

# Development Priorities for South Asia

Christine Chan, Asian Development Bank  
CORDEX South Asia, IITM, Pune Oct 18 2012



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# Manila, The Philippines

ADB:  
multilateral development bank--67 members  
finance and technical assistance  
mandate is poverty reduction





# South Asia Department

India Nepal Bhutan

Bangladesh Sri Lanka

Maldives

Country Partnership Strategy  
[www.adb.org](http://www.adb.org)



India

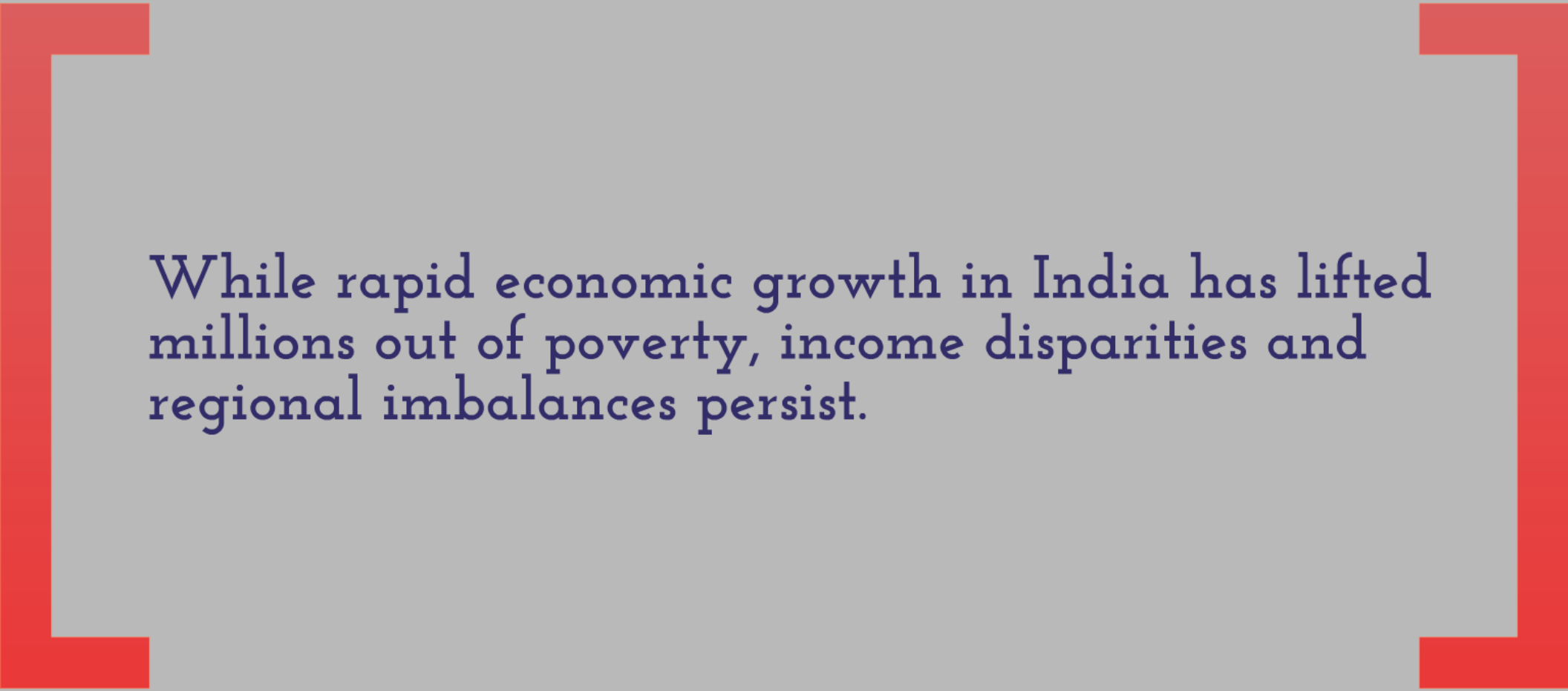


Nepal



## ■ ADB LENDING

Sector (No. of loans)	Amount (\$M) / %
Agriculture (6)	262.97 / 0.97
Energy (59)	9,351.29 / 34.64
Finance (19)	2,620.00 / 9.71
Health (1)	20.00 / 0.07
Industry and Trade (5)	275.90 / 1.02
Public Sector (8)	1,050.00 / 3.89
Transport and ICT (41)	8,363.85 / 30.98
Water Supply (24)	2,372.66 / 8.79
Multisector (15)	2,679.00 / 9.92
<b>TOTAL (178)</b>	<b>26,995.68 / 100.00</b>

Cumulative as of 31 December 2011



While rapid economic growth in India has lifted millions out of poverty, income disparities and regional imbalances persist.



Expanded operations (60% in 2011) to states with high poverty, low levels of social development, weak capacity, and inadequate infrastructure

# Development priorities for India

\$2.2 billion annually 2012-2014

## infrastructure

GDP  
growth infrastructure  
drives 25% of annual  
growth

\$1 Trillion over  
next 5 years

roads  
access to jobs,  
schools, markets,  
medical clinics

housing  
100 million homes  
global climate  
change

## agriculture and water resources

improve agricultural  
productivity and  
sustainability  
invest in  
climate change  
adaptation

develop  
agriculture and  
livestock  
infrastructure for  
value addition

water use  
efficiency, flood  
protection,  
climate  
resilience

## clean energy

solar power: 100  
MW/100 MW  
500 MW/100 MW  
100 MW/100 MW

public transport:  
railway network  
urban network

on Climate Change  
Investment Fund to  
increase low carbon and  
adaptation investment



