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Green, Resilient Economic Development in Snow Leopard Landscape Management Planning

Interim Advice Document Addendum to the General Guidelines for Climate Smart Snow Leopard Landscape Management Planning

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1. Background

A recent report estimates global infrastructure spending to reach nearly \$80 trillion by 2025, with one third of this expected to occur in developing countries¹. While critical to alleviating poverty, increasing access to markets, and economic growth in general, if done without proper consideration of current and future impacts on surrounding landscapes, such development will have considerable impacts on ecosystems, their services, and biodiversity that is in many cases already facing the downside of economic development. These range from severed migration pathways and habitat destruction, to water quality degradation and impacts on water flows, to name just a few. In the larger context of this development pressure, the effects of climate change continue to worsen, creating increasingly frequent and intense extreme hazards like droughts, floods, extreme storms, and incremental impacts due to increased temperatures, from glacial melt to desertification. The confluence of these two large drivers present the greatest challenge to ecosystem and biodiversity conservation today.

It is thus critical for governments around the world to embrace holistic and integrated landscape management approaches that effectively balance trade-offs for infrastructure development, natural resource management and biodiversity conservation that build climate resilience for communities and ecosystems. Important advancements have been made in recent years to develop such a framework, especially in striving for more sustainable development pathways in emerging economies in the developing world, through new approaches to sustainable, or “green” infrastructure development, including principles for a “Green Economy” developed by the Green Economy Coalition—a consortium of civil society groups and the private sectors—and more specifically and concretely for wildlife conservation, “Smart Green Infrastructure in Tiger Conservation Landscapes,” developed in Bhutan by government and civil society representatives in 2011. These approaches, however, have yet to truly incorporate considerations of climate change impacts and the need for climate resilience. As is evidenced through both field observations, consultations with local stakeholders, and substantial peer-reviewed research, this is an especially important consideration for the snow leopard range, which is already experiencing the effects of climate change, and in many cases more extensively and rapidly than many other regions around the world.

A key aspect of the approach being used by GSLEP is to acknowledge legitimate roles of all stakeholders, including communities, governments and businesses, in the GSLEP landscape and develop management plans that balance the needs of conservation and development. Using principles of ‘green development (economy)’, and in particular ‘green infrastructure’ is thus a key means of this approach.

¹<https://www.pwc.com/gx/en/capital-projects-infrastructure/publications/cpi-outlook/assets/cpi-outlook-to-2025.pdf>

9 Principles for a Green Economy

- 1. The Sustainable Principle:** a green, fair and inclusive economy is a means to deliver sustainability
- 2. The Justice Principle:** a green, fair and inclusive economy supports equity
- 3. The Dignity Principle:** A green, fair and inclusive economy creates genuine prosperity and wellbeing for all
- 4. Healthy Planet Principle:** A green, fair and inclusive economy restores lost biodiversity, invests in natural systems and rehabilitates those that are degraded
- 5. The Inclusion Principle:** A green, fair and inclusive economy is inclusive and participatory in decision-making
- 6. The Good Governance and Accountability Principle:** A green, fair and inclusive economy is accountable
- 7. The Resilience Principle:** A green, fair and inclusive economy contributes to economic, social and environmental resilience
- 8. The Efficiency and Sufficiency Principle:** A green, fair and inclusive economy delivers sustainable consumption and production
- 9. The Generations Principle:** A green, fair and inclusive economy invests for the present and the future

From www.greeneconomycoalition.org. See Appendix 2 for full descriptions of each principle.

Moving forward, a critical next step will be to develop guidelines that specifically address the challenges of greener, more sustainable and climate resilient development across the unique landscapes of the snow leopard range stretching across millions of square kilometres in Central and South Asia. While these guidelines are developed, the principles from these two key resources—the Green Economy Coalition and Bhutan guidelines for smart green infrastructure—can serve as useful guidelines in the development of snow leopard landscape management plans across the range. Of course, not all of them will be relevant, given the differences between tigers and snow leopards, but they should nevertheless provide a useful starting point for considering these issues.

