2008, thus making it the first TRS of the African continent but also the first TRS to be located outside of Europe.⁸³ We will therefore look into the process leading up to the creation of the TRS, whilst analyzing the gaps that occurred prior to the TRS and how they hope to improve them through cooperation and joint management of two sites.

Overview

The Saloum-Niumi Complex is located in the Northwestern part of The Gambia and covers an area of 185 000 hectares. The mainly composed of coastal wetlands, savannah forests and one of the last remaining untouched swathes of mangrove forest in West-Africa. Wetland features include shallow marine waters, estuaries, sandy inlets and shores, inter-tidal sand and mudflats, marshes and mangroves. The complex is the host to over 100 000 birds, counting close to 80 different species such as the royal tern, the Caspian tern, the slender-billed gull, the pink-backed pelican and so on. The waters of the park is an important spawning ground for fish, whilst the terrestrial parts are vital habitats for a variety of threatened fauna such as spotted hyenas, crocodiles, African clawless Otters and so on. Because of this rich biodiversity both Sine Saloum and Niumi are national parks; in fact the Saloum Delta was inscribed as World Heritage site of Outstanding Universal Value by UNESCO in 2011.⁸⁴

Despite strong attempts to protect this natural ecosystem some threats have had negative impacts on conservation. These threats arise from the cheer size of the protected area in question and the fact that people live and operate in the parks and buffer zones. The difficulties emanating from

⁸³ Wetlands International website, "Le Niumi Saloum, Premier site Ramsar transfrontière d'Afrique", published on Wetlands International website, 5 December 2008, accessed on the 2nd of May 2015, <http://africa.wetlands.org/News/NewsinFrench/tabid/2950/ID/1614/Le-Niumi-Saloum-1er-site-RAMSAR-transfrontiere-dAfrique.aspx>

⁸⁴ UNESCO, World Heritage Centre website, World Heritage List, Saloum Delta, accessed on the 2nd of May 2015, <http://whc.unesco.org/en/list/1359/>

managing a transboundary site without any cooperation has meant that illegal hunters can easily cross the border and escape protected area authorities. There is also a significant and regular movement of fishermen across the borders, making it difficult to apply national laws. Overall the threats to the complex are:⁸⁵

- Mangrove cutting for drying fish, collecting oysters and fuel wood
- Impact of over-fishing, most notably on juvenile fish stocks
- Over-fishing of regionally endangered species such as sharks and sting rays
- Transboundary hunting and resource exploitation
- Clearance of land for agriculture
- Local and transboundary conflicts affecting the territory's integrity
- Overgrazing by livestock
- Coastal erosion
- Lack of planning for tourist development and related environmental impacts

These threats have been amplified by the fact that the parks were managed and treated as completely separate entities, with different administrative and legal systems, different languages and staff. In terms of management prior to current activities, both national parks were managed by respective national park agencies (Direction des Parcs Nationaux of Senegal and the Department of Parks and Wildlife Management of The Gambia) and locally based staff.

In view of this situation a group of third parties such as the IUCN, Wetlands International, the United Nations Environmental Program (UNEP), the Global Environmental Facility (GEF) elaborated the “Wings Over Wetlands” project (WOW) in 2007. The WOW project was the largest international flyway-scale wetland and waterbird conservation initiative ever to take place in the African-Eurasian region. The project lasted four years (2006-2010) but contributed to a variety of regional and sub-regional projects that will undoubtedly continue into the future. Throughout the project area, WOW support a number of demonstration sites following a number of themes such as ecotourism, wetland restoration, transboundary management and so on. As such, the WOW project supported the implementation of the “Transboundary Cooperation and Community Participation: Saloum-Niumi, Senegal / The Gambia” project. This case study will therefore focus on this project as it is the central common activity implemented by both parties in terms of transboundary cooperation to date and also the most documented and reviewed.

