Towards a Conservation Strategy for the World's Temperate Grasslands

photo: Chris Harris

Temperate grasslands are one of the world's great biomes. However, after cradling human needs for millennia, indigenous temperate grasslands are now the most altered and endangered ecosystem on the planet. Indigenous temperate grasslands occur on every continent (except Antarctica) and occupy about 8% of the earth's terrestrial surface. Of this, only 5% is currently protected within the global system of protected areas.

Once home to some of the world's greatest assemblages of wildlife (for example, North American bison, Argentina's pampas deer and Asia's saiga antelope), the remaining intact indigenous grasslands now support only remnant populations. More than half of all temperate grasslands have been converted for crop production, forest plantations, urbanization and other land uses such as energy and mining development. Much of the remainder is subject to intensive grazing. These practices have led and are continuing to lead to habitat loss, declining biodiversity, desertification and fragmentation. In addition, the specter of climate change is of ever-increasing concern.

It is essential that we increase the level of conservation and protection of temperate grasslands, and minimize the threats to these important landscapes, if we are to ensure their future health and ecological viability. Although the past few decades have seen impressive gains in the protection of nature in tropical rainforests, coral reefs and mountain landscapes, temperate grasslands have not been a visible part of the global conservation agenda. The level of communications and international cooperation that exists for many other biomes simply has not been present for temperate grasslands.

The Temperate Grasslands Conservation Initiative (TGCI) has been created to fill this gap, to serve as the center point for international communications and collaboration for the improved conservation and protection of the world's indigenous temperate grasslands. Through facilitating the development of a global strategy and regional action plans, the TGCI's goal is to double the current level of protection for these grasslands by 2014 and promote sustainable land use practices throughout the biome.

The situation is urgent and the message is clear – temperate grasslands need our help. Supported by a strong international network of grassland professionals, the Temperate Grasslands Conservation Initiative is well positioned to address this challenge. This brochure outlines specific project details and funding requirements to achieve success.

We need your financial support and urge you to join us in this important global conservation effort!

Bill Henwood
Project Director, Temperate Grasslands Conservation Initiative

Taking Global Action

The Temperate Grasslands Conservation Initiative (TGCI) is a project of the Grassland Protected Areas Specialist Group with the World Commission on Protected Areas, one of several commissions within the International Union for Conservation of Nature (IUCN). The TGCI was launched in June 2008 at a workshop in Hohhot, China where 35 grassland experts from 14 countries adopted the following mission: **"to reverse the trend of biodiversity loss and degradation of the temperate grasslands biome by promoting both the designation and special management of representative protected areas, and the widespread use of sustainable management practices beyond protected area boundaries, with the goal of at least doubling the current level of 5% protection by 2014".**

Work is now underway to deliver on this mission. As we set up programs to deliver on this mission we must respect the importance of temperate grasslands to the life and cultural survival of indigenous people.

The report Life in a Working Landscape: Towards a Conservation Strategy for the World's Temperate Grasslands is a record of the discussions and outcomes of the Hohhot Workshop. This workshop culminated in the adoption of a consensus statement, known as *The Hohhot Declaration*, which stands as a call to action to protect the world's indigenous temperate grasslands. This report, plus all TGCI documents is available on our website: www.iucn.org/wcpagrasslands

Making a difference!

We believe that the conservation and protection of the world's indigenous temperate grasslands requires the dual focus of site-specific protection of representative indigenous temperate grasslands ***and*** the fostering of sustainable land use practices throughout the biome. To achieve this mandate, the TGCI has identified five program priorities:

1. To conduct a global inventory and gap analysis of temperate grassland protected areas.
2. To develop a global strategy and four regional action plans to double the level of protection for temperate grasslands by 2014, by encouraging transboundary initiatives wherever possible.
3. To develop guidelines for sustainable land use practices that promote the maintenance of ecological and biodiversity values as well as socio-economic values of indigenous grasslands.
4. To develop mechanisms for improved international communications and collaboration, and general public awareness.
5. To support research that improves the understanding of the total economic value of intact indigenous temperate grasslands to society and human health.

Where are these grasslands?

