

# Asian Development Bank's Experience and Approaches in Assessing Environment

**Andrew Brubaker and Garrett Kilroy**

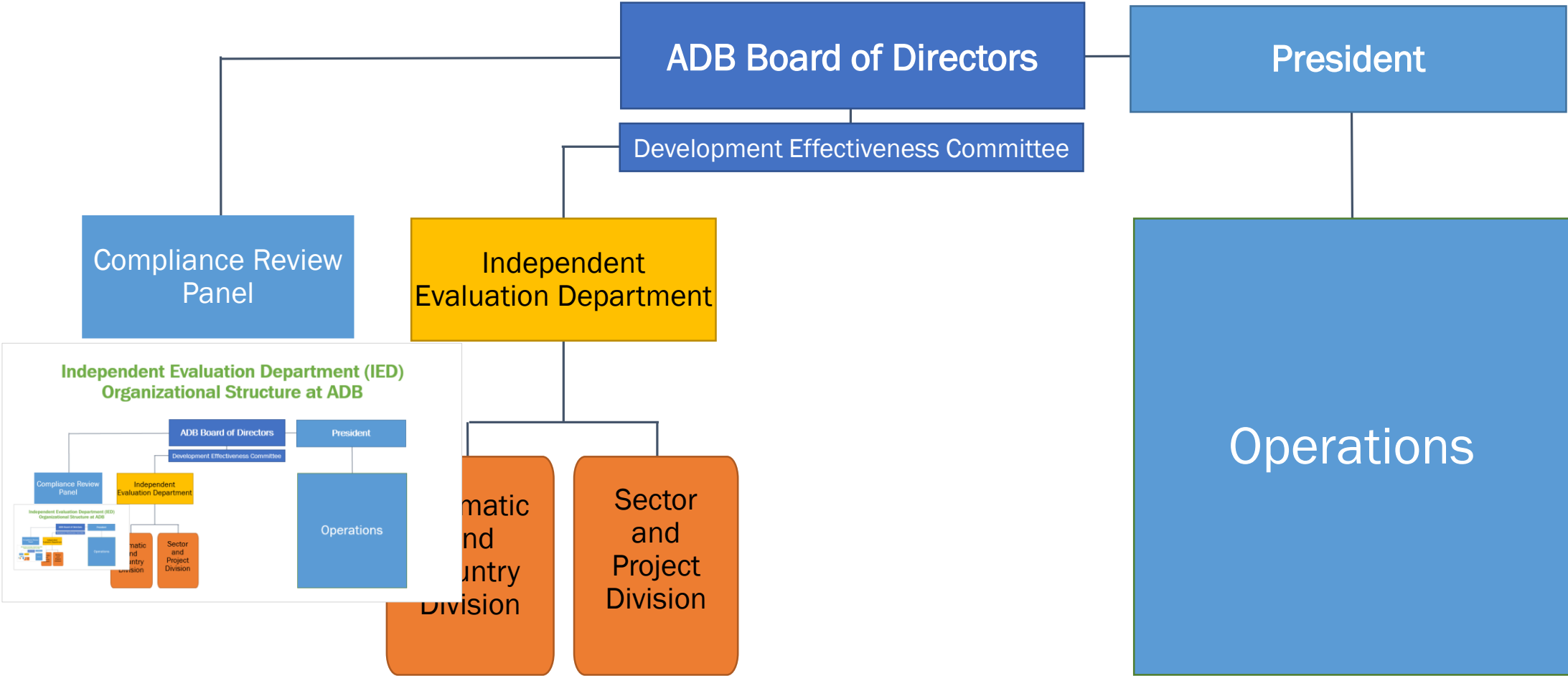
Independent Evaluation Department, Asian Development Bank