Wings Over Wetlands demonstration project: rationale and objectives

As previously stated, the WOW project was elaborated to respond to the gaps emanating from the lack of cooperation over nature conservation between Senegal and The Gambia. A report by the United Nations Office for Project Services states that, in view of the threats to the ecosystems of

⁸⁵ UNEP – GEF, “Wings Over Wetlands”, project “Transboundary Cooperation and Community Participation: Saloum-Niumi, Senegal / The Gambia”, 2010, accessed on the 3rd of May 2015, http://wow.wetlands.org/Portals/1/documents/demoprojects/senegal_gambia/demo_project_document_senegal_gambia.pdf

the complex, the major management requirement is to improve transboundary cooperation so that the Saloum-Niumi Complex can effectively fall under one management system.⁸⁶ The report continued by stating that the complex needs improved transboundary surveillance of sensitive sites, such as important breeding bird colonies and areas of important aquatic biodiversity. Other human activities such as fishing, wood-cutting, land clearing, agriculture, hunting and tourism, would be more effectively controlled if monitored on a transboundary scale. The lack of personnel and infrastructure in both parks could be complemented via the pooling of resources.

Hence, the rationale for the project is to promote the management of this single ecological unit as one single administrative unit in order to make biodiversity conservation more effective through a cooperative framework for resource management, surveillance and monitoring. The project saw all activities as partnerships in order to bring added value to existing national commitments and plans. It also emphasized the need to involve a wide range of stakeholders and local communities in order for the activities to be successful.

The general objective of the project is “the conservation and sustainable use of biological diversity in the wetlands of the Sine Saloum Delta and Niumi within the framework of transboundary cooperation”. This objective has been divided into three sub-objectives:

- Sub-objective 1: To enhance transboundary management and surveillance of biodiversity and of natural resource use in the Saloum-Niumi Complex, especially of waterbirds and other species that move freely between the two countries.
- Sub-objective 2: To strengthen transboundary and local cooperation for the sustainable use of natural resources in the Saloum-Niumi Complex.
- Sub-objective 3: To promote transboundary wetland/resource management through awareness raising at the local and subregional levels.

Suggested Activities by the WOW project⁸⁷

<i>Desired Outcomes</i>	<i>Proposed activities</i>
Outcome 1: Improved transboundary management and surveillance of biodiversity and of natural resource use in the Saloum-Niumi Complex, especially of migratory species	<ul style="list-style-type: none"> • Designate Transboundary Ramsar Site • Develop an integrated transboundary management plan • Strengthen surveillance of waterbird breeding colonies • Support parks infrastructure (field equipment, institutional support)

⁸⁶ UNEP – GEF, “Wings Over Wetlands”, project “Transboundary Cooperation and Community Participation: Saloum-Niumi, Senegal / The Gambia”, 2010, accessed on the 3rd of May 2015, p.3

⁸⁷ UNEP – GEF, “Wings Over Wetlands”, project “Transboundary Cooperation and Community Participation: Saloum-Niumi, Senegal / The Gambia”, 2010, accessed on the 3rd of May 2015, pp. 6-8.

<p>Outcome 2: Strengthen capacity for transboundary and local cooperation for the sustainable use of natural resources in the Saloum-Niumi Complex</p>	<ul style="list-style-type: none"> • Staff capacity building • Community capacity building
<p>Outcome 3: Awareness raised on the importance of transboundary cooperation for improved wetland management at local and sub-regional levels</p>	<ul style="list-style-type: none"> • Awareness raising campaign for policy makers and high-level government officials • Promote sustainable use of natural resources that includes local communities, fishing cooperatives and women's groups • Raise public awareness on the value of wetlands (displays, information boards at tourist sites and local schools, production of a short film) • Subregional workshop and exchange program
<p>Outcome 4: Integration of transboundary activities and monitoring into administrative procedures and park management plans (see governance section for more detail)</p>	<ul style="list-style-type: none"> • Project management and review unit (with a project coordinator and two national focal points) • Project monitoring and evaluation (project Steering Committee to oversee and guide projects, approve reports and budgets, meet on bi-annual basis)

Governance⁸⁸

The WOW project is guided by the Steering Committee, composed and represented by the main stakeholder groups including Wetlands International, site management teams, IUCN, WWF, PRCM, GEF focal points. The main role of the Committee will be to monitor and evaluate project progress reports, work plans and budgets. The Committee meets on a bi-annual basis. The actual coordination of the project is undertaken by the Wetlands International West Africa Office in order for the two implementing agencies (Direction des Parcs Nationaux of Senegal and the Department of Parks and Wildlife Management of The Gambia, DPN and DPWM respectively) to work closely on technical issues. Wetlands International will contribute by providing logistical, administrative and technical support to the project.

