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# Ecosystem Governance in a Cross-border Area: Building a Tuman River Transboundary Biosphere Reserve

*By Sangmin Nam*

**T**he Tumen River Area, where the borders of China, North Korea and Russia converge, is a globally important reservoir of biodiversity—a unique refuge for numerous species that survived the Quaternary glacial period over 1.6 million years ago. The river area's relatively undisturbed terrestrial ecosystem provides habitats for over 50 species of mammals and 360 species of birds, many of which are found nowhere else in the world. The Tumen River Delta, a vast wetland complex with over 30 freshwater lakes and brackish lagoons, also serves as the critical northern end of a major migratory path of the East Asian-Australian Flyway, supporting 200 species of migratory birds including 34 globally endangered species that are listed in the IUCN Red Data Book. Protecting this area is challenging not

only because the riparian countries view it as a peripheral area not worthy of conservation investment, but also because China has been politically very cautious about multilateral talks on transboundary environmental problems. China's hesitancy is understandable as it is often the source of most of the degradation problems.

## *Dwindling Numbers of Siberian Tigers and Far Eastern Leopards*

While conserving the area's ecosystem as a whole is important, efforts to protect some endangered keystone species are imperative—two top priorities are the Siberian (or Amur) tigers and Far Eastern leopards. The number of Siberian tigers, one of the five living subspecies of tiger and an internationally endangered subspecies, is

estimated at about 400, most of which live mostly on the Russian side in Primorsky. While their numbers have been stable during the past decades, humans have caused many tiger mortalities. However, the Far Eastern leopard's fate is even more threatened than that of the Siberian tiger. With only an estimated 40 to 50 in the Tumen River Area, this leopard is one of the rarest subspecies in nature and ranked on the list of critically endangered species by the IUCN. Although hunting leopards has been banned since 1956, the destruction and curtailment of habitats by development and logging have resulted in the serious decline in their numbers. Protecting a safe habitat is a critical condition for the Far Eastern leopard's survival because its natural habitat is only in the lower reaches of the Tumen River while the range of Siberian tiger extends much further into the north of the Russian Far East. The two species also face serious threats of poaching in the Russian territory near the border to China and illegal trade of their products between China and Russia. No effective administrative systems and transboundary collaboration mechanisms exist to keep these wild tigers and leopards safe.

#### ***Tumen River Area Development Program, NGOs, and the Environment***

The main challenge to protecting the many threatened species in the Tumen River Area is how to govern the single bioregion, which is divided by three different sovereign territories. It is only since the mid-1990s that the region's governments and international organizations have been discussing efforts on protecting the endangered species and their habitat. See Box 1 for an overview of multilateral and bilateral efforts to promote conservation in this area.

Transboundary cooperation on biodiversity was boosted not as the result of strong environmental awareness or governmental initiative in the region, rather by the creation of a regional *economic* program—the Tumen River Area Development Program (TRADP)—and environmental activities of international multilateral organizations and nongovernmental organizations (NGOs). TRADP, the Northeast Asia's first multilateral development program, was officially launched in late 1995, but is today no more than symbolic attempt at collaboration. This multilateral program, comprised of China, Mongolia, Russia and the two Koreas as member countries, aimed to build the area into a trade hub and economic cooperation center for Northeast Asia. Many planners anticipated this program would change the geographical face of the Tumen River from a non-

populated, less developed area to a vibrant economic zone.