**Third International Conference on Evaluating Environment and Development**

Prague, Czech Republic | October 2019

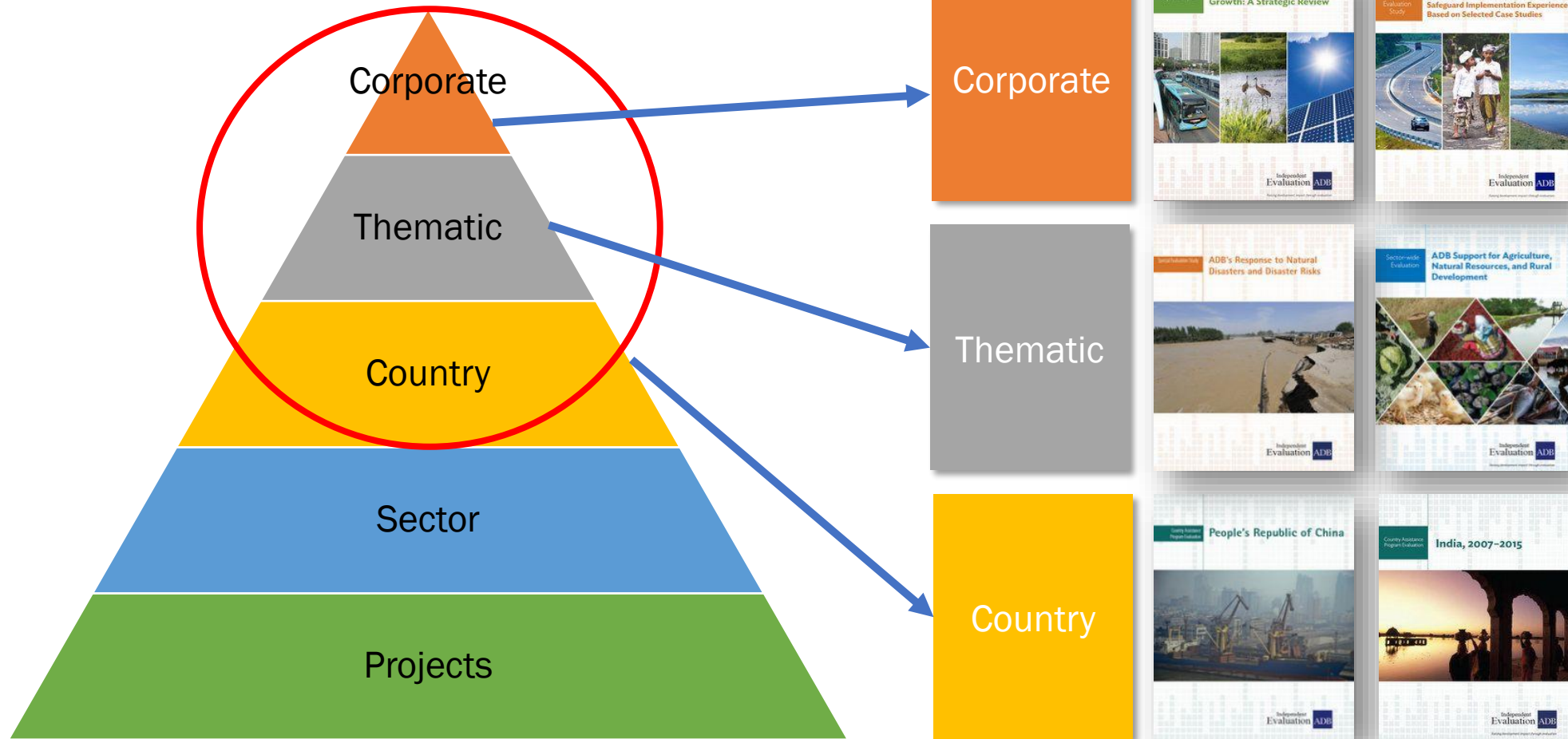
Independent  
Evaluation 

# Independent Evaluation Department (IED) Organizational Structure at ADB



# Higher-Level Evaluations Related to Environment

## EVALUATION TYPE



# Challenges for Assessing the Environment in Higher Level Evaluations

- ❑ Lower level evaluations do not systematically address environment
- ❑ Portfolio data and results frameworks don't capture Env well
- ❑ Inconsistent and limited data
- ❑ Poor or absent baselines
- ❑ Limited time and resources