The DPN and DPWN coordinate activities and site personnel within their own countries through respective focal points appointed by each park. To provide valuable coordination and

⁸⁸ UNEP – GEF, “Wings Over Wetlands”, project “Transboundary Cooperation and Community Participation: Saloum-Niumi, Senegal / The Gambia”, 2010, accessed on the 3rd of May 2015, p. 12

harmonization, these focal points will be coordinated on site by the project site coordinator (who divides his time in between the two sides of the border). The project coordinator and focal points as well as Wetland International act as a Management Team on the ground to oversee project administration, day to day monitoring, solving administrative or management problems.

Outcomes and challenges of the “Wings Over Wetlands” demonstration project

This section will be based on the Semi-Annual Report of the Wings Over Wetlands project that was written and published in 2010⁸⁹.

Key Project Achievement	Date
Designation of the Saloum-Niumi Complex as a Transboundary Ramsar Site, first of its kind in Africa. Staff from both parks and high level officials from both countries cooperated over the designation of the Complex as a TRS	01.2008
Elaboration and review of a transboundary Management Plan for the Complex under final adoption process.	03.2010
Restoration and installation of some facilities in the Niumi National Park to encourage tourism	Throughout project
Improvement of park headquarters capacity and infrastructures through field materials and equipment	Throughout project
Production and installation of signboards within the complex	12.2008
Setting up of local ecoguard group composed of volunteers from local communities at the Niumi National Park side of the complex	Throughout project
Capacity building of the park’s staff and volunteers (around 30 people) in various technical thematic (using GPS, bird counting, tourist guiding, etc) and joint bird counts and bird monitoring activities within the complex including two international bird counts by the complex staff	Throughout project
Capacity building of community members (especially women) for a sustainable use of natural resources in the complex through training sessions on topics like collecting oysters, sustainable use of fisheries, vegetable farming, etc.	Throughout project
Exchange visits at site and national level to support the capacity building of the park staff to the complex	03.2009
Regional exchange visit to explore and discuss the possibility of establishing an African Sites Managers Network.	Throughout project
Series of awareness campaigns addressing local community leaders and other members through radio channels, etc.	Throughout project
Awareness campaign for national level authorities in each country	Throughout project
Awareness campaign and discussions for children within schools in and around the complex	Throughout project

⁸⁹ UNEP – GEF African Eurasian Flyways Project, Wings Over Wetlands, Demonstration Project Semi-Annual Report, Transboundary cooperation and community participation the Saloum-Niumi Complex, Senegal / The Gambia, 2010, accessed on the 4th of May 2015, http://wow.wetlands.org/Portals/1/WoW_Sal-Niumi_Final_Report_-_cleared_by_PCU.pdf

Some major challenges are apparent in slowing down if not completely disrupting the development of transboundary cooperation in this complex. Despite the Management Plan been endorsed by all stakeholders there is a serious lack of funds to support the implementation of the plan in the complex. The risk stemming from this situation is a return to the separate management of the two sites and therefore a return to the previous issues from this separate management. There is also a lack of effective joint collaboration with organizations and partners acting on the site with regards to transboundary cooperation. If the setting up of the eco-guard group was useful, they need to go beyond joint monitoring exercises towards the joint management of initiatives within the complex. Also mentioned, is the fragility of the administrative and political systems on both sides of the border, which could impact on the sustainability of this cooperation. Since the end of the WOW project, no documents can be found by the author on any further developments within the complex, whether from Ramsar, IUCN, Wetlands International or the national implementing bodies. This can lead to suppose that the efforts to develop cooperation have faltered and stopped as no official documents on the state of conservation can be found.