Appendices

Appendix 1: The Thimphu recommendations on smart green infrastructure in tiger conservation landscapes

Thimphu, Bhutan
May 30-31, 2011

On May 30-31, 2011, in Thimphu, Bhutan, representatives from diverse ministries, civil society, and the private sector in Bhutan, national experts from other Tiger Range Countries (TRCs) and international experts met to discuss how to ensure tiger conservation amid accelerating development pressures in tiger conservation landscapes (TCLs). The outcome of 'Smart Green Infrastructure in Tiger Conservation Landscapes: A Practitioner's Workshop', which was jointly organized by the Royal Government of Bhutan and the Global Tiger Initiative, is a set of recommendations for planning and implementing Smart Green Infrastructure (SGI) tools with application to land-use planning, hydroelectric power, roads and ecotourism development that can potentially impact TCLs. These recommendations may have wide applicability in TRCs.

Recommendations on Land-Use Planning

Recommendations at the policy level (National and Provincial Level)

- **Develop TCL Master Plans** encompassing core habitats, buffer zones, corridors and the wider production landscape to ensure inviolability of core habitats and compatible land use in the remaining landscape under available national or sub-national land-use policies or relevant physical/spatial planning acts.
- **Adopt comprehensive national physical/spatial planning legislation** wherever enabling land-use planning legislation is absent to ensure hierarchical land-use planning covering economic, social, environment and natural resource conservation, as well as infrastructure and urban and rural development.
- **Include SGI principles in environmental compliance legislation** through the development of tools and guidelines.
- **Finance the incremental cost of SGI** through the design and adoption of innovative business models building on the notion of Corporate Environmental Responsibility and offset banking, including economic and ecosystem valuation methodologies to support SGI.

Recommendations at the TCL level (Landscape Level)

- **Adopt core principles of SGI**, i.e. that tiger range areas are inviolate and that infrastructure in the remainder of the landscape incorporates engineering solutions for biodiversity.
- **Prepare an annual State of the TCL Report** based on a transparent monitoring framework using the best available science to report on changes in tiger habitat. This Report will also build awareness of SGI principles and hold stakeholders accountable for their actions to implement these principles.
- **Share responsibility for ensuring SGI across public agencies, the private sector, and civil society.** Conserving tiger landscapes is not the sole responsibility of forest and wildlife

departments, but a shared responsibility. Human capital and technical capacity to design, implement and supervise SGI must be built within infrastructure, planning and financial institutions. All sectors must contribute the resources necessary for this.

- **Identify and map critical biological/ecological corridors** linking TCLs and linking tiger habitats within TCLs. Their management must be mainstreamed in both land-use planning and TCL master plans to ensure tiger mobility while allowing for sustainable livelihoods and smart green infrastructure.
- TRCs, including Bhutan, are undergoing an intensive pace of urbanization. Cities are expanding and mushrooming in an unregulated manner. It is critical to **regulate unplanned urban sprawl** through a strict compliance with land use planning and zoning and to contain the ecological footprint of cities, particularly those in the contiguities of TCLs and other sensitive and high-value ecosystems.

Recommendations on Hydropower Development

Recommendations

- **Develop an overall hydropower development strategy** that takes into account sensitive environmental areas, including core tiger breeding zones. Such a strategy should build on Strategic Environmental Assessment of the hydropower sector and make upfront choices of what, when and where projects should be developed.
- **Define, delineate and designate No-Go Areas for core tiger habitats** as soon as possible.
- **A framework for establishing baselines environmental status and regular monitoring processes** should be established and implemented.
- **Institutional arrangements should be established** involving national and sub-national entities, and between sectors for planning specific projects, managing social and environmental risks and promoting adaptive management during the implementation of the project.
- **Accelerate skill enhancement and human resource capacity building** in order to enable the development and implementation of SGI in the hydropower sector.
- **Promote the principle of the developer meeting the full environmental and social costs of the project**, including paying for the value of ecosystem services provided to the project and making contributions to environmental offsets as appropriate to the project and country.
- **Use independent panels** on dam safety/construction and social-environmental issues which are accountable to the government to ensure expert monitoring and establish common ground between developers and government.
- **Promote the use of voluntary, industry-adopted corporate toolkits** among developers for defining good practices and a framework for sustainability assessments.
- **Highlight the right of Least Developed Countries (LDCs) to compensation for foregone opportunity costs of non-development in No-Go Areas in favour of Global Public Good values.**

Recommendations on Roads

Objectives

To manage road construction, operation and maintenance to support viable populations of tigers in each landscape in which roads and their ancillary infrastructure intersect. By 2022, a demographically stable meta-population of tigers in Bhutan to co-exist compatibly with rural livelihoods.