# Approaches for Assessing the Environment in Higher Level Evaluations



Secondary data



Portfolio review



Statistical analysis



Cost benefit analysis

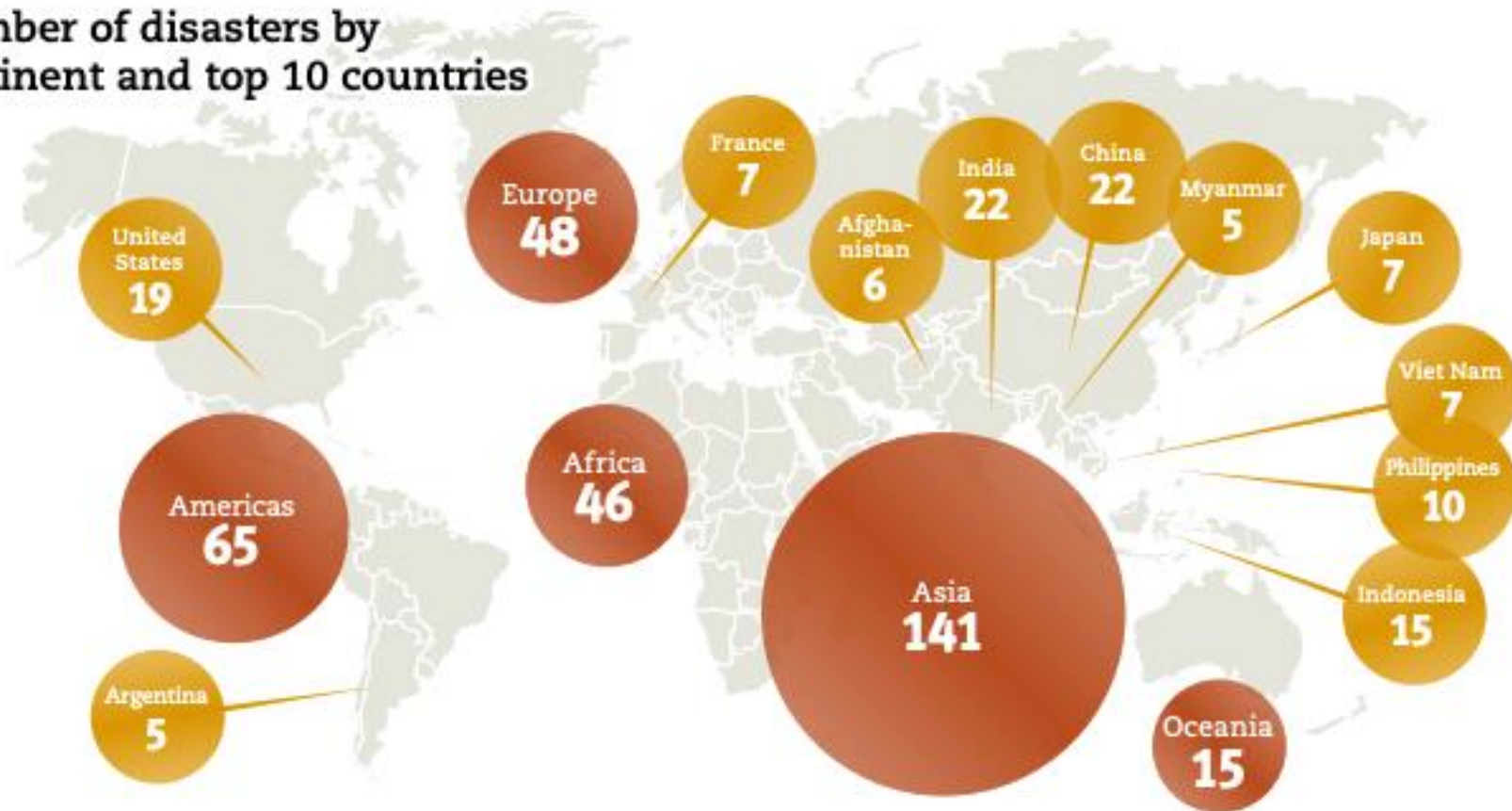


Remote sensing



# Secondary Data: Natural Disasters

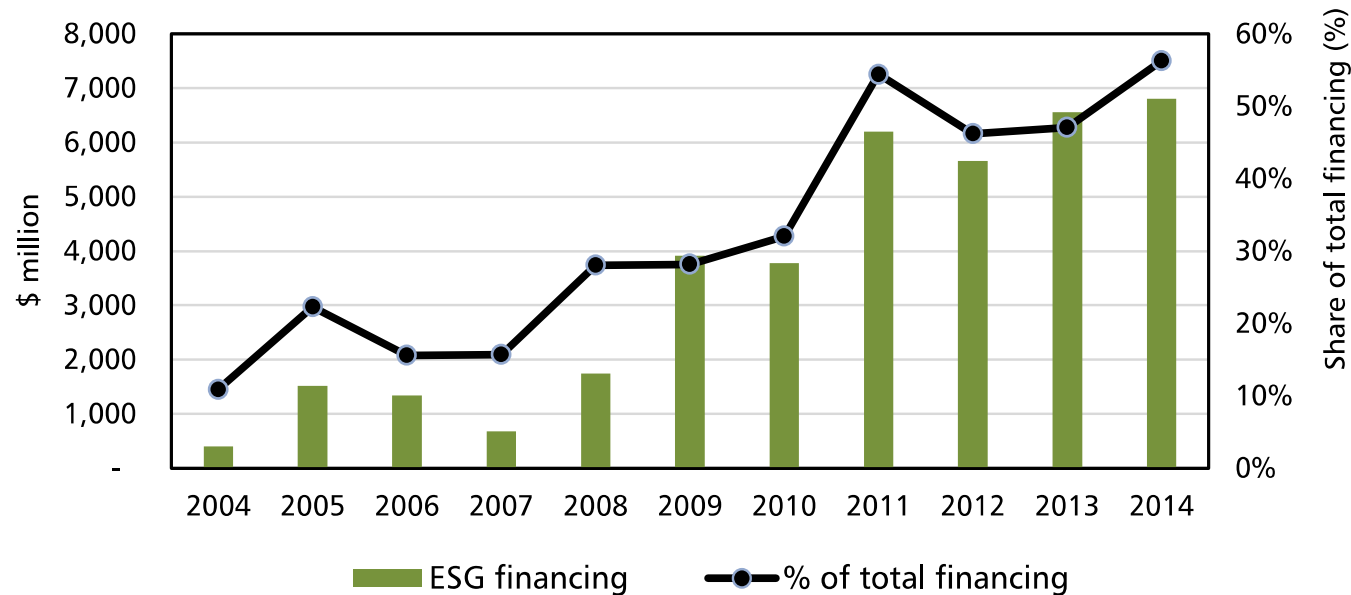
Number of disasters by continent and top 10 countries