Despite this situation, it is interesting to note the importance that third parties can play in the development of cooperation over transboundary nature conservation. In this case, NGOs, international organizations and the park teams were the ones who “kick started” the process that eventually built up to high administrative levels in each country and leading to site been recognized as a TRS. For the Saloum-Niumi Complex, it was these actors and not governments as in the Wadden Sea case studies, who were the drivers of activities, projects and ideas to increase transboundary management of the area. However, the ending of the WOW project and thus of the demonstration sites, seems to have also brought an end to the progress made over those four years. This could be explained by the lack of funding and interest by local and national administrations, but also by the total disinvestment on the part of the third parties who initially participated in the project. The role of the Ramsar Convention and the recognition of the complex as a TRS is unclear as to increasing cooperation in between the two states and hence the effectiveness of nature conservation in the site. It seems that Ramsar came more as a “label” given to a work in progress that was initiated by third parties, rather than initiating and providing the capacity to the relevant stakeholders to start and continue their efforts. Therefore, the role of third parties initiating and providing assistance to the relevant stakeholders as well as the implementation of viable and adapted activities are crucial to assure the longevity of transboundary cooperation.

c. The case for ecotourism

This section will look into the relationship in between transboundary cooperation for nature conservation and ecotourism (or sustainable tourism). Indeed, ecotourism has been implemented around the world (to various levels of success) as a tool for resource and nature conservation. This is because ecotourism facilities and activities are expected to operate in harmony with the ecology of the area and remain consistent with the culture and social expectations of the people living

within the local communities. Thus ecotourism depends on the success of nature conservation and can provide a significant income for local communities. As we have seen throughout this paper, transboundary cooperation can improve the conservation and protection of an ecosystem, therefore enhancing the potential for ecotourism. Likewise, by promoting conservation at the local and national level, ecotourism provides diversified funds for the continuation of conservation projects and can hence sustain transboundary initiatives. As such ecotourism can become a valuable mechanism to encourage stakeholder involvement and attract sources of funding to initiate cooperation activities. However, this activity must follow strict guidelines in order to avoid the destruction of the ecosystem it depends on. This section will be based on the experience of the Sava River Basin (Slovenia, Croatia, Bosnia and Herzegovina and Serbia) and the elaboration of their “Transboundary Ecotourism Guidelines for the Sava River Basin” published in 2013.

Definitions and objectives of ecotourism

Generally speaking ecotourism is considered to be a kind of sustainable tourism that is focused on visiting fragile and pristine and undisturbed natural areas. It is a combination of socially responsible travel and environmental sustainability.⁹⁰ As such, it hopes to meet the demands of present tourists whilst enhancing future opportunities for the community and their ability to protect and preserve the environment and local heritage in a sustainable way. The vision is to meet economic and social needs through the protection and maintenance of natural ecosystems and cultural integrity.⁹¹ According to the World Tourism Organization, ecotourism is used to mean forms of tourism which have the following characteristics⁹²:

- All nature based forms of tourism in which the main motivation of the tourists is the observation and appreciation of nature as well as the traditional cultures prevailing in natural areas.
- It contains educational and interpretation features.
- It minimized negative impacts upon the natural and socio-cultural environment.
- It supports the maintenance of natural areas which are used as ecotourism attractions by:
 - Generating economic benefits for host communities, organizations and authorities managing natural areas with conservation purposes.
 - Providing alternative employment and income opportunities for local communities.
 - Increasing awareness towards the conservation of natural and cultural assets, both among locals and tourists.

⁹⁰ International Sava River Basin Commission, Transboundary Ecotourism Guidelines for the Sava River Basin, One River, Four Countries, Unlimited Possibilities, September 2013, accessed on the 4th of May 2015, http://www.savacommission.org/dms/docs/dokumenti/documents_publications/publications/other_publications/transboundary_eco_tourism_guidelines.pdf, p.7.

⁹¹ World Tourism Organization, The British Ecotourism Market, Special Report, p.22, 2001.

⁹² World Tourism Organization, The British Ecotourism Market, Special Report, p.19, 2001.

For states and other stakeholders engaging in transboundary cooperation, ecotourism presents some significant environmental, economic and social advantages. Indeed, in many cases worldwide, border areas are disadvantaged zones in an economic sense due to their remoteness from central government, lack of infrastructure, political hostilities and so on. Transboundary conservation areas can help offer development to border areas, especially through tourism. In the early years 2000, ecotourism represented around 20% of all international travel globally and is growing at a faster rate than “traditional” tourism.⁹³ By consequence, ecotourism can offer great potential for the country and local communities to enhance their incomes and quality of life through the conservation of their natural environment. It is also recognized that cooperation between countries and the joint promotion of a site as “one site” is attractive to tourists and donors, moreover that the designation of sites by international organizations such as UNESCO and Ramsar increases flows of tourists to the site. States thus have an incentive to develop transboundary conservation in order to promote ecotourism.