Indigenous temperate grasslands occur globally in about 20 countries, mainly in the middle latitudes where seasonal climates and soils favour the dominance of perennial grasses or graminoids, as illustrated in the accompanying map. Similar grasslands occur above the tree line in tropical or sub-tropical regions such as in the high Andes, the Tibetan plateau, Iran and equatorial Africa.

The Hohhot Declaration

XXI International Grasslands Congress/VIII International Rangeland Congress – July 2008
Hohhot, Inner Mongolia, China

Therefore, we the participants of the Hohhot World Temperate Grasslands Conservation Initiative Workshop from five continents and 14 countries, declare that temperate indigenous grasslands are critically endangered and urgent action is required to protect and maintain the services they provide to sustain human life. We call upon all sectors of society to collaborate towards this goal.

The Need for a Global Strategy

The potential for improved conservation and protection of indigenous temperate grasslands varies widely around the world. The greatest potential for large landscape level conservation, identified on the map by hatching, lies in the Daurian steppe and Amur River Basin of eastern Mongolia, China and Russia; the Kazakh steppe; the Patagonia steppe; and the Northern Great Plains of North America. Moderately fragmented grasslands are found in the pampas and campos in South America, and the veld of Southern Africa, and although highly utilized, continue to hold potential for sustaining biodiversity. The highly modified grasslands in the steppes of eastern Europe, the tall grass prairie of North America and the lowland grasslands of south-eastern Australia and New Zealand deserve urgent attention as so few intact remnants exist.

Global conservation necessitates 'transboundary' eco-regional conservation – not a country-by-country approach. Transboundary management requires diplomacy, cooperation, shared decision-making and partnerships to ensure such matters as wildlife migration patterns and water management are properly addressed.

As such, any conservation strategy must be based on a comprehensive inventory and assessment of these grasslands throughout the biome that determines management effectiveness and the existing extent of protection. Currently this data is lacking.

One-time Funding Requirement: $150,000US

Undertake a comprehensive and quantitative GIS-based global inventory to locate and describe all current protected areas within the temperate grassland biome, and a gap analysis to enable the identification of protection priorities and the best candidate areas to fill these gaps and meet the protection target.

Maintaining dialogue is critical to success. The TGCI therefore requires a basic budget for core capacity and a steering committee; communication with the global network of approximately 100 grassland experts; support for regular global-level temperate grassland meetings; and the coordination of regional efforts. In addition, the ability to provide timely and effective input to key IUCN commissions and WCPA partners is essential.

Annual Funding Requirement: $30,000US

Create and support mechanisms to improve international communications and collaboration, and to monitor progress.

One-time Funding Requirement: $60,000US

Undertake a global review of various international conventions and agreements to assess their potential contribution and to harmonize action with these key partners. Prepare for the upcoming Convention on Biological Diversity COP 10 meeting in October 2010.

photo: Andrea Kotylak

The World's Temperate Grasslands Conservation Priorities

photo: Krista Connick Todd

- The North American Prairie includes the Northern Great Plains of Canada and the United States, and the Chihuahuan Desert Grasslands of Mexico

photo: Bridget Besaw/TNC

- South American Patagonia Steppe

photo: Karsten Wesche

- Ethiopian Mountain Grasslands

photo: Adriano Becker

- South American Pampas

photo: Vadim Kiriliuk

- The Daurian Steppe and Amur River Basin spanning China, Mongolia and Russia

photo: Alan Mark

- New Zealand's mid-elevation grasslands

Intermontane Grasslands
Northern Great Plains
North American Prairie
Chihuahuan Desert Grasslands
Páramo
Central Andean Puna
Pampas and Campos
Patagonia Steppe
Mountain Grasslands of Eastern Africa
Kazakh Steppe
Eurasian Steppe
Mongolian Steppes
Daurian Steppe and Amur River Basin
Mountain Steppes of Southeastern Asia
Northern China
South African Veld Grasslands
New Guinea
Southeastern Australia
New Zealand

Temperate Grasslands

Greatest Potential for Indigenous Temperate Grasslands Conservation at a Landscape Scale

cartography: Ole Heggen
Department of Geography
University of Victoria

IUCN WCPA WORLD COMMISSION ON PROTECTED AREAS

Temperate Grasslands Conservation Initiative

Regional Conservation Action Plans

The approach to regional conservation planning for temperate grasslands will vary from region to region. This variation is determined by such factors as the current level of protection and disturbance, the existing ecological condition and potential for connectivity, the possibility of restoration, the status of wildlife populations and ability for re-introductions, and the prospects for sustainable management and further protection. These factors lead to the quality of temperate grasslands being classified from large and relatively intact landscapes to highly modified and fragmented landscape remnants.