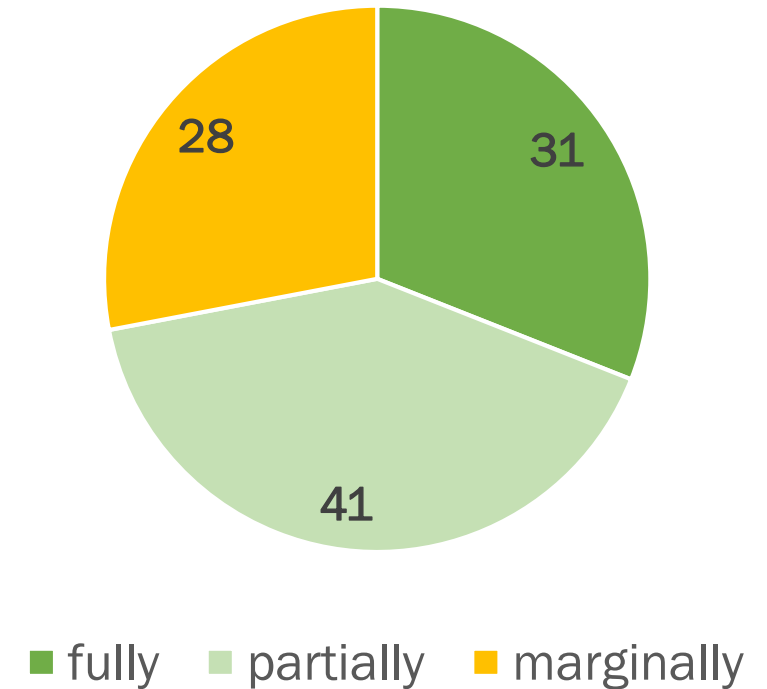
Source: <https://www.emdat.be/publications>