# *infrastructure*

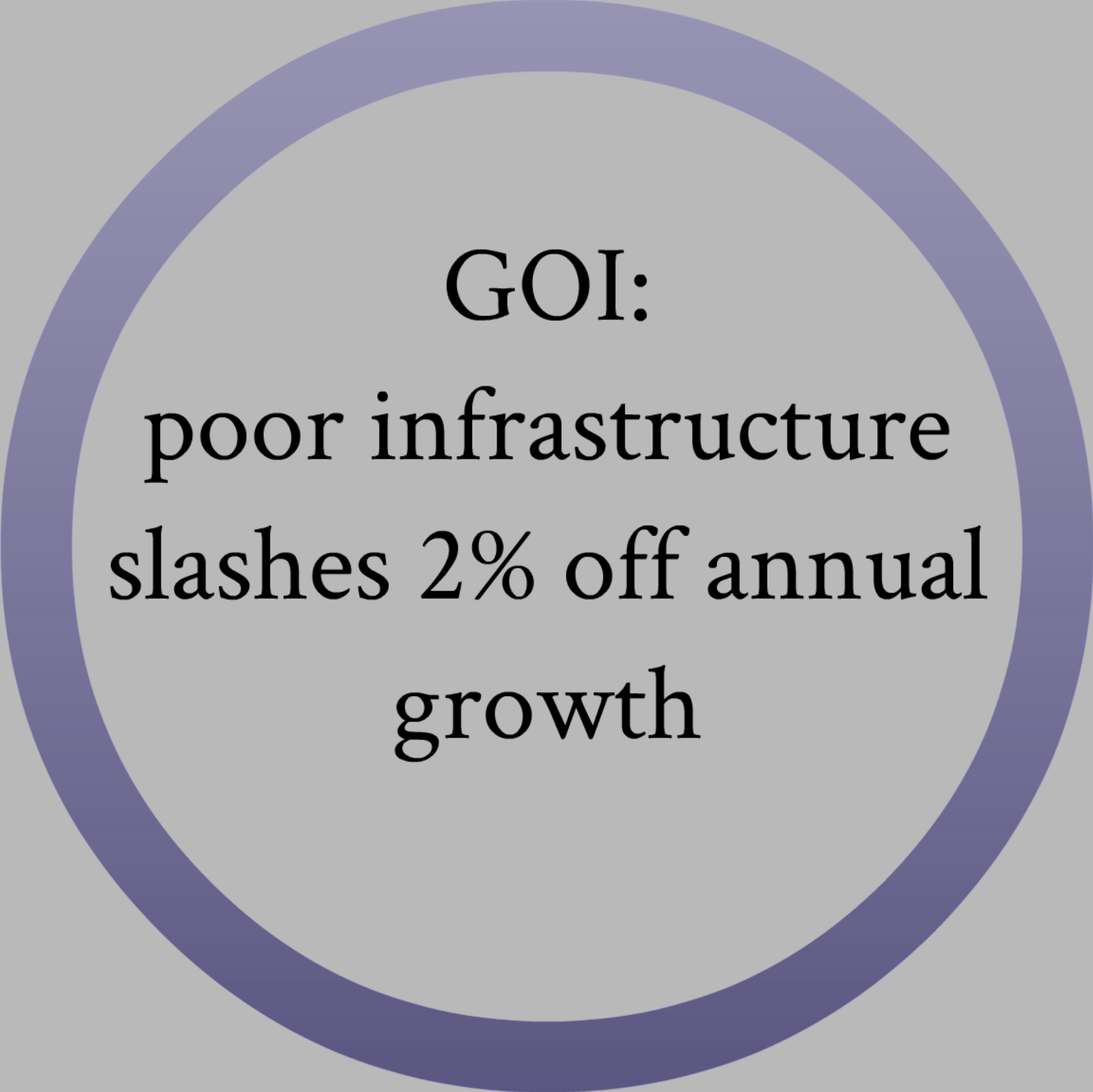
GOI:  
poor infrastructure  
slashes 2% off annual  
growth

\$1 Trillion over  
next 5 years

roads:  
access to jobs,  
schools, markets,  
medical clinics

financing:  
PPP, carbon markets,  
global climate  
funds


# *agriculture and*




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medical clinics



financing:  
PPP, carbon markets,  
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# Infrastructure

\$1 Trillion over  
next 5 years

roads:  
access to jobs,  
schools, markets,  
medical clinics

financing:  
PPP, carbon markets,  
global climate  
funds

# agriculture and water resources

"The digital measures, coupled with measures to the agricultural supply chain and a large-scale irrigation, are likely to result in reduced agricultural growth and a more secure food supply."  
Asian Development Outlook 2013