Building the process

Capacity-building, institutional coordination and financial resources (from partnerships, public purse, etc.) to construct, operate and maintain roads in TCLs, and supervise implementation of Environmentally-Friendly Road Construction (EFRC).

Recommendations

- **Use and enhance existing in-park road guidelines²** throughout TCLs to apply minimum standards to all road construction, maintenance and operation in TCLs. (Lead responsibility: Department of Forests and Park Services)
- **Develop monitoring tools/indicators for supervising implementation of guidelines in EIA process.** This should include developing the unit cost of environmental specifications, including supervision and monitoring. These tools would apply to both contractors in their EMPs and agencies that supervise road operation and maintenance following the construction phase. (Lead responsibility: Department of Roads with Department of Quality and Standards).
- **Distil lessons learned** from pilot approaches in the on-going national highway project.
- **Develop bidding documents that capture the unit cost of environmental mitigation and monitoring** as part of the submitted bid (estimate/km). (Lead responsibility: Ministry of Finance).
- **Clearly map and instil mitigation measures with principles of avoidance and SGI to existing and proposed infrastructure** in TCLs to maintain tiger populations. This needs to link with Master Plans for TCLs and be integrated into the National Road Plan.



Photo 1. A bulldozer haphazardly digs a road out of a hillside in Nepal's Tsum Valley. Eventually this road will reach all the way to Tibet. Photo: Chris Czarnecki

² Guidelines already exist for roads in protected areas.

Recommendations on Sustainable Tourism

Objective

To promote sustainable tourism in TCLs, recognizing that controlled and managed tourism can help support and protect globally significant biodiversity, tigers and their habitat.

Priority Recommendations

- **Develop guidelines to regulate tourism in and around TCLs.**
- **Include a tourism and visitor management component** in all TCL Master Plans.
- **Acknowledge that conservation comes first**, and that sustainable tourism is a tool to help fund TCLs, not a panacea for protection.
- **Develop tourism as a complementary rather than an alternative livelihood** for rural communities in and around TCLs.
- **Maximize the use of smart green technologies in all tourism facilities** (e.g. buildings, water supply, waste management, renewable energy, etc.).
- **Recognize that commercial viability is vital** for the sustainability of private sector and other partners who manage tourism operations.
- **Enforce legal regulations and zoning** to control ad hoc private sector development in and around TCLs.

Building the Process

- **Capacity-building, institutional coordination and financial resources** for SGI to facilitate sustainable tourism in and around TCLs.
- **Build community and host capacity to engage in responsible tourism**, to reap livelihood benefits, and to manage financial flows in and around TCLs.
- **Forge partnerships among TCL tourism stakeholders** to ensure coordination and responsible stewardship.
- **Develop interpretation and guide standards** for each TCL to enrich visitor experience and create awareness of conservation issues.
- **Develop products and amenities to match the range of target market segments** (high-end to budget, including domestic) in and around TCLs.
- **Be careful not to raise tourism and conservation expectations** at a community and national level that cannot be met.
- **Develop indicators to monitor and evaluate visitor impacts in TCLs.**

Appendix 2: Nine Principles of a Green Economy, from the Green Economy Coalition

The following are the nine basic principles of a green economy, from the Green Economy Coalition, which consists of various civil society groups and the private sector. See www.greeneconomycoalition.org for more information.

Nine Principles of a Green Economy

A green, fair and inclusive economy provides a better quality of life for all within the ecological limits of the planet.