This nascent economic collaboration—which represented the first time any cooperative mechanism was created in the Tumen River Area—highlighted the lack of cooperation among these riparian countries on environment and social issues in this richly biodiverse river basin. The potential for economic development and the void in environmental collaboration in the Tumen River Area drew international attention, leading to the rapid growth of various governmental and nongovernmental activities in the environmental sphere. This international concern was the catalyst that pushed the China, Russia, North and South Korea, and Mongolia to adopt the 1995 Memorandum of Understanding (MOU) on Environmental Principles Governing the Tumen River Economic Development Area and Northeast Asia. This MOU called upon the countries to undertake joint efforts to mitigate adverse environmental impacts that might be caused by economic activities in the Tumen River Area. On the basis of the MOU, the five governments compiled an Environmental Action Plan through two workshops in 1997 and 1998. However, TRADP's shrinking role after the Asian financial crisis that began in late 1997, the low catalytic capacity of its Secretariat, and little environmental interest of the member countries prevented implementation of the Environmental Action Plan.

A few years after the Asian financial crisis, TRADP's member countries tried to reinvigorate this development program by carrying out a project to prepare a Strategic Action Plan (SAP). The SAP project—which ran from mid-2000 to 2002 funded with \$5 million from the Global Environment Facility—helped diagnose and compile information on the environmental situation in the Tumen River Area, and facilitated interactions of various stakeholders across national boundaries. The project also produced a draft SAP, which as of early 2004 was still not formalized, as China and Russia were still calculating the costs and benefits of its implementation. In the eyes of the Chinese government, signing the SAP means the formal acceptance of China's responsibility for pollution and biodiversity destruction. In addition, an organizational conflict between the Chinese State Environmental Protection Administration (SEPA), which felt it should be the SAP signatory body, and the Ministry of Foreign Trade and Economic Cooperation, the principal national partner of the SAP project, became a critical factor delaying China's formal endorsement.

In the vacuum of effective intergovernmental actions

## Box 1. Timeline of Multilateral and Bilateral Environmental Activities and Agreements in the Tumen River Area

**1992-1995:** Under the auspices of UN Development Programme (UNDP), China, Mongolia, Russia, South and North Korea held a series of meetings to create a multilateral development project in the Tumen River Area.

**1994:** UNDP produced the first brief report on the environmental situation in the Tumen River Area.

**1995 (December):** The five countries endorsed the launch of the Tumen River Area Development Program (TRADP), and adopted the Memorandum of Understanding (MOU) on Environmental Principles Governing the Tumen River Economic Development Area (TREDA) and Northeast Asia.

**1996:** UNDP and the five countries started to prepare a project proposal for a Strategic Action Plan in the Tumen River Area, which was to be funded by the Global Environmental Facility (GEF).

**1997:** UNDP produced the environmental report: *Preliminary Transboundary Analysis of Environmental Key Issues in the Tumen River Area, its Related Coastal Regions and Its Northeast Asian Hinterlands*.

**1997:** A summit meeting of China and Russia resulted in an agreement to cooperate on tiger protection in border areas.

**1997-1998:** The five countries held two meetings of the Working Group on the Environment, and created a project list to act as an Environmental Action Plan. However this plan was not implemented. During the winter between 1997 and 1998, the first Sino-Russian joint survey and census of the Far Eastern leopard and the Siberian tiger and their habitat in the Tumen River Area was undertaken.

**2000:** A GEF-funded program, "Preparation of a Strategic Action Programme and Transboundary Diagnostic Analysis for the Tumen River Area, and its coastal and related Northeast Asian Environs," dubbed the TumenNET project, finally commenced after official approval of the GEF in 1999.

**2002:** The TumenNET project was finished in September producing the Strategic Action Program document, which has not been signed by the governments of China and Russia as of March 2004.

on protecting the key animals of the bioregion, NGOs have played substantial roles in species conservation. (See Box 2). NGOs such as WWF, Tigris Foundation of the Netherlands, Hornocker Wildlife Institute and the Wildlife Conservation Society of the United States have acted as the main sources of technical and financial resources for the Russian side where the local government's capacity in the management of protected areas had fallen considerably since the collapse of the Soviet Union.