# Environmentally Sustainable Growth (2016): Portfolio Review

ESG Financing in ADB Sovereign Operations, 2004-2014

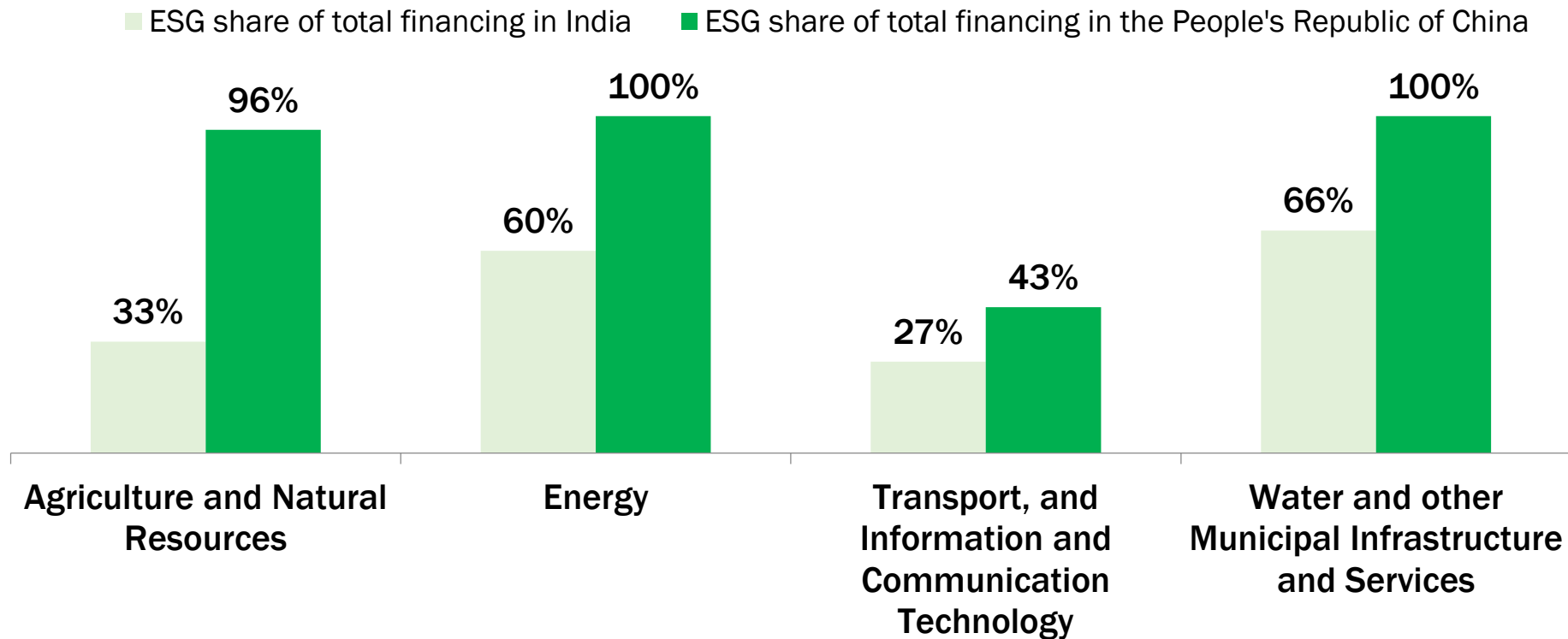


Results: Extent ESG by percent



# Environmentally Sustainable Growth Agenda: Comparison of India and PRC

## ESG Approvals for India and the People's Republic of China, by Four Sectors, 2004–2014

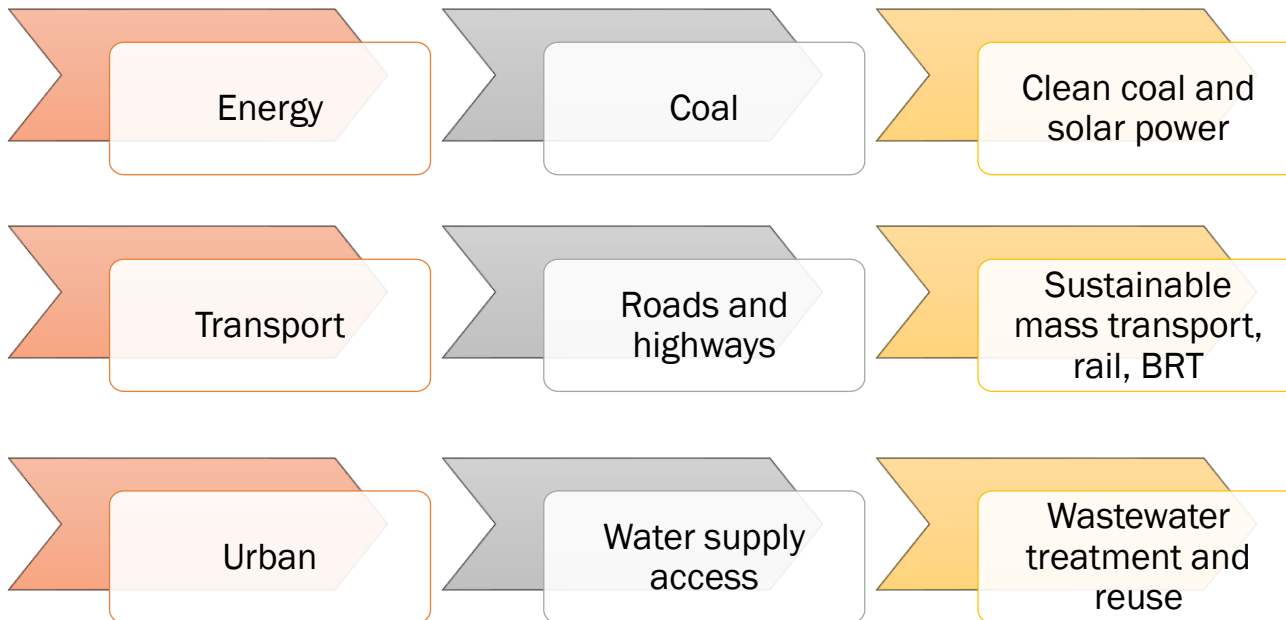




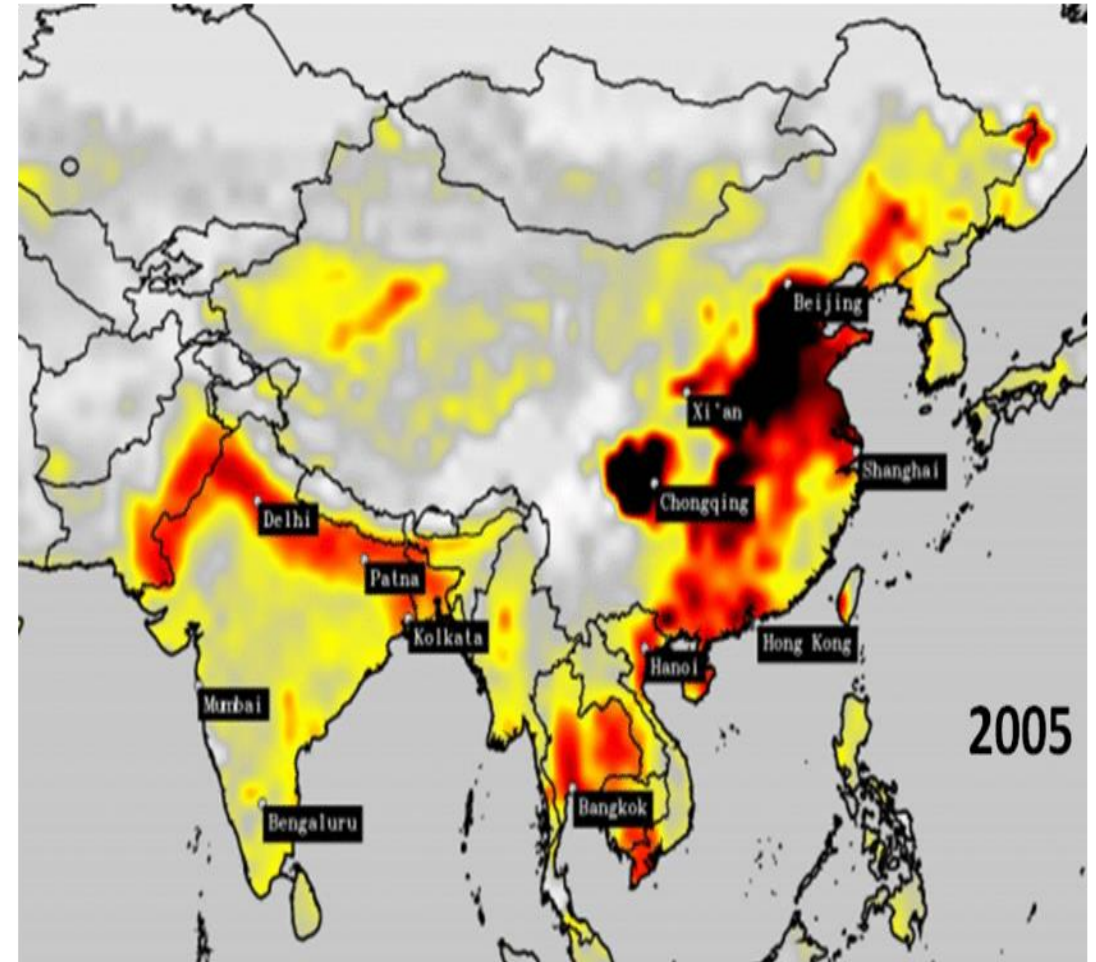