develop  
agribusiness and  
irrigation  
infrastructure for  
value addition

water use  
efficiency, flood  
protection,  
climate  
resilience

# clean energy

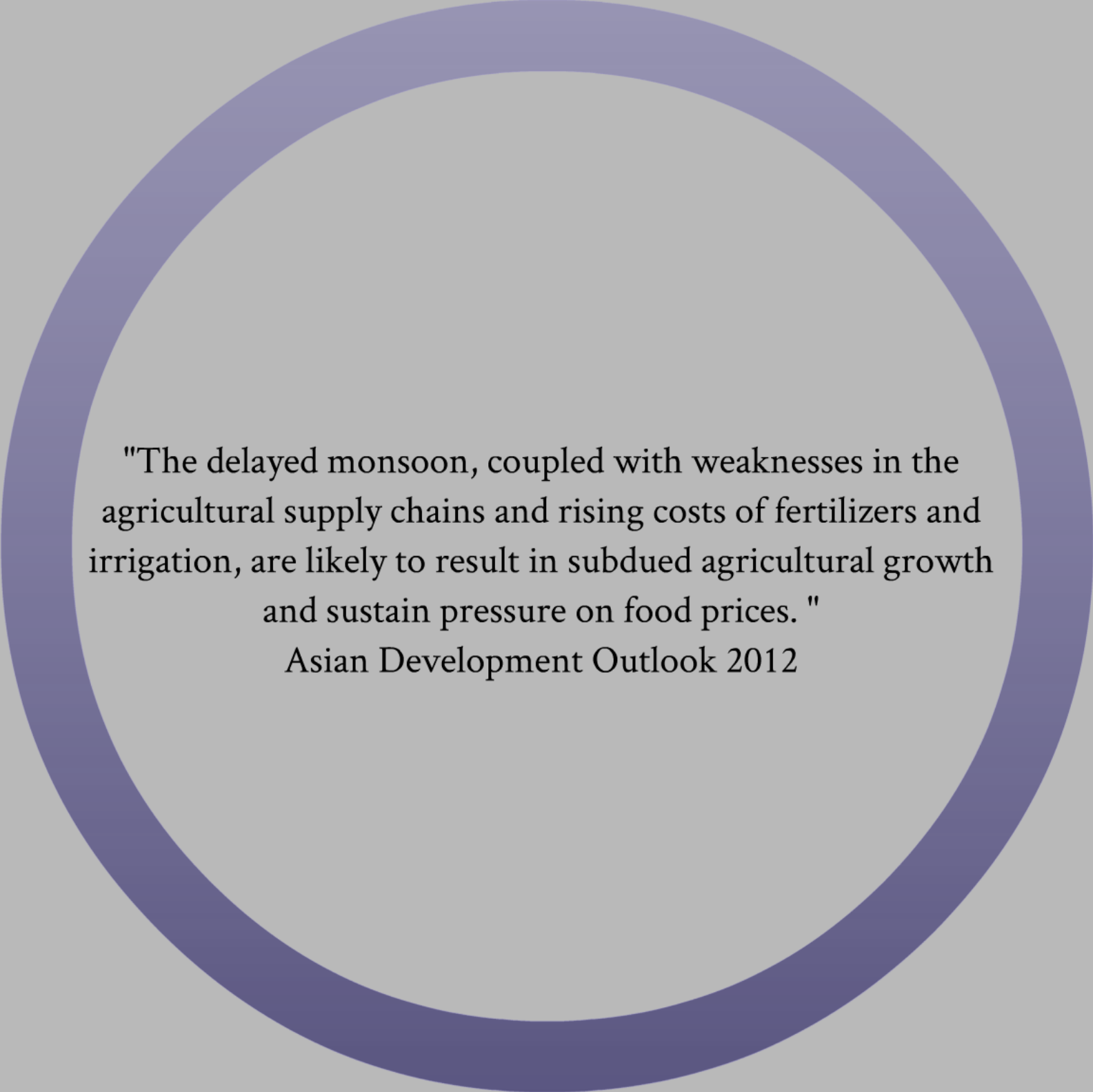
solar power: 310  
sunny days/year

500 MW Gujarat  
100 MW Rajasthan

public transport:  
railway network  
urban network


use Climate Change  
Investment Fund to  
increase low-carbon and  
adaptation investments



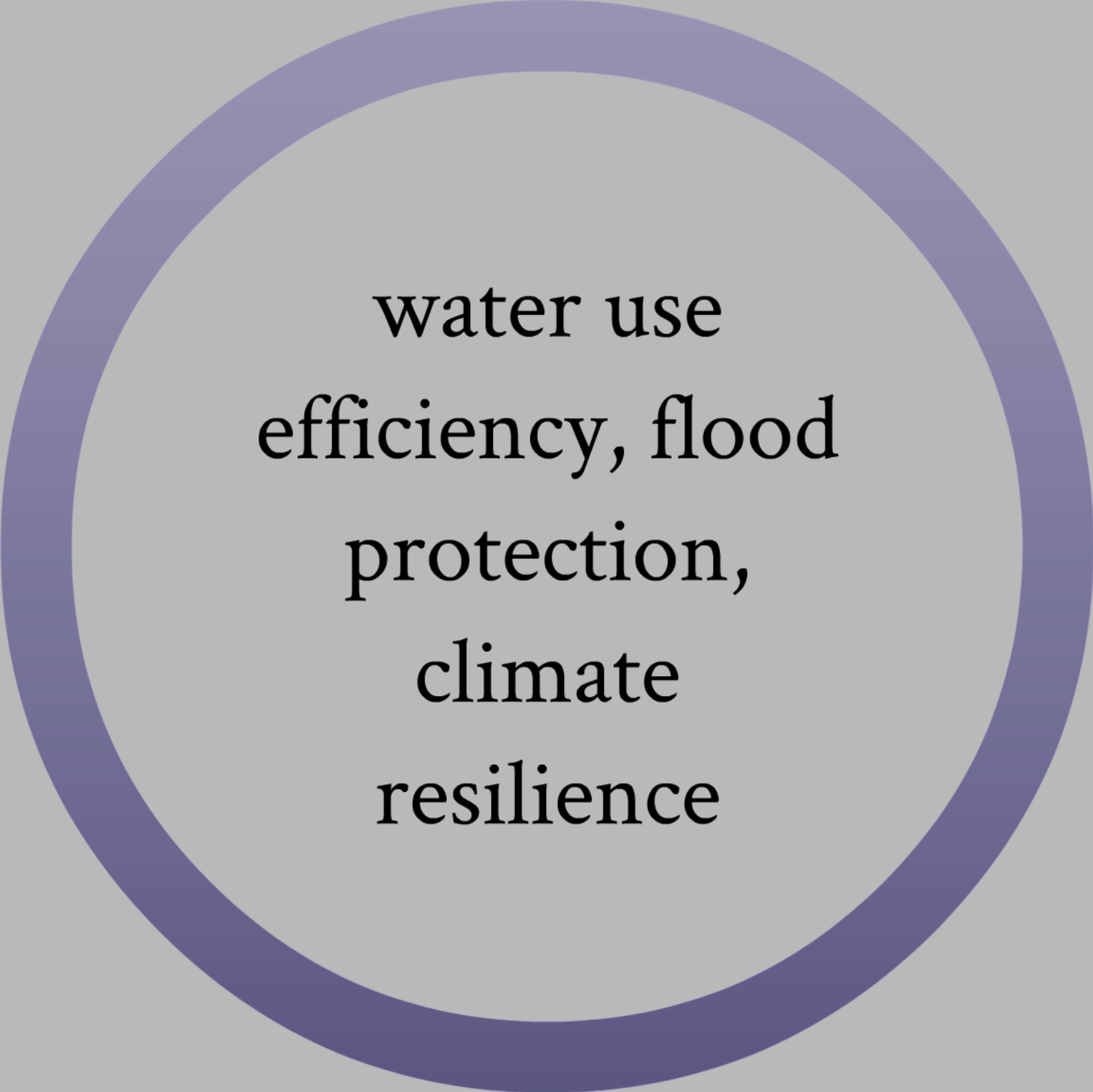


"The delayed monsoon, coupled with weaknesses in the agricultural supply chains and rising costs of fertilizers and irrigation, are likely to result in subdued agricultural growth and sustain pressure on food prices. "

