

# Green Infrastructure Development: *An Overview*

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**Dr. Vinod B. Mathur**

**Former Chairperson, National Biodiversity Authority of India &  
Asian Development Bank (ADB) International Green Infrastructure Expert**  
[vbm.ddn@gmail.com](mailto:vbm.ddn@gmail.com)

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# The Context...

## *The familiar story of infrastructure growth...*

- ◆ Roads that fragment forests & habitats and injures/kills wild animals
- ◆ Railway lines that kill elephants
- ◆ Coal mining that rips apart tiger corridors
- ◆ High tension lines that kill flamingoes

*In short, between the vehicle and the wire, wildlife is getting sandwiched and slaughtered like never before.*

*One 'eco' – the economic is soaring and everything ecologic is being torn to shreds*



Source: <http://www.wti.org.in>



Source: [www.downtoearth.org.in](http://www.downtoearth.org.in)

# Typology of Infrastructure Development?

## What is Blue-Green-Grey Infrastructure?

Blue Infrastructure	Green Infrastructure	Grey Infrastructure
<ul style="list-style-type: none"><li>❖ Rivers</li><li>❖ Lakes, Ponds</li><li>❖ Wetlands</li><li>❖ Floodplains</li><li>❖ Aquifers</li></ul>	<ul style="list-style-type: none"><li>❖ Upland Forests</li><li>❖ Open spaces (Eg: Parks, lawns and fields)</li><li>❖ Mangroves</li><li>❖ Urban Farms</li></ul>	<ul style="list-style-type: none"><li>❖ Dams</li><li>❖ Seawalls</li><li>❖ Pipes</li><li>❖ Embankments</li><li>❖ Water Treatment Plants</li></ul>

# Sustainable Infrastructure Development

## *Key challenges*

### ◆ The 3 'L's

- Lack of Awareness
- Lack of Capacity
- Lack of Finance

Need to move from '*Silo/ Solo*' approach towards a '*Strategic*' approach

*more...*

# Sustainable Infrastructure Development

## *Key challenges*

- ◆ **Inadequate understanding of natural capital/ green spaces/ wildlife corridors and connectivity and their linkages with human well-being.**

*more...*

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*more...*

# Sustainable Infrastructure Development

## *Key challenges*

- ◆ **Lack of capacity amongst various stakeholders to plan, design, construct and monitor sustainable infrastructure**

*more...*

# Sustainable Infrastructure Development

## *Key challenges*

- ◆ **Lack of finance/ finance solutions that are innovative and are required to bring in transformative changes**

*more...*



# Sustainable Infrastructure Development Philosophy: *Mainstreaming*

**Mainstreaming** is best understood as an attempt of modifying larger development strategies by incorporating biodiversity goals for both development and conservation.

- *Development without Destruction*
- *Development with Design*

All infrastructure developments must now conform to the Goals and Targets being approved in the Post-2020 Global Biodiversity Framework (GBF) especially those related to '*connectivity conservation*'.

# Mainstreaming Approaches

Linear infrastructure developments need to be made '*animal friendly*' to provide pathways for movement of species and be '**SMART**' and '**Green**' to effectively mitigate the ecological impacts of roads, railway line and power lines, when routed through sensitive ecosystems and habitats.

**Green infrastructure must promote both smart growth and smart conservation**

# Green Infrastructure: *Principles*

- Sensitive planning and design to protect wildlife
- Connectivity is the key
- Context matters
- Grounded in science, land use theory and practice
- Pre-identifies ecologically significant lands and suitable development areas
- Designed to provide a framework for growth
- Planned and implemented either *before* or *during* the construction and monitoring phases

# Financing Options for Smart Green Infrastructure (SGI):

*Who pays for SGI?*

- ◆ The proponent
- ◆ The regulator
- ◆ The donor
- ◆ ??

# Nature Nurtures... Conserve Nature

Together we can build a frame work that  
nourishes and not depletes our natural assets...

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***Thank You !***

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