Overview of a selected number of Resolutions and Recommendations relevant to mainstreaming biodiversity in Infrastructure and Urban developments

Background

By 2040, the global population will grow by almost 2 billion people – a 25% increase. Rural to urban migration will continue with the urban population growing by 46%, triggering massive demand for infrastructure support. The Global Infrastructure Outlook I, developed by the Global Infrastructure Hub with Oxford Economics, has forecasted infrastructure investment needs across 50 countries and seven sectors to reach $94 trillion by 2040.

These investments will certainly contribute to achieving a number of Sustainable Development Goals, but will also have to be undertaken with great consideration for their potential impacts on biodiversity.

Parties to the Convention on Biological Diversity as well as other governments, stakeholders and partners gathering in Sharm El-Sheikh, Egypt on the occasion of the UN Biodiversity Conference 2018 will discuss among other things, issues related to the mainstreaming of biodiversity into the sectors of energy and mining, infrastructure, manufacturing and processing industry, and health. A number of IUCN Resolutions and Recommendations related to infrastructure and urban development contain important inputs that could contribute to inform these discussions. Key issues are highlighted in this Information Paper.

Support the adoption of the mitigation hierarchy as the preferred biodiversity management framework and other management best practices

In accordance to WCC-2016-Res-067 Best practice for industrial-scale development projects, governments should promote best practice for all industrial-scale development projects to limit environmental and social impacts by ensuring¹:

- that projects are sited within the context of an integrated, sustainable, cross-sectoral and transparent landscape-level plan;
- the avoidance of areas of significance for biodiversity and ecosystem services, particularly World Heritage Sites and other priority conservation areas;
- the legal mandating and approval of Environmental and Social Impact Assessments (ESIAs) during the project design phase when permission for the project is requested, following international best practice;
- application of the mitigation hierarchy to avoid, minimise, restore and, as a last resort, compensate or offset residual impacts where they occur;
- transparent and accountable reporting and decision making throughout the project; and

¹ The list below is taken from the text of the Resolution.
• respect for the legal and customary land and resource rights of local communities, and their free and prior informed consent to any project that affects such rights; …

Strengthen the mitigation measures if in a Key Biodiversity Area (KBA)

The KBA Partners have developed Guidelines on Business and KBAs: Managing Risk to Biodiversity highlighting specific measures that should be adopted when projects could impact on Key Biodiversity Areas’ and more specifically the KBA specific trigger. These measures include limits to biodiversity restoration and to biodiversity offsets, designed to prevent that sites do no longer meet the KBA criteria.

Promote a Net Biodiversity Gain target for all infrastructure projects and the implementation of biodiversity offsets in line with WCC-2016-Res-059 IUCN’s Policy on Biodiversity Offsets.

In particular, the Policy stresses that “…biodiversity offsets are only appropriate for projects which have rigorously applied the mitigation hierarchy (avoid, minimise, restore/rehabilitate and offset….) and when a full set of alternatives to the project have been considered. “…Therefore, “Only after applying the earlier steps in the mitigation hierarchy should biodiversity offsets be employed to address the residual impact in order to achieve at least No Net Loss and preferably a Net Gain at the project level.”

The IUCN’s Policy also indicates that “In certain circumstances, residual impacts on biodiversity (after completing the avoidance, minimization and rehabilitation steps of the mitigation hierarchy) cannot be offset. Additionally, there are some components of biodiversity for which impacts could theoretically be offset, but with a high risk of failure. Under these circumstances, biodiversity offsets are not appropriate, and this means the project as designed should not proceed.”

Avoid projects in protected areas

Infrastructure should not be developed in protected areas (all 6 IUCN Categories) and impacts avoided in sacred natural sites and territories and areas conserved by indigenous peoples and local communities (ICCAs).

WCC-2016-Rec-102 Protected areas and other areas important for biodiversity in relation to environmentally damaging industrial activities and infrastructure development, states that and/or calls on:

• governments should prohibit environmentally damaging industrial activities and infrastructure development in all IUCN categories of protected area.
• governments, decision makers, community and private landowners to give high priority to avoiding environmentally damaging industrial activities and infrastructure development that impact sacred natural sites and territories and areas conserved by indigenous peoples and local communities (ICCAs), noting the ICCA Registry maintained by the UNEP World Conservation Monitoring Centre. The aim is to ensure that all activities are compatible with the conservation outcomes of these areas through appropriate, transparent and rigorous pre-emptive appraisal processes, such as international best-practice environmental and social impact assessments, and via free, prior and informed consent, in line with the UN Declaration on the Rights of Indigenous Peoples;
• companies, public sector bodies, financial institutions (including development banks), relevant certification bodies and relevant industry groups not to conduct, invest in or fund environmentally damaging industrial activities and infrastructure development within, or that negatively impact protected areas or any areas of particular importance for biodiversity and ecosystem services that are identified by governments as essential to achieving the Aichi Biodiversity Targets, and to make public commitments to this effect.

Require screening for biodiversity risks

It is recommended to screen risks to biodiversity at the early stage of the project. The Integrated
Biodiversity Assessment Tool (IBAT) is a suitable tool for this high level screening (and now it enables also the assessment of linear infrastructures).