Transboundary mechanisms to promote ecotourism: examples from the Sava River Basin

In order to develop successful and sustainable ecotourism in the Sava River Basin, the four states (Slovenia, Croatia, Bosnia and Herzegovina and Serbia) wrote a Transboundary Ecotourism Guideline as the main framework of implementation. The central purpose of the guidelines is to provide an expert contribution to a unified approach to sustainable development and ecotourism in wetland areas of international importance (Ramsar Sites) and to outline the scope of work for the preparation of a master plan for the development of ecotourism in the Sava Basin. A consultation process used to develop and prioritize actions for the sustainable development of ecotourism found five major themes:

- Develop and sustain transboundary ecotourism activities
- Managing Ramsar Site and wetland landscapes to maximize their conservation and public benefits and preserve their ecosystem services
- Sustainable economic development
- Stakeholder involvement and community participation
- Conserving and enhancing biodiversity

Proposed activities for the development of transboundary ecotourism

Although all these themes are related to the issues covered by this report, we will only focus on the proposed activities to develop the first theme “Develop and sustain transboundary ecotourism activities”.

Objective	Outcome	Comment
Establishment of a Framework for	<ul style="list-style-type: none"> • Identification of the main natural and cultural potential in 	The framework should be developed through

⁹³ Maja Vasilijevic and Tomasz Pezold, Crossing Borders for Nature, European examples of transboundary conservation, IUCN Program Office for South-Eastern Europe, 2011, p.70.

<p>Ecotourism Development in Sava River Basin</p>	<p>the river basin</p> <ul style="list-style-type: none"> • Identification of the main characteristics of each site as a basis for ecotourism development • Analysis, comparison and harmonization of land use planning, nature conservation and tourism development policies • Identification of liaison for stakeholder groups to participate in the process of policy establishment 	<p>consultation with all relevant stakeholders</p>
<p>Produce a baseline study, which identifies risks and conflicts between ecotourism development and wetland conservation</p>	<ul style="list-style-type: none"> • Evaluation of existing network of established tourism offer within the Sava River Basin • Identification of existing potential conflicts of uses and activities • Determination of site specific expectations and limitations • Development of fatal flaw checklist for Ramsar Site development (no-go activities) • Identification of policy or legislative needs • Develop a SWOT analysis 	
<p>Development of Transboundary Policy for Ecotourism Development in the Sava River Basin</p>	<ul style="list-style-type: none"> • Identification of existing and required policies relevant to the development of ecotourism • Engagement of national authorities to ensure cooperation between sites in different countries • Definition of specific expectations for sites based on Ramsar guidelines and other relevant guidelines such as UNESCO programs and conventions • Strengthening of cooperation to ensure transboundary nature conservation and ecotourism integrity and continuity • Encourage collaborative 	<ul style="list-style-type: none"> • ISRBC and REC have been identified as suited actors to begin process of engaging both local and national level authorities in the development of cooperation • Policies should respect national policies and international guidelines • The development of an ecotourism strategy should be elaborated in consultation with all relevant stakeholders and must include:

	<p>promotional action at an international scale</p> <ul style="list-style-type: none"> • Assurance of the proper application and integration of international and national tourism legislation • Establishment of the perception and public image of the Sava River basin as a complete and collective tourist destination • Establishment and promotion of sustainable tourism and exchange of information on the best practices through cooperation with tourist destination in other countries • Development and promotion of transnational synergies for a profile and improved promotion of tourism • Identification of government liaison to communicate between policy makers and stakeholders • Promote the incorporation of these guidelines into national legislations 	<ul style="list-style-type: none"> • A definition of the area to be influenced by the strategy • Assessment of the area's ecosystem services, historic and cultural heritage and current tourism infrastructure, economic and social circumstances; consider issues of capacity, need and potential opportunities • Assessment of current visitors and potential future markets • Set of strategic objectives for the development and management of tourism • Action plan to meet these objectives • Indication of resources and partners to implement the strategy • Proposals for monitoring the results
Development of a Master Plan for Ecotourism Development in Ramsar sites, Buffer Zones and Corridors in the Sava River Basin	<ul style="list-style-type: none"> • Identification of protection status of considered and potential areas and existing relevant policy agreements • Identification of regional/national/entity/local expectations • Identification of local products • Identification of main stakeholders and target groups • Identification of program measures 	<ul style="list-style-type: none"> • This plan will define a unified path for development of ecotourism and ensure its consistency with regional and global ecotourism standards. • A Master Plan should be developed for all Ramsar sites in the Sava River Basin based on the approaches and objectives of the global Master plan.
Establishment of Joint Certifications	<ul style="list-style-type: none"> • Implementation of additional eco-labels and certificates such 	<ul style="list-style-type: none"> • The key objective is to promote the