# Country Evaluation: PRC



Period	Share of energy, transport, urban	Success rate (%)	Share of projects with environment
1998-2005	93%	97%	< 50%
2006-2013	81%	100%	> 90%

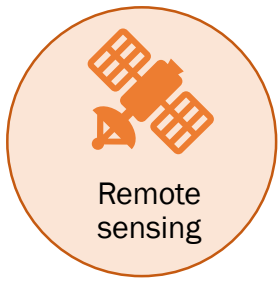


Source: IED

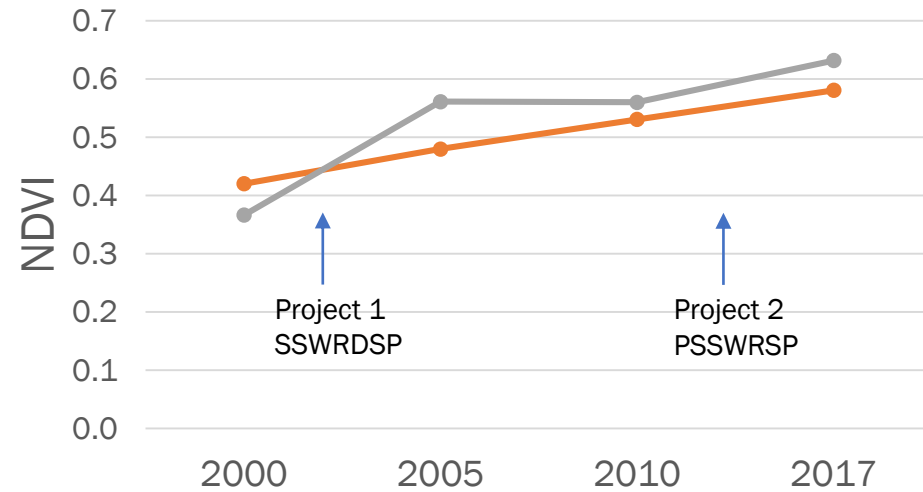


Source: NASA

# Strategic Application of Remote Sensing



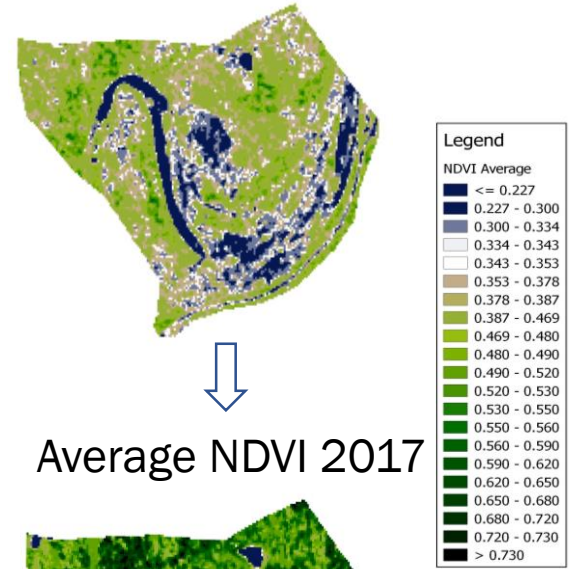
### Normalized Difference Vegetation Index (NDVI) for Rice Yields



