

United Nations Biodiversity Conference
High-level Segment
“Investing in Biodiversity for People and Planet”
Sharm El-Sheikh, 14-15 November 2018

Mainstreaming biodiversity in the infrastructure sector

Infrastructure is fundamental to human societies. Built infrastructure is central to economic growth and facilitates every aspect of modern life. It includes the transport infrastructure that moves people and goods across the globe, telecommunications, energy infrastructure that delivers power to homes and businesses, urban infrastructure, and the dams, water and wastewater treatment plants and water pipelines that manage water supplies for domestic, industrial and agricultural use.

The infrastructure sector is expected to grow significantly over the coming decades due to population growth, economic development, trade and increasing urbanization.

In 2014, 54% of the world's population resided in urban areas. This is expected to reach 66% by 2050. As a result of this growth, it has been estimated that up to 70% of future infrastructure investment will be focused on urban locations.

There will also be increased demand for, and construction of, associated infrastructure and growth in infrastructure-dependent sectors. One projection indicates that 25 million kilometres of new paved roads and 335,000 kilometres of rail track will be required by 2050. Demand for both “conventional” and “smart” power grids is also projected to grow.

Where and how this infrastructure is built will have major impacts on biodiversity.

The effects of linear infrastructure on habitat fragmentation, movement of populations and gene flow are expected to be significant. At the same time, there is a continuing need to maintain, upgrade or decommission existing infrastructure.

Many expanding cities are located near biodiversity hotspots and other areas of high-conservation value. There are currently 422 cities with more than 300,000 inhabitants in the world's conservation hotspots, of which 383 are evaluated as facing conflicts between urban growth and biodiversity. At the same time, cities rely on biodiversity and healthy ecosystems for many basic ecosystem services, such as supplying freshwater, improving air quality, regulating temperature, providing resilience against climate change and natural disasters. How the cities of the future evolve is highly relevant to biodiversity. If projected urban expansion is not appropriately planned and managed, there is a risk of significant adverse impacts on biodiversity.

It is important to note that the construction industry is one of the largest employers worldwide. The majority of infrastructure development is traditionally initiated by the public sector, but there is an increasing portion financed by the private sector or through public-private partnerships.

How is biodiversity considered in infrastructure development?

Governments at all levels can use a range of instruments that help to minimize and mitigate negative impacts on biodiversity of all forms of infrastructure development. Among the most effective instruments are those that have a long-term forward-looking perspective, such as spatial planning, urban planning, strategic environmental assessment, climate adaption planning, systematic conservation planning etc. In employing such instruments, it is important to involve all affected sectors and to develop outcomes that are understood and supported by all sectors and form the basis for decisions on infrastructure investments for decades. This can increase social acceptance, avoid costly conflicts, minimize the need for corrections and enable the consideration and weighing of biodiversity needs and priorities.

Urban planning can help to retain, or though more difficult, re-establish, connectivity and corridors through green axes, maintain wetlands and the quality of rivers and streams while minimizing risks from floods and drought, and conserve areas of high-conservation value. It can also reduce the space needed for and impacts of transportation infrastructure.

Larger spatial planning can help to maximize the viability, coverage and quality of protected areas, protect watersheds, river basins and coastal ecosystems and other areas of high conservation value and maximize benefits of these measures for local residents and tourists. It can help bundle linear infrastructure along major corridors, thereby making measures to enhance connectivity (such as bridges and tunnels for wildlife) more cost-effective. Most importantly, it can prevent, reduce and channel urban sprawl and encroachment on the landscape, thereby protecting habitations, populations, the delivery of ecosystem services and ecosystem functioning.

Infrastructure developments increasingly consider and apply ecosystem-based approaches and nature-based solutions. These contribute to environmental protection while providing livelihoods and incomes to those at risk from its degradation. In some countries, the use of labour-based appropriate technologies with an optimized mix of equipment and employment-intensive approaches has proven that assets can be built in such a way that local communities are increasing their income potential, while using local materials and technologies, creating multipliers in the local economy. The International Labour Organization confirms that innovations based on local traditional knowledge can enhance resilience and provide opportunities to build enterprises and cooperatives, while creating decent “green” jobs, which empower indigenous women and men.

Approaches to mainstreaming biodiversity in the infrastructure sector

As almost all types of infrastructure are likely to increase over the coming years, there is a need to find ways of reducing demand for new infrastructure by making the most of existing infrastructure and increasing efficiencies as well as ensuring that any additional infrastructure considers biodiversity impacts and dependencies.

There are a number of points of intervention for mainstreaming biodiversity within the infrastructure sector:

- (a) Through demand and efficiencies;
- (b) Strategic planning and impact assessment;
- (c) Contracting;
- (d) Financing;
- (e) Procurement;
- (f) Construction;
- (g) Operation;
- (h) Decommissioning;
- (i) Project legacy.

Questions to guide the discussions

- What are the main actions for an enabling environment to mainstream biodiversity in this sector?
- What are some specific positive examples of biodiversity mainstreaming in the infrastructure sector?
- What are the biggest challenges and barriers to mainstreaming biodiversity into the infrastructure sector?
What are the biggest opportunities we have now?
- What additional actions are needed to enable and support biodiversity mainstreaming in this sector?
Budgetary measures, institutional frameworks and processes, legislation and policy actions?



- Who are the main actors that have a key role to play in achieving biodiversity mainstreaming in this sector?