and training standards	<p>as European Charter for Sustainable Tourism in Protected Areas issued by the Europarc Federation</p> <ul style="list-style-type: none"> • Promote the incorporation of ISO 140 000 family addresses various aspects of environmental management • Promote the incorporation of Eco-Management and Audit Scheme • Develop a transboundary training standards for workers in ecotourism in the Sava River basin • Assurance of consistency and strict requirements with branding 	<p>consistency and high level of standards for ecotourism</p> <ul style="list-style-type: none"> • Need to actively participate in international networks such as Europarc Federation and PAN Parks to access expertise and on certification of management standards, park management
------------------------	---	--

d. Recommendations

Based on the information found in these case studies and the other sections of this report, some recommendations can be identified. These can be considered in a general context but also in the more specific setting of East and Northeast Asia, where the author believes transboundary cooperation can make a significant contribution to nature conservation and diplomacy in between states.

- **Promote transboundary cooperation as an effective tool for nature conservation and “ecological diplomacy”:** Encourage third parties such as NGO’s and international organizations to continue or start promoting transboundary cooperation for nature conservation in between states. We have seen throughout this report the benefits that cooperation can bring in conservation, political, economic and social terms. Not only has the conservation and protection of sites of exceptional ecological value been increased by cooperation, but it has also helped build trust and interaction in between previously rather hostile neighboring states. If some examples of cooperation are top down and start at the governmental level, other examples have seen third parties play an essential role in initiating local level joint activities, providing funds and technical assistance, eventually growing into more formal and high-level intergovernmental agreements.
- **Set clear and feasible objectives:** whatever the level of cooperation taking place, whether at the ministerial level or at the local park staff level, stakeholders must agree upon clear, achievable and straightforward joint activities. Setting the bar too high could lead to technical and financial difficulties and compromise the viability of the cooperation.

The need to build from simple to complex takes time and trust in between stakeholders to function and be effective.

- ***Develop local participation:*** the need to include local communities and stakeholders is crucial for the effectiveness of transboundary cooperation. By living in or close to natural parks, they are those who need to be the most included in conservation efforts as their activities and lifestyles can impact (positively or negatively) the natural environment.
- ***Trust in between stakeholders is the key to success:*** throughout the various case studies in this report, we have seen how trust is essential in fostering effective cooperation. A lack of trust, as in the case of the Prespa Lake where Greece is stalling the conservation process, will ultimately lead to the downfall of transboundary cooperation. Greater trust can lead to greater cooperation and the more a transboundary area is active, the more it can attract funding and apply for international designations such as those from UNESCO or Ramsar, which will in turn increase the trust from third parties to supply funds.
- ***Step up international cooperation and ecotourism planning:*** the promotion of ecotourism through transboundary nature conservation initiatives and better international coordination of tourism policies and park management can significantly contribute to ecosystem conservation. Being based on success in the protection and conservation of the natural environment, ecotourism bolsters the incentive for local stakeholders to promote nature conservation, whilst providing local communities with a sustainable source of income. For states, ecotourism can become a significant income too, and its success will be based on how well they can cooperate and jointly manage a transboundary area. As a fast growing market, ecotourism is an interesting option for stakeholders to consider when entering transboundary nature conservation. However, a lack of coordination and strict framework of action can lead to unsustainable levels of tourist activity, degrading the natural environment on which it is based.
- ***Use the legal frameworks and other support provided by international organizations and conventions:*** Governments and local stakeholders engaging in transboundary activities should try to use the existing legal and administrative frameworks provided by international organizations and conventions.
- ***Promote the exchange of knowledge and experience of setting up transboundary cooperation initiatives to “prospective” countries:*** NGOs and international organizations that engage in transboundary nature conservation projects should be able to assist new projects in a more formal way. Sharing knowledge and experiences between stakeholders can mean a significant gain of time and funds for new projects.