The Hornocker Wildlife Institute initiated a catalytic NGO project on transboundary conservation cooperation by conducting the first Sino-Russian joint animal survey in the winter of 1997-1998. The survey uncovered considerable wire-snare poaching of ungulate species (such as deer) being done by Chinese villages near the border. This poaching significantly impacts the leopard and tiger population because it substantially depresses their prey populations. NGOs have also been major contributors to the establishment of China's Hunchun Nature Reserve in Jilin province, which borders Russian protected areas in Primorsky Krai. NGOs have helped protect tigers

in the Hunchun reserve by providing policy and technical assistance, as well as financial resources to Jilin province, particularly to communities near the reserve. The small successes of these NGO environmental protection initiatives and cooperation among the riparian states have indirectly laid the groundwork for discussions of a more ambitious plan to protect the Tumen River Area—a transboundary biosphere reserve.

### *Move Towards a Transboundary Biosphere Reserve*

Despite a high and long wire fence marking the boundary, tigers and leopards freely cross between China and Russia. They also roam in and out of North Korea across the Tumen River. However, the politically sensitive borders are still hostile to people, which deters nature reserve employees in protected areas in both China and Russia from closely monitoring animal and ecological conditions along the border in the mountains. This lack of monitoring has given local poachers and illegal traders free range to use the border

area as their sanctuary to trap leopards and tigers and the prey upon which they depend.

A renewed effort to discuss the challenge of protecting endangered tigers and leopards in the border region began in 2001 when the Korean National Commission for UNESCO organized the second workshop of the Ecopeace Network of Northeast Asia in Yanji City, located in the Yanbian Korean Autonomous Prefecture of Jilin province. This workshop brought NGOs from Northeast Asian countries, as well as officials and NGOs from the Tumen River Area together for the first time. Many participating NGOs and government officials agreed the border region could only be protected through institutionalized cooperation, which led to the proposal to create a transboundary biosphere reserve (TBR).

During the workshop, participants from both Chinese and Russian parts of the Tumen River area reached a consensus on the need for collaborative actions to mitigate transboundary environmental problems. In particular, the workshop resolution recognized biodiversity conservation as a priority issue for joint action. Many participants saw the TBR concept as a practical method of undertaking such joint actions, which

led them to make a formal request to UNESCO to help facilitate necessary activities towards the creation of a TBR in the Tumen River Area.

The concept of a biosphere reserve (BR) is not new to the countries in the Tumen River Area. UNESCO launched the idea of such reserves in 1971 to promote and demonstrate a balanced relationship between people and nature under UNESCO's Man and the Biosphere (MAB) Program.<sup>1</sup> Currently the number of designated Biosphere Reserves in China, Russia and North Korea is 21, 26, and 1, respectively. These three countries and other Northeast Asian countries (Mongolia, Japan and South Korea) have been operating the East Asian Biosphere Reserve Network (EABRN) since 1994 in order to share information on BR management and undertake cooperative activities. Although EABRN is the most active regional environmental mechanism in Northeast Asia, a TBR in the Tumen River Area had never been actively envisaged, in great part because of the potential political challenges in bringing the area's countries together. In fact, only six TBRs exist in the world, which reflects the political difficulties in creating such a transboundary institution.<sup>2</sup>

The workshop's call for a TBR led the Korean

## Box 2. The Role of NGOs in the Tumen River Area

NGOs have been extremely important actors in the environmental governance of the Tumen River Area by carrying out activities in two contexts: (1) within the Tumen River Area Development Program (TRADP), and (2) with outside formal international mechanisms. Examples of two strategies NGOs employed during the mid-1990s included:

- NGOs such as the Pacific Environment and Resource Center (PERC) of the United States and Friends of the Earth-Japan acted as "external watchdogs" to ensure that TRADP would become an environmentally sound program promoting sustainable development as promised by UN agencies.
- PERC and Hornocker Wildlife Institute worked as "operational agents" of international organizations, by undertaking various on-the-ground projects sponsored by UNDP and the Tumen Secretariat. The role of the NGOs not only helped international organizations actualize their intended activities, but also brought about legitimized space for NGOs in formal river basin governance in the area.