Asian Development Outlook 2012



develop  
agribusiness and  
irrigation  
infrastructure for  
value addition



water use  
efficiency, flood  
protection,  
climate  
resilience

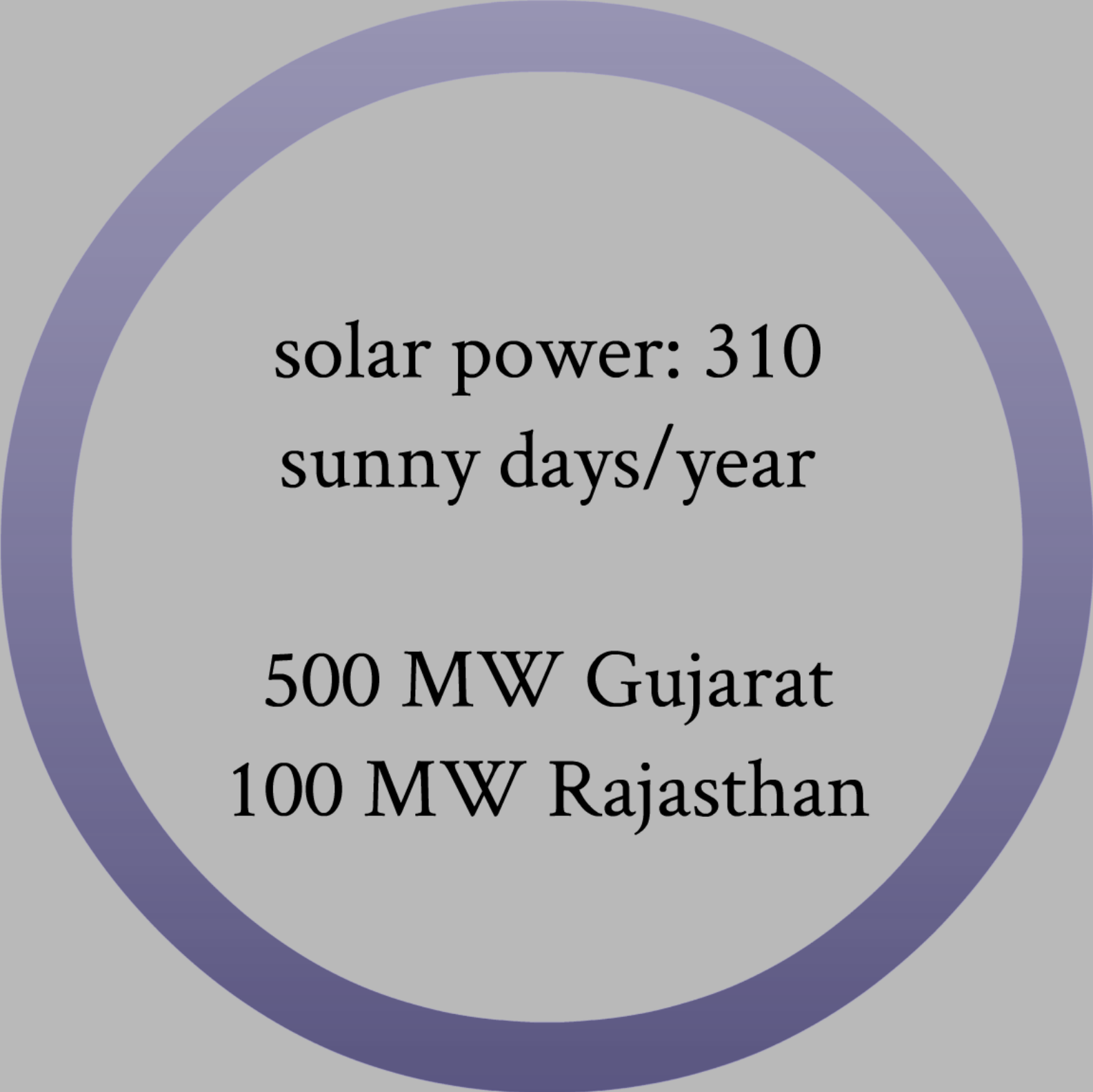
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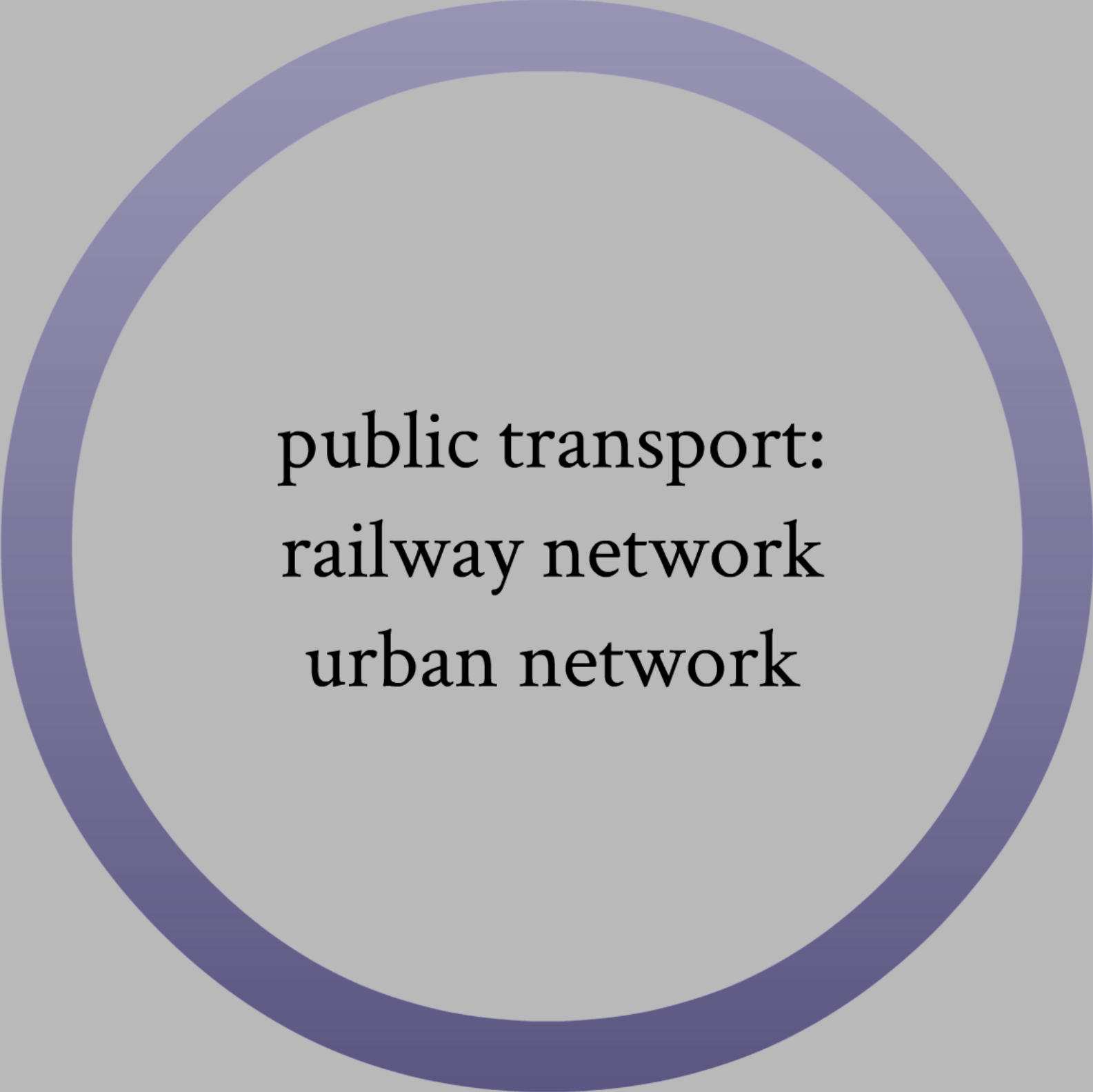
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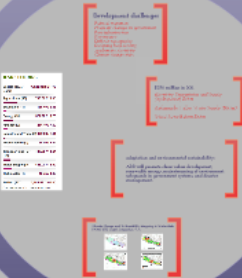