In the more specific context of East and Northeast Asia, the following recommendations can be made, which support those put forward by NEASPEC:

- ***Identify a potential transboundary protected area and initiate cooperation:*** NEASPEC is already undertaking this initiative through various joint international studies and conferences. One of its studies identified the Rason Migratory Bird Reserve, which is

located within the Democratic People's Republic of Korea (DPRK), the Russian Federation and China. As this site meets all Ramsar criteria, NEASPEC has recommended that the DPRK become a contracting party to the Ramsar Convention and designate the Rason Migratory Bird Reserve as a Ramsar site. This site could potentially become a Transboundary Ramsar site, the first in Asia if jointly applied with China and the Russian Federation.

- ***NEASPEC must continue its supporting role to transboundary cooperation in East and Northeast Asia:*** the role of third parties in initiating and supporting transboundary cooperation is crucial in the early phases of the joint projects. By providing financial and technical support, international organizations such as NEASPEC can play the role of convener and platform for stakeholders to meet, discuss and organize projects and activities. It can also provide the bridge to higher-level government officials, whose support is crucial for the survival of the process.

Conclusions

There is no doubt that greater transboundary cooperation in the field of nature conservation is required in this globalized world. Judging by how marginal transboundary areas are today, the challenges to developing cooperation are still very strong and the incentives too small for states to initiate cooperation.

We have looked at the benefits that transboundary cooperation can provide: the two core ones being the enhancement of biodiversity conservation by treating ecosystems as ecological units despite human borders, harmonizing and coordinating research and monitoring, undertaking coordinated activities and conservation policies and so on. The second benefit is political, as transboundary nature conservation can act as an effective diplomatic tool to unfreeze tense political situations by getting opposing actors to focus on a mostly depoliticized issue such as nature conservation. Of course, other benefits arise from cooperation, such as the economic and social outcomes that can arise from the promotion of ecotourism, by making parks more attractive to tourists. Based on these observations and the variety of successful case studies found throughout the world, it seems reasonable to promote and argue for the expansion of transboundary cooperation.

The challenges to the development of cooperation are significant in both quantitative and qualitative terms. At the level of states, the lack of trust is often the greatest barrier to cooperation, when at the local level, it is often the lack of financing and technical capacity that will impede on cooperation. As such, the role of third parties such as NGO's, International Organizations and other stakeholders is crucial in bridging these gaps and providing the necessary means for the initiative to take place and grow. There is no "one size fits all" model to develop transboundary cooperation; it must be adapted to each location specific context by the most relevant stakeholders. However, communication with those states and other stakeholders

who have participated in the elaboration of a transboundary project could significantly help gather valuable knowledge and experience for “younger” projects to base themselves upon.

The mechanisms used to implement transboundary cooperation are numerous and range from the simple exchange of information between park rangers, to highly complex and high-level joint management of a transboundary area through coordinated activities and policies. Most of the time cooperation starts with joint monitoring and assessment studies of transboundary areas, to move towards the organization of conferences, education activities and finally to more complex cooperation, such as the elaboration of a joint management plan and the harmonization of conservation policies. In any case, all stakeholders involved must achieve prior goodwill and agreement on the general outline of cooperation activities. Building up trust through the gradual implementation and development of cooperation is crucial if the project is to succeed.

In East and Northeast Asia, transboundary cooperation is still in its early days, but current trends are encouraging, such as the various joint projects led by NEASPEC. The next step would be to identify a potential transboundary conservation area that includes the DPRK and use organizations such as NEASPEC to act as platforms to convene all relevant actors to the development of transboundary nature conservation. As the first transboundary area in Asia, such a site would attract great attention from funders and could be a valuable occasion to lessen regional tensions through environmental diplomacy.

Bibliography

Common Wadden Sea Secretariat, 2010 Sylt Declaration, Ministerial Council Declaration of the 11th Trilateral Governmental Conference on the Protection of the Wadden Sea, Wilhelmshaven, Germany.