1. **The Sustainable Principle.** A green, fair and inclusive economy is a means to deliver sustainability.
 - It is one of the vehicles to deliver sustainable development – not a replacement for it.
 - It respects its dependency on a healthy environment and it strives to create wellbeing for all
 - It addresses all three dimensions (environmental, social and economic) and develops policy mixes that integrate and seek the best results across all of them
2. **The Justice Principle.** A green, fair and inclusive economy supports equity
 - It supports equity between and within countries and between generations
 - It respects human rights and cultural diversity
 - It promotes gender equality and recognises knowledge, skills, experience and contribution of each individual
 - It respects indigenous peoples rights to lands, territories and resources
3. **The Dignity Principle.** A green, fair and inclusive economy creates genuine prosperity and wellbeing for all
 - It alleviates poverty
 - It delivers a high level of human development in all countries
 - It provides food security and universal access to basic health, education, sanitation, water, energy and other essential services
 - It transforms traditional jobs by building capacity and skills, respects the rights of workers and actively develops new, decent green jobs and careers
 - It achieves a just transition.
 - It acknowledges the contribution of unpaid work
 - It promotes the self-empowerment and education of women
 - It support the right to development if delivered in a sustainable way
4. **Healthy Planet Principle.** A green, fair and inclusive economy restores lost biodiversity, invests in natural systems and rehabilitates those that are degraded
 - It recognizes its dependency on the productivity of ecosystems and biodiversity
 - It does not violate, disrupt, or overstep ecological boundaries and commits to cooperate within them, including reducing pollution, safeguarding ecosystems, biodiversity integrity, other natural resources including air, water, soil, and biogeochemical cycles

- It ensures that environmental integrity is maintained before allocating resources among competing uses
 - It ensures an efficient and wise use of natural resources, including water, natural gas, oil and mineral resources, without compromising future generations prospects
 - It supports the respect of all forms of life
 - It applies the precautionary principle
 - It assesses the potential impact of new technologies and innovations before they are released
 - It assesses the environmental impacts of economic policies and seeks to find the least disruptive, most positive benefit for the environment and people
 - It promotes the restoration of balance between ecological and social relations
5. **The Inclusion Principle.** A green, fair and inclusive economy is inclusive and participatory in decision-making
- It is based on transparency, sound science and the visible engagement of all relevant stakeholders
 - It supports good governance at all levels from local to global
 - It empowers citizens and promotes full and effective voluntary participation at all levels
 - It respects cultural values, is tolerant to religious views and lifestyle choices, and sensitive to ethical considerations
 - It builds societal awareness, developing education and skills
 - It is transparent, inclusive and participatory, giving equal opportunities to, and advocating further for the rights of, young and old, women and men, poor and low skilled workers, indigenous peoples, ethnic minorities and local communities
6. **The Good Governance and Accountability Principle.** A green, fair and inclusive economy is accountable
- It provides a framework to structure markets and production in consultation with all stakeholders
 - It reports its sustainable progress on environmental, social and economic measures, in company, national and international accounts.
 - It achieves transparency
 - It promotes international cooperation and defines international liability
 - It promotes global policy coherence and fair international cooperation
 - It promotes common but differentiated responsibilities
 - It commits to international human rights standards and environmental agreements
7. **The Resilience Principle.** A green, fair and inclusive economy contributes to economic, social and environmental resilience
- It supports the development of social and environmental protection systems, and preparedness against and adaptation for climate extreme events and disasters
 - It creates a universal social protection floor.
 - It promotes a variety of green economy models relevant to different cultural, social and environmental contexts
 - It considers indigenous local knowledge and promotes the sharing of diverse knowledge systems

- It builds on local skills and capacities and develops these further
 - It supports sustainable, diverse economies and local livelihoods
 - It promotes systems approaches, recognising the interdependence and integrated nature of these systems, underpinned by culture and ethical values
8. **The Efficiency and Sufficiency Principle.** A green, fair and inclusive economy delivers sustainable consumption and production
- It seeks to ensure prices reflect true costs incorporating social and environmental externalities
 - It implements the polluter pays principle
 - It supports life-cycle management, and strives for zero emission, zero waste, resource efficiency and optimal water use
 - It prioritises renewable energy and renewable resources
 - It seeks absolute decoupling of production and consumption from negative social and environmental impact
 - It delivers sustainable lifestyles supporting a major cultural transformation
 - It promotes social, economic and environmental innovation
 - It gives fair rights to access intellectual property within a global legal framework



Photo 2. Eco-camp for children in Mongolia. Photo Credit: Nature Conservation Foundation / Snow Leopard Trust

9. **The Generations Principle.** A green, fair and inclusive economy invests for the present and the future
- It delivers inter-generational and intra-generational fairness
 - It promotes conservation of resources and the quality of life over the long term
 - It influences and regulates the finance sector so that it invests in the green, fair and inclusive economy and achieves a stable global monetary system
 - It prioritises long-term, scientifically-sound decision making above the short-term
 - It promotes equitable education at all levels and sustainability education for children