public transport:  
railway network  
urban network





use Climate Change  
Investment Fund to  
increase low-carbon and  
adaptation investments



# Nepal

## ■ ADB LENDING

**Sector (No. of loans)**      **Amount (\$M) / %**

**Agriculture (48)**      **788.89 / 28.35**



**Education (11)**      **185.40 / 6.66**



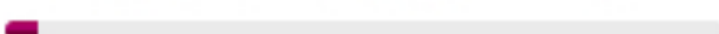
**Energy (15)**      **521.90 / 18.76**



**Finance (9)**      **214.10 / 7.69**



**Industry and Trade (9)**      **142.23 / 5.11**




**Public Sector (2)**      **65.00 / 2.34**



**Transport and ICT (18)**      **407.36 / 14.64**



**Water Supply (14)**      **445.00 / 15.99**



**Multisector (1)**      **12.75 / 0.46**



**TOTAL (127)**      **2,782.63 / 100.00**

Cumulative as of 31 December 2011

# Development challenges

*Political transition*

*Frequent changes in government*

*Poor infrastructure*

*Governance*

*Difficult topography*

*Declining food security*

*Inadequate electricity*

*Climate change risks*

**\$270 million in 2011**

*Electricity Transmission and Supply  
(hydropower) \$75m*

*Kathmandu Valley Water Supply (\$80m)*

*School Sector Reform \$65m*

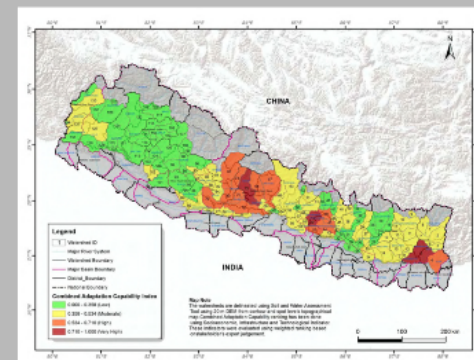
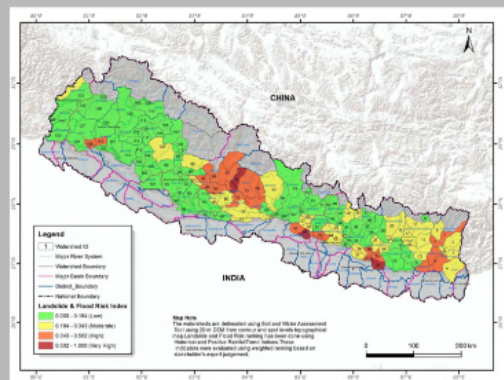
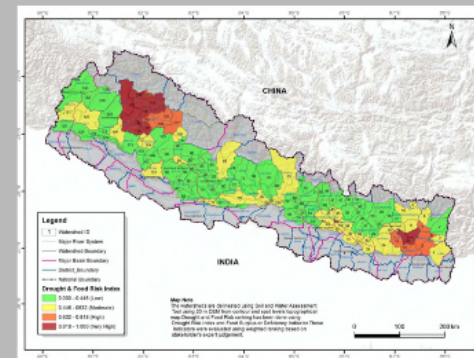
adaptation and environmental sustainability:

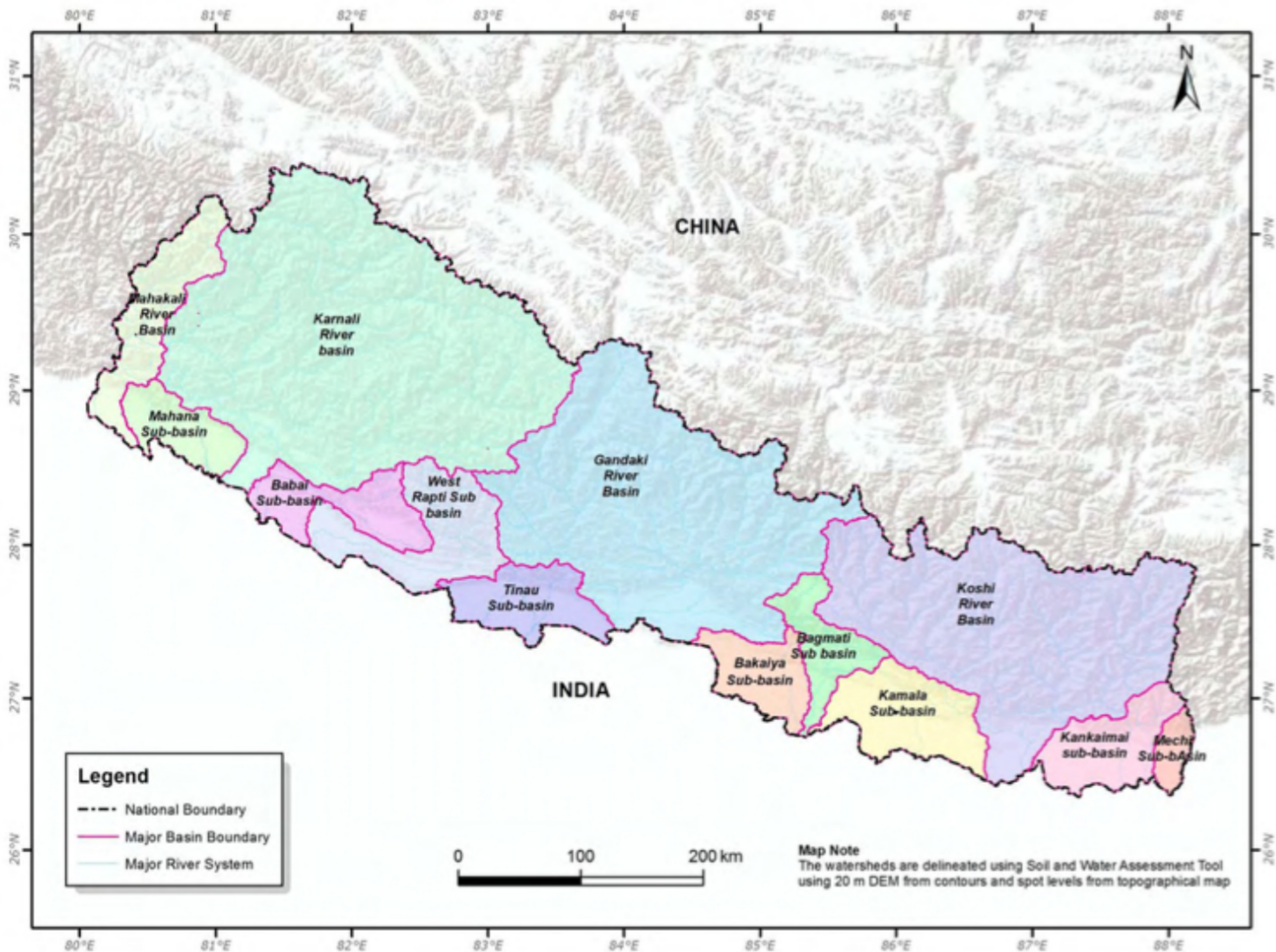
ADB will promote clean urban development, renewable energy, mainstreaming of environment safeguards in government systems, and disaster management.



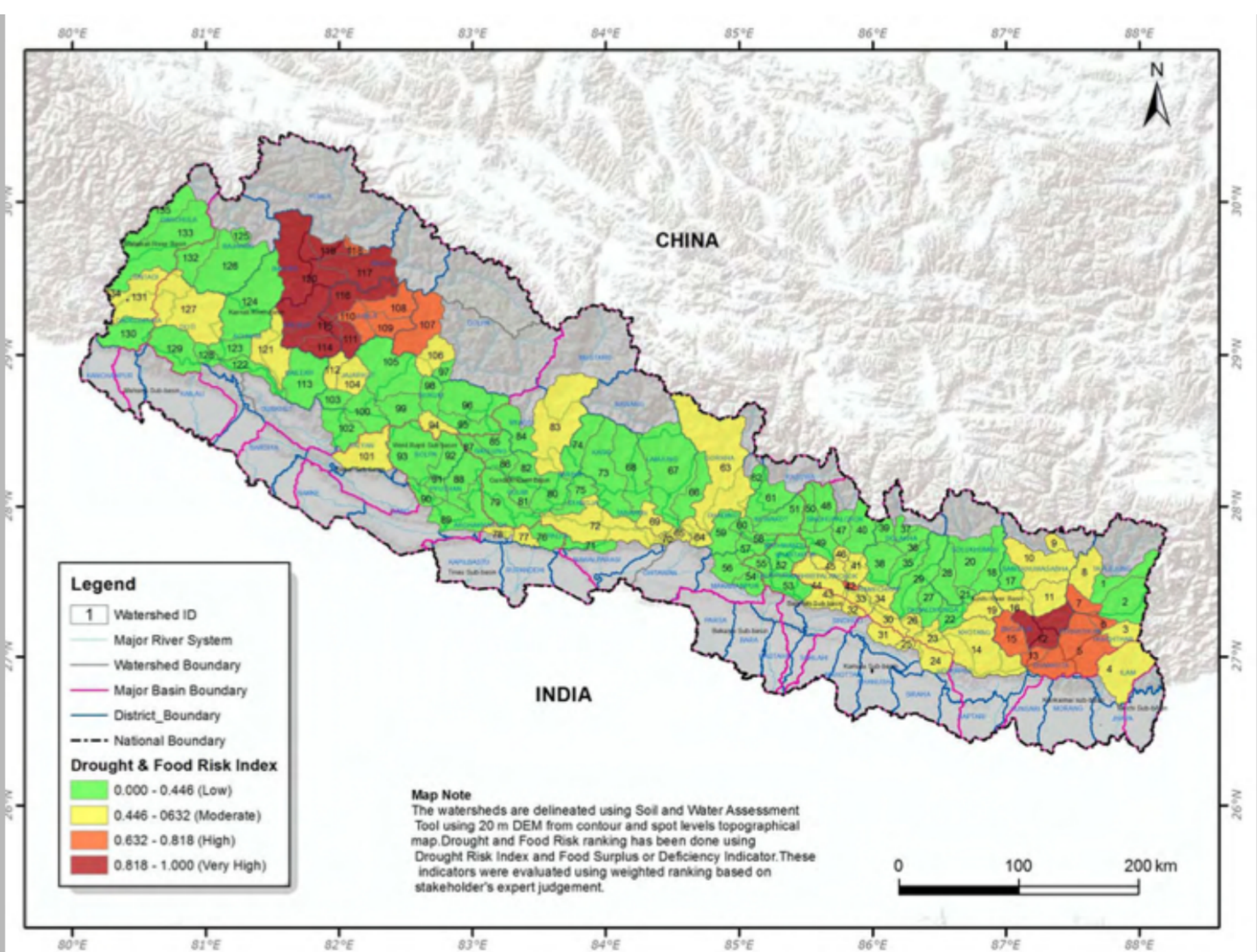
# Climate Change and Vulnerability Mapping in Watersheds