As stated previously, the greatest potential for large landscape level conservation lies in the Daurian steppe and Amur River basin of East Asia (eastern Mongolia, China and Russia); the Kazakh steppe; the Patagonia steppe; and the Northern Great Plains of North America.

Annual Funding Requirement: $200,000US

Undertake landscape level conservation planning within each of the four temperate grassland regions. Funding is required to provide capacity for a local group to lead the planning effort and the development and implementation of a ten-year regional action plan that focuses on conservation, identification of candidate protected areas, legal protection opportunities and sustainable management. These funds would be allocated as follows:

- **Annual Funding Requirement for South America: $50,000**US
- **Annual Funding Requirement for Northern Great Plains: $50,000**US
- **Annual Funding Requirement for East Asia: $50,000**US
- **Annual Funding Requirement for for the Kazakh steppe: $50,000**US

As biologically important as large landscape conservation is, those temperate grasslands that have been modified and fragmented also deserve attention. On these grasslands we must ensure the maximum retention of biological diversity, their long-term potential for connectivity and the ability for indigenous people to retain their culture and livelihood. In those grasslands that have been highly modified (where less than 5% of the original ecosystem remains) the urgency for legal protection cannot be overstated, for example in the steppes of eastern Europe, the tall grass prairie of North America and the lowland grasslands of south-eastern Australia and New Zealand.

Annual Funding Requirement: $50,000US

Organize the development of regional conservation action plans for those temperate grassland regions that have been highly modified and fragmented, to establish priorities for legal protection and to put in place best management practices related to sustainable land use. These action plans must aim to coordinate the cooperative action of landowners, conservation groups and associated governments.

photo: Ilya Smelansky

A recent literature review of research on the total economic value of indigenous temperate grasslands, sponsored by TGCI, found no studies that specifically addressed the empirical value of these grasslands. It is traditionally assumed that when grasslands are treated as a 'commodity and sold on the market place' their economic value has been measured and reflected in the subsequent dollar amount exchanged. However, we now know this is not true! In a biome with the highest Conservation Risk Index globally, our understanding of the value of goods and services provided by indigenous temperate grasslands is virtually non-existent. Temperate grasslands are in all likelihood the least understood biome in the world in terms of their total value to sustainable economic uses, ecosystem goods and services, and their contribution to human health and well being. If our economy is not fully able to provide an accurate picture of the net benefits of temperate grasslands, poor land use and investment decisions will result, and the important values of these grasslands will be lost to society.

We know that indigenous temperate grasslands provide goods and services essential for the ongoing well-being of humans and of the planet, yet we don't understand their total economic value as a measure of their true contribution. Grasslands have intrinsic ecological value and provide habitat for thousands of species – including humans. The very nature of their ecosystem services helps to regulate and filter water, trap and store carbon, and contribute to maintaining the world's climatic systems. We also need to articulate a grassland-related carbon credit strategy that would allocate funding toward protection and conservation.

We believe that further research would enhance temperate grassland conservation.

Annual Funding Requirement: $40,000US

Undertake research to estimate the true economic value of intact indigenous temperate grasslands in terms of their socio-economic values and those values associated with ecological goods and services and carbon credit conservation funding.

Guidelines and best practices for sustainable land use planning

The ecological health and viability of the temperate grassland biome cannot be dependent on protected areas alone, especially with most unprotected grassland ecosystems being in an altered condition. If temperate grasslands are to continue to provide the full range of ecological and socio-economic goods and services that humans require, the management of all grasslands throughout the biome needs to be guided by a comprehensive set of best land use practices that focus on conservation and the maintenance of biodiversity.

One-time Funding Requirement: $75,000US

Develop overall guidelines for sustainable land use practices for temperate grasslands that address such issues as overgrazing, the introduction of exotic species, fire suppression and water management. Once completed, these guidelines would be widely distributed to temperate grassland users and managers.