5th European Regional Meeting on the Implementation and Effectiveness of the Ramsar Convention, Workshop D, "Shared catchments and wetlands – increasing transboundary cooperation", 4-8 December 2004.

Pamela J. Griffin and Saleem H. Ali, Managing transboundary wetlands: the Ramsar Convention as a means of ecological diplomacy, Journal of Environmental Studies and Science, 10 June 2014.

International Sava River Basin Commission, Transboundary Ecotourism Guidelines for the Sava River Basin, One River, Four Countries, Unlimited Possibilities, September 2013.

Millennium Ecosystem Assessment, "Ecosystems and Human Wellbeing: Wetlands and Water (Synthesis)", World Resource Institute, Washington, 2005.

NEASPEC, 19th Senior Official Meeting, Review of Program Planning and Implementation, Development of the Cooperation Mechanisms for Nature Conservation in Transboundary Areas in Northeast Asia, 22-23 September 2014, Moscow (Russian Federation).

NEASPEC, 17th Senior Officials Meeting, Review of Program Planning and Implementation, meeting on Development of Cooperation Mechanisms for Nature Conservation in Transboundary Areas in Northeast Asia, 20-21 December 2012, Chengdu, China.

Ramsar, Ecosystems and Human Well-Being: Wetlands and Water Synthesis, 2013.

Trevor Sandwith and Charles Besançon, Trade-Offs Among Multiple Goals for Transboundary Conservation, published by the Wilson Center, August 2005.

Trevor Sandwith, Clare Shine et al., Transboundary Protected Areas for Peace and Cooperation, published by the World Commission on Protected Areas and the IUCN, Best Practice Protected Areas Guidelines Series n°7, 2001.

Michael Schoon, "A brief History of Transboundary Protected Areas", Global Transboundary Conservation Network website, accessed on the 26th of March 2015.

Trilateral Wadden Sea Secretariat, Climate Change Adaptation Strategy, Annex 6, Climate Change Adaptation Strategy, 2010.

UNEP – GEF African Eurasian Flyways Project, *Wings Over Wetlands, Demonstration Project Semi-Annual Report, Transboundary cooperation and community participation the Saloum-Niumi Complex, Senegal / The Gambia, 2010, accessed on the 4th of May 2015.*

Maja Vasilijevic and Tomasz Pezold, *Crossing Borders for Nature, European examples of transboundary conservation, IUCN Program Office for South-Eastern Europe, 2011.*

B. Vasilijevic and M. McKinney, *“Initiating effective transboundary conservation, a practitioner’s guideline based on the experience from the Dinaric Arc”, published by the International Union for the Conservation of Nature and Natural Resources, 2012.*

Wadden Sea Board, *on the topic of the Wadden Sea Transboundary Ramsar Site, 28-29th of January 2015, Wilhelmshaven, Germany.*

Wetlands International website, *“Le Niumi Saloum, Premier site Ramsar transfrontière d’Afrique”, published on Wetlands International website, 5 December 2008.*

World Tourism Organization, *The British Ecotourism Market, Special Report, 2001.*

Websites:

Amur Leopard and Tiger Alliance: <http://www.altaconservation.org>

Common Wadden Sea Secretariat website, <http://www.waddensea-secretariat.org>

Greater Tumen Initiative website: <http://www.tumenprogramme.org>

International Crane Foundation website: <https://www.savingcranes.org>

International Union for the Conservation of Nature and Natural Resources website: <http://www.iucn.org/fr/>

IUCN Red List of Threatened Species (2014): <http://www.iucnredlist.org>

Land of the Leopard website: <http://leopard-land.ru>

Northeast Asian Subregional Program for Environmental Cooperation website: <http://www.neaspec.org>

Ramsar Convention website: <http://www.ramsar.org>

Society for the Protection of Prespa website: http://www.spp.gr/index.php?option=com_content&view=article&id=5&Itemid=5&lang=en

UNESCO, World Heritage Centre website, World Heritage List, <http://whc.unesco.org/en/list/>

World Conservation Society Russia website: <http://www.wcsrussia.org>

World Wildlife Fund: <http://wwf.panda.org>