## IWMI 2012, Project Preparatory TA

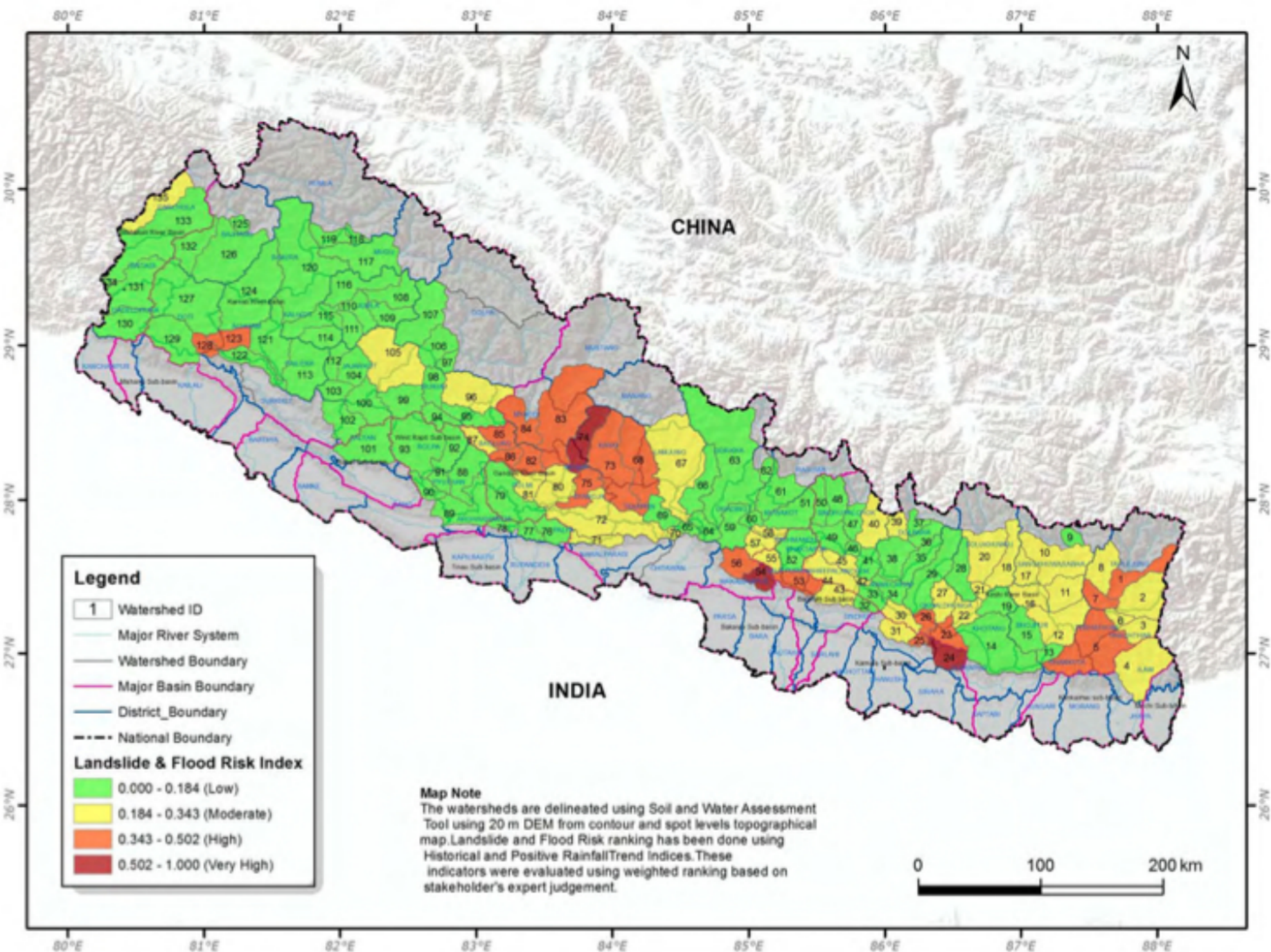




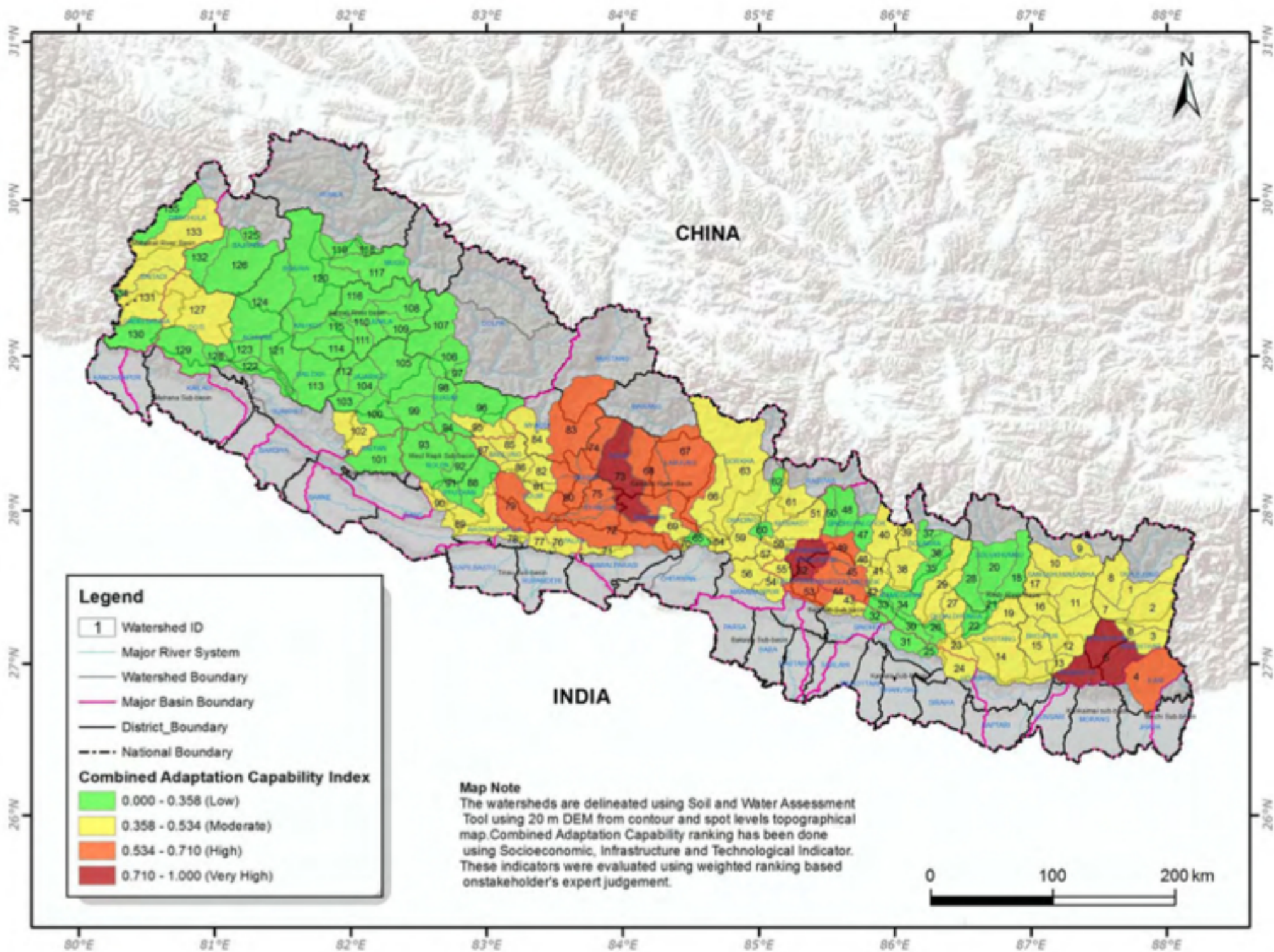














# Manila, The Philippines

# Asia-Pacific climate projections consortium

## Objectives

Support regional capacity for climate risk management  
Effective design of development adaptation measures building resilience  
Regional access to climate resources and projection  
Enhance institutional capacity  
Facilitate partnership between climate science, adaptation, risk management and development sustainable development

## Progress to date

Climate Experts Meeting (June 2020)  
Regional Consultation (COARR, RRM, Japan MRE, GMR, JICA)  
Stock taking of relevant institutions  
Feasibility paper  
Climate Experts Technical Meeting (June 2020)  
ICPAP, Ministry of Natural Resources, Ministry of Education, Science and Technology, ASEAN  
Feasibility application process (July 2020)

## First Stage Implementing Agencies

Indian Institute for Tropical Meteorology  
Climatological Center Thailand  
Bureau of Meteorology, Climatology, and Geophysics (Indonesia)  
Philippine Atmospheric, Geophysical, and Astronomical Services Administration

## Enhance technical capability

Identify skills/expertise gaps in IA  
Foster experts from leading international institutions with IA technical staff (learn by doing)  
Pilot country forum (shared lessons)

## Climate projections and data facility

Knowledge products  
Climate model and output (CMIP 3 and 5, CMIP6)  
Downscaled projections  
Data access (identify relevant climate information needed for risk assessment and future planning)

Online delivery platform  
Web-based  
Access to climate data (open, secure, common standards)  
Access to data and tools for climate information

## User services

Helpdesk  
Expert advice  
Discussion forum  
Informational guidance  
Training courses

## Next steps

Develop early analysis, review of how climate information is used, survey of projections users  
Develop online platform (on cloud) geographic search, access, search, help request  
Launch helpdesk (online, robust, multi-lingual)  
Facilitate dissemination following CMIP6 model results  
Engage capacity building subcommittee (invited after CMIP6 Results Climate Forum)  
Create committee and meeting

**Nairobi Work Programme:**  
"Given the considerable disconnect between the efforts being undertaken by scientists, policy makers and practitioners and fragmentation in actions, finding effective ways of disseminating information has become extremely urgent and important to ensure alignment and constructive flow of information between various stakeholders."

**funding:**  
ADB will facilitate resource development with international, bilateral, and multilateral partners

**potential partners:**  
MRI KMA CSIRO  
NCAR UKMO START  
IITM ADPC BMKG Pagasa

### Nairobi Work Programme:

"Given the considerable disconnect between the efforts being undertaken by scientists, policy makers and practitioners and fragmentation in actions, finding effective ways of disseminating information has become **extremely urgent** and important to ensure alignment and constructive flow of information between various stakeholders."



# Objectives

Improve regional capacity for climate risk management

Effective design of development, adaptation, resilience-building activities

Expand access to climate scenarios and projections

Enhance institutional research capacities

Build partnerships among climate science centers, adaptation, risk management and development assistance communities

## Progress to date

Climate Experts Meeting (Jan 2012)

Regional Consultations (CORDEX, IITM, Japan MoE, CSIRO, JICA)

Stock-taking of relevant initiatives

Feasibility paper

Climate Experts Technical Meeting (June 2012)  
NCAR, Hadley Center, CSIRO, Manila Observatory, ADPC, START, ClimSystems

Funding application process (July 2012)

# First Stage Implementing Agencies

Indian Institute for Tropical Meteorology

Climatological Center Thailand

Bureau of Meteorology, Climatology, and  
Geophysics (Indonesia)

Philippine Atmospheric, Geophysical, and  
Astronomical Services Administration

# Enhance technical capability

Identify skills/expertise gaps in IA

Pair experts from leading international institutions with IA technical staff (learn by doing)

Pilot country forum (shared lessons)

# Climate projections and data facility

## Knowledge products

Climate model evaluations (CMIP 3 and 5, CORDEX)  
Downscaled projections  
Case studies identifying critical climate information needed for risk assessment, adaptation planning

## User services

Helpdesk  
Expert advice  
Discussion forum  
Informational guidance  
Training courses

## Online delivery platform

Web-based  
Primary interface for clients (search, retrieve, communicate)  
Access to distributed archives for climate information

# Climate projections and c

## Knowledge products

Climate model evaluations (CMIP 3 and