The Challenge:
Giving this agenda life

We know that indigenous temperate grasslands are likely the least understood biome in the world. Combined with the fact that grasslands are historically difficult to raise money for, we are left with a critical situation. The case is clear – there is an urgent need for the protection and conservation of temperate grasslands. However, a focused communication strategy to raise awareness with critical sectors, governments, funders and related non-governmental organizations is virtually non-existent. To achieve success this lack of general public awareness must be addressed.

Annual Funding Requirement: $30,000US

To raise public awareness globally about the need for temperate grasslands conservation and protection and to firmly place indigenous temperate grasslands on the global conservation agenda.

We need your help!

Since 2007, $420,000US has been raised to support this initiative. In addition temperate grassland experts throughout the world have matched this contribution through their generous in-kind donation of time and scientific expertise. Our goal is to catalyze additional financial support for temperate grasslands conservation among conservation and research institutions, key government agencies, the private sector, and interested donors and foundations.

In summary our five funding priorities are:

- To conduct a global inventory and gap analysis of temperate grassland protected areas.
- To develop a global strategy and four regional action plans to double the level of protection for temperate grasslands by 2014.
- To develop guidelines for sustainable land use practices that promote the maintenance of ecological and biodiversity values as well as socio-economic values of indigenous grasslands.
- To develop mechanisms for improved international communications and collaboration, and general public awareness.
- To support research that improves the understanding of the total economic value of intact indigenous temperate grasslands to society and human health.

To achieve these priorities, the TGCI's annual budget requirement is $350,000US. In addition, the one-time funding requirements for inventory and assessment, land use guidelines and supporting documentation amount to $285,000US. Donated funds will be applied directly to raising public global awareness, directing socio-economic research and, through the development of regional action plans, ensuring as much 'on the ground' response as possible to increase the level of protection, conservation and the sustainable management of the world's indigenous temperate grasslands.

With your assistance, our dream of ensuring a future for the biodiversity of this critical biome will become a reality.

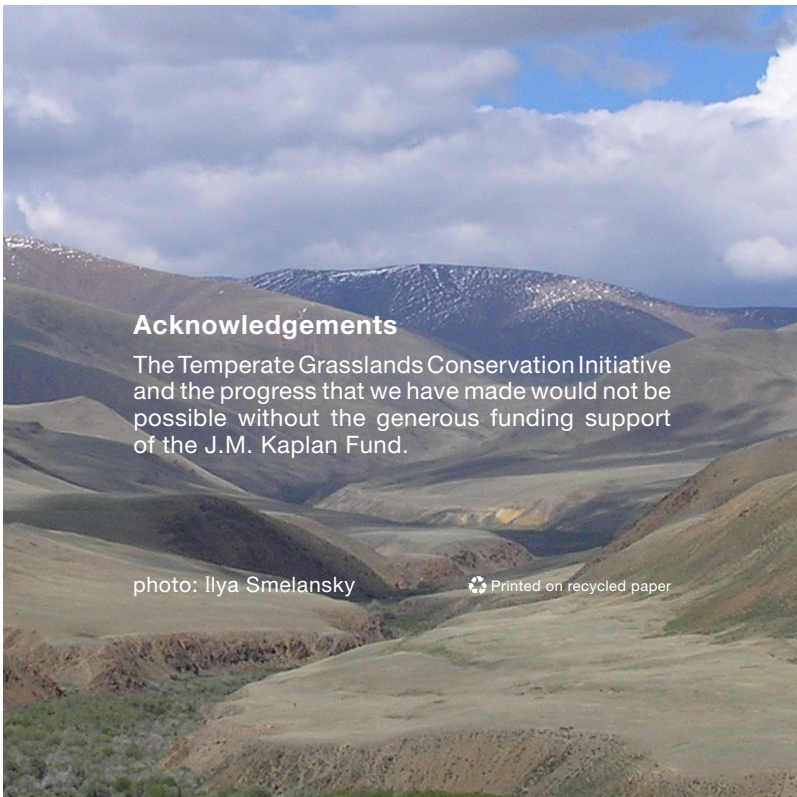

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photo: Ilya Smelansky

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