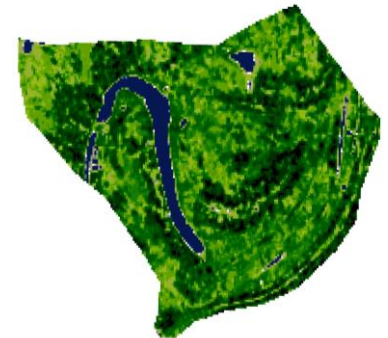
Yield Increase

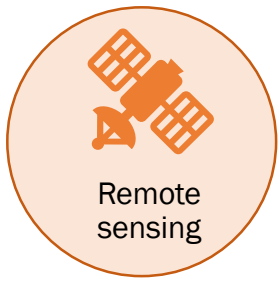
—●— Boro (pre-harvest) —●— Aman (pre-harvest)

### Average NDVI 2000



### Average NDVI 2017

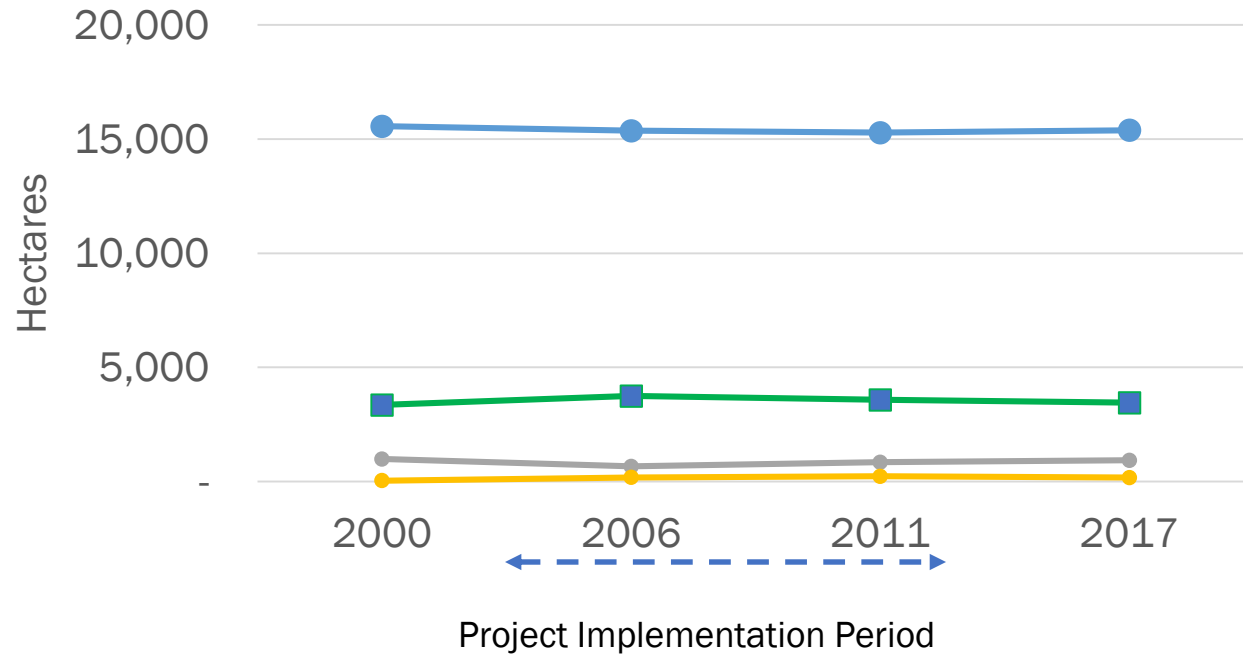




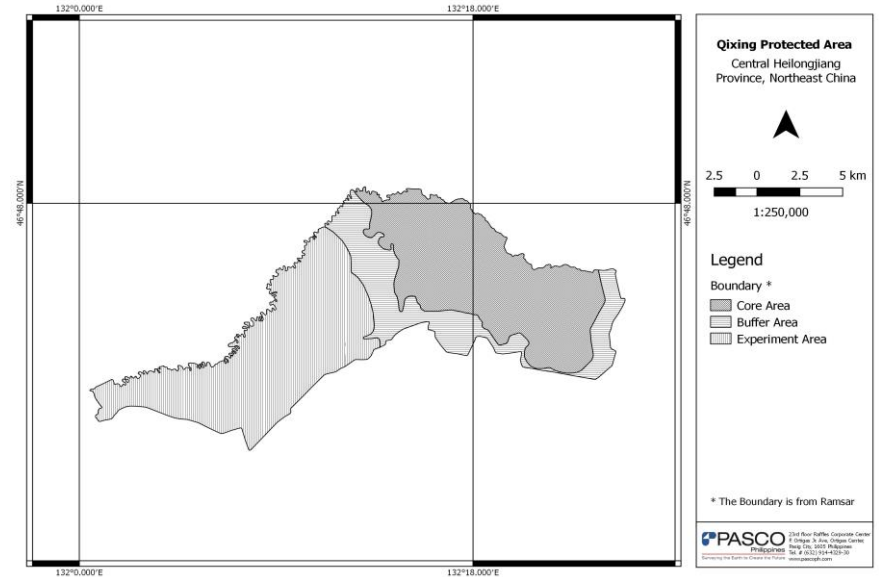
Remote sensing

# Wetland Restoration in Sanjiang Plain

### Qixinghe Nature Reserve Land Cover



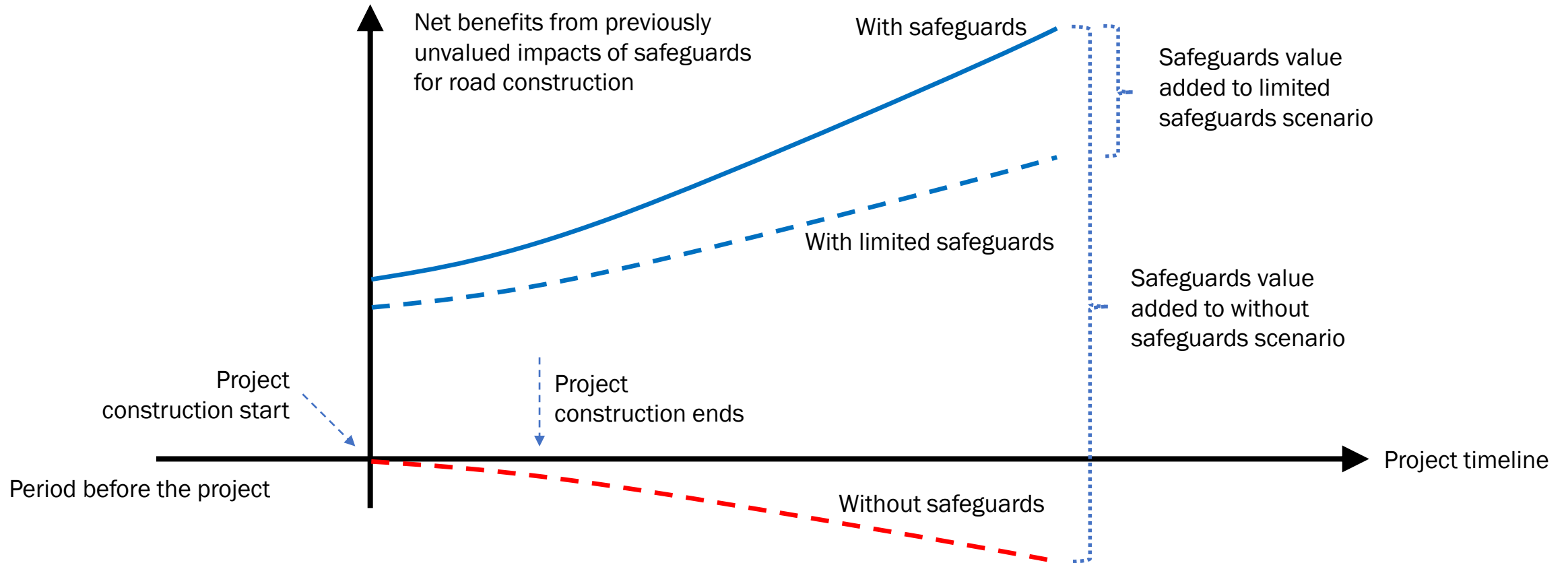
● Wetland   ■ Agriculture   ● Grassland   ● Water bodies





# Cost Benefit Analysis: Safeguards Evaluation

## Benefits and Costs of the With and Without Safeguards Scenarios



# Key Messages

- Robust standard methodologies and triangulation remain the cornerstone of thematic and corporate evaluations and can be applied to the environment
- Spaced-based technologies and other forms of data analysis, used appropriately and cost-effectively, can add value to standard approaches, increase efficiency of evaluations and improve the weight of evidence
- Shifting baselines due to land-use and climate influences will drive greater use of these technologies in evaluation

# Asian Development Bank's Experience and Approaches in Assessing Environment

**Andrew Brubaker and Garrett Kilroy**

Independent Evaluation Department, Asian Development Bank

**Third International Conference on Evaluating Environment and Development**

Prague, Czech Republic | October 2019

Independent  
Evaluation 