Promote the assessment of indirect and cumulative impacts

Any development project, including infrastructure developments, generate also indirect impacts, which are the impacts induced by, or ‘by-products’ of, project activities. These would include the introduction and spreading of invasive species, hunting/gathering and habitat degradation (not project related but enhance by the increased access to natural systems). Cumulative impacts are the successive, incremental and combined direct and indirect impacts of project development. They arise from compounding additional activities of a project or projects. The inclusion of indirect and cumulative impacts assessments in EIA should be promoted (especially for transport infrastructures that enable access to previously inaccessible areas).

Integrate biodiversity safeguards in the sourcing of building materials

From cement to sand, to steel and aluminium and wood, the extraction of these raw materials has a suite of additional biodiversity impacts which should be considered at the development stage and well managed. Reputable sustainability certification schemes exist for all these raw materials and could be used as the basis for the procurement.

Promote where relevant the use of natural infrastructure

Natural infrastructure is increasingly recognised as a way to provide successful environmental, economic and social benefits through natural solutions and to help reduce dependence on grey (built) infrastructure that often has significant impacts on biodiversity and is more expensive to build and maintain.

Invest in nature in urban areas

With two-thirds of the world’s population expected to live in cities by 2050, the IUCN Urban Nature Alliance, launched in September, with Scottish Wildlife Trust, aims to raise awareness about the value of biodiversity and ecosystems in urban areas, and explore and develop partnerships for action on how these ecosystems can help address urban challenges, such as air pollution, flooding and health problems. Restoring the connection between cities and the surrounding natural landscape and the ecosystem services they provide is one of the greatest opportunities we can offer urban citizens.

Nature is more and more present in cities, not only because of the presence of trees, parks, rivers or green roofs, but also through the ecological management of green and blue urban spaces. Plant and animal species benefit tremendously from these areas and besides the cultivated species, also wild species can be seen. These green and blue spaces provide many benefits that contribute to quality of life of urban citizens and present an essential element of a sustainable urban future. An important focus for IUCN is to raise awareness for the role of cities and subnational governments in investing in protecting and restoring ecosystems and to support them to incorporate biodiversity considerations into their urban, peri-urban and land use planning.

Climate change and hazard events such as landslides and floods have caused an increase in disasters worldwide, putting millions of people at risk. Investments in sustainable ecosystem management or sound environmental management can act as natural buffers to hazard events for flood abatement, slope stabilization, coastal protection and avalanche prevention. These natural buffers are often less expensive to install or maintain, and often more effective than physical engineering structures, such as dykes or concrete walls.
To transform cities into ecologically healthy, liveable and resilient areas that can be sustained for decades a complete rethink of the way urban areas are developed and managed is required. The health of the natural environment deserves an integral place in urban planning, development and management and will benefit from the establishment of collaboration between non-conventional partners.

There is a clear need for a new financial and land and water management system which recognizes nature's enormous contribution to global economic growth, livelihoods and disaster risk reduction. This means bringing the world of nature conservation together with the financing, insurance, infrastructure and urban development sectors. Some examples:

- In India, wetlands cover an estimated three % of India’s land area. East Kolkata Wetlands, for over a century, has been quietly flushing filth out of the city’s system and cleaning its air. The rapidly shrinking East Kolkata Wetlands is considered the largest natural treatment system for solid and soluble waste. This natural waste water treatment system receives some 1,000 million litres of sewage every day, reducing the need for constructing expensive treatment plants. It was developed by the local community with their traditional wisdom saves the city the cost of having to build and maintain a conventional treatment plant and in addition, the wetland also provides livelihood for around 25,000 families of fishermen, produces over 10,000 tonnes of fish per year for the people of Kolkata as well as rice and vegetables. Kolkata is the only city in India without a sewage treatment plant.

- Healthy coral reefs are valuable assets for coastal communities. They provide a powerful defence against storms, absorbing more than 90% of a wave's force before it reaches shore. In Tulum, Yucatan, Mexico, the local government, tourism industry and insurance industry are teaming up to share the costs—and benefits—of protecting a coral reef through a new insurance product—insurance for nature. A new insurance product to cover the most valuable assets in the world—the natural systems that provide us clean air to breathe, healthy water to drink, fertile soil to grow our food, and protection from floods and storms. The Coastal Zone Management Trust, a partnership which involves Mexican state government, the Cancún and Puerto Morelos Hotel Owner's Association, the insurance industry, and The Nature Conservancy, that will use funds collected from the local tourism industry to purchase an insurance policy on a stretch of the Mesoamerican Reef.

- Japan has been using protection forests to mitigate the impacts of coastal hazards. According to Japanese researchers, trees with roots reaching deeper than 3 meters were generally able to withstand the force of the 2011 tsunami while those with less, and planted on shallow soils, could not. To help allow roots to extend deeper, the Forestry Agency has raised the ground along the coast by three to five meters before planting the trees and to increase the width of disaster reduction forests from the standard 50 – 100 meters to 200 meters.

- In the EU, ecosystem-based flood defence has been brought into large-scale practice as a solution that is more sustainable and cost-effective than conventional coastal engineering. The Flemish government is working on a large scale flood protection plan (SIGMA II) – part of this is the restoration of 5,000 ha of wetlands, to absorb flood water, improve biodiversity and provide recreational areas.

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The information contain herein is extracted from IUCN’s Resolutions and Recommendations as appropriate. It is intended to inform discussions around the mainstreaming of biodiversity in infrastructure and urban development.