A more important aspect of NGO performance in the Tumen River Area was the operation of NGOs promoting local-level environmental governance. For example, international NGOs such as Tigris Foundation, Wildlife Conservation Society, and WWF collaborated with local NGOs and research institutes to execute their own biodiversity conservation programs. Some notable programs that were independent of (but complemented) UN initiatives include: (1) creating ecological conservation programs, (2) operating anti-poaching teams in collaboration with the government, (3) creating compensation schemes for farmers who lost livestock to tigers and leopards, and (4) undertaking capacity-building activities for local stakeholders of protected areas. Through these programs, NGOs acted as diffusers of information and knowledge, as well as providers of financial resources for local actions. Nevertheless, NGOs also have faced limitations. Specifically, NGOs were able to work only on the issue of biodiversity and operate only in Russia. The NGOs did not pursue issues of water pollution or undertake projects in the Chinese area, which sorely needs NGO and grassroots activism. In the Chinese region of the Tumen River Area, the lack of NGO counterparts and political restrictions, as well as weak human and financial resources restricted the sustainability of international NGO activism.

### Box 3. China's Hesitancy in Multilateral Environmental Initiatives

While China has been an active member of regional environmental initiatives, it is often hesitant to fully participate in these multilateral activities. For instance, China tried to reduce the institutional level and activity scope of the Acid Deposition Monitoring Network in East Asia (EANET) when it became an intergovernmental program in 1998 by opposing the development of an emission inventory and numerical models of long-range transport of acid deposition. China also opposed a Northeast Asia Subregional Program of Environmental Cooperation (NEASPEC) project dealing with transboundary air pollution, and a Northwest Pacific Action Plan (NOWPAP) activity plan on marine pollutions from land-based sources. In addition, the Chinese government also demanded that the Transboundary Diagnostic Analysis of the TumenNET project to include a statement indicating that the results of the analysis were not official but simply the personal opinion of researchers, although the government had officially undertaken the project. In regards to the Mekong River Basin Commission China has maintained simply an observer status, which means it is not obligated to undertake actions mandated for the commission is member countries.

National Commission for UNESCO in early 2002 to start a feasibility study on establishing such a reserve in the lower Tumen River Area. The main aim of the feasibility study project was to prepare a TBR proposal that included: (1) guidelines for transboundary cooperation, (2) potential institutional mechanisms, (3) establishment procedures, (4) zoning plans, (5) a draft Biosphere Reserve nomination form, and (6) and recommendations on a TBR implementation action plan and fund mobilization.

The feasibility study and the project to form the TBR, however, initially faced various political hurdles—one of the largest being the cautious position of Chinese central government agencies such as SEPA and the Chinese Man and the Biosphere (MAB) National Commission for UNESCO. The TBR project required clear support from China's MAB National Commission to be conducted smoothly and to produce politically meaningful outcomes. However this commission did not commit itself to the TBR because it did not receive the political approval from key high-level agencies in China.

Throughout all regional environmental cooperative efforts, China has been extremely cautious of bilateral or multilateral actions that might commit the country to long-term political or financial duties to protect the environment outside its borders. Chinese officials involved in such cooperative efforts are hesitant to even employ the term “transboundary” in cooperation projects, as they do not want the country to be officially recognized as a source of pollution of a neighbor's territory. Even more important is the wish to avoid any situation that might interfere in China's sovereignty to pursue economic development. See Box 3 for some other examples of China's hesitancy in transboundary environmental initiatives.

The Chinese have exhibited similar hesitancy vis-à-vis the Tumen River TBR initiative, which delayed the

official launch for months. Finally the TBR project began without the participation of the China's central government agencies. Without the formal endorsement by all national governments, the TBR project could only move forward as a results-oriented action plan for a TBR proposal. Within this new, “informal” action plan, UNESCO, NGOs, and provincial governments, took a new approach, focusing on bottom-up, instead of top-down activities—first mobilizing local stakeholders' understanding and interests within the TBR before trying to attract political support from central government agencies. This approach also was derived from the lessons from previous intergovernmental activities in the Tumen River Area, which mostly alienated local stakeholders, leaving feeble local capacities in environmental knowledge and management.

From mid-2002 until early 2004, international and local NGOs, as well as local governments in the border region have undertaken activities laying the groundwork for a true TBR in the Tumen River Area, including: (1) awareness-building and field diagnostic meetings, (2) national technical meetings, (3) a regional workshop, (4) national subprojects, and (5) mapping of ecological, economic and social conditions. At the end of October 2003, officials from Jilin (China) and Primorsky (Russia) provincial governments, staff from nature reserves in both parts of the Tumen River Area, and experts from domestic and international NGOs gathered together at a regional workshop in Hunchun, Jilin. The consensus reached at the meeting was more than originally expected. Officials from both Chinese and Russian provincial governments expressed their strong support for creating a TBR. Both provincial governments saw activities leading to the TBR creation as a crucial avenue to promote local cooperation across the border, to attract international attention to their protected areas, and to protect endangered animals. This breakthrough led workshop participants to agree on



meaningful outcomes to push forward the project's process. The outcomes included:

- Promoting local stakeholder understanding of various methodologies for biodiversity conservation in the transboundary areas;
- Opening windows of opportunity for information exchanges and field activities between various stakeholders across national boundaries, as well as within a country; and,
- Gathering and sharing information and materials on the ecological situation and state of conservation efforts in the Tumen River Area.

As the feasibility study project nears completion, it becomes clear that most local stakeholders in both Jilin and Primorsky want to help create the first TBR in Asia. At this stage, two ways are possible for the establishment of a Tumen River TBR: (1) make the central authorities of both China and Russia fill out a nomination form for a TBR together and apply for the creation to UNESCO, or (2) create a separate BR in each country and combine them as a TBR later when the political situation is more supportive. If BRs were independently established on both sides of the Sino-Russian border in the Tumen River Area, they could still act as an informal TBR until the official establishment. Regardless of which strategy is chosen, success remains in the hands of authorities in Beijing. Relevant authorities in Moscow already released letters of their support for a TBR, but Beijing still waits for the right moment to signal their intent.

In light of the Chinese central government's hesitancy, officials of the Jilin province and Hunchun Nature Reserve are first trying to upgrade the provincial level reserve to the state level, which will facilitate the reserve's nomination for a BR later. At the same time, local stakeholders in both China and Russia are preparing practical and cooperative activities for two BRs or a TBR. In parallel, the local stakeholder project team is attempting to invent workable options for the central government of China.

Having constructed a meaningful avenue for most major stakeholders to meet and to shape their common goals, it is crucial to keep transboundary activities alive after the feasibility study project's completion in mid-2004. In addition, persuading North Korea to join transboundary activities and become a member of a TBR remains as an important task, as its territory has considerable value as a part of the potential reserve. Currently, North Korea is hardly involved in multilateral environmental activities in Northeast Asia, but it appears rather receptive to activities on biodiversity issues. Thus, there is hope to see North Korea participate in later activities even though it declined the initial invitation.

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#### ENDNOTES

<sup>1</sup> As the BR is rooted in a UNESCO program, the creation of a Biosphere Reserve requires UNESCO to approve an application submitted by a country's National Commission for UNESCO.

<sup>2</sup> The existing transboundary biosphere reserves are the: Tatra in Poland and Slovakia (1992); Krkonoše/Karkonosze in Czech Republic and Poland (1992); Vosges du Nord /Pfälzerwald in France and Germany (1998); the Danube Delta in Romania and Ukraine (1998); the Eastern Carpathians in Poland, Slovakia and Ukraine (1998); and the West Region in Benin, Burkina Faso and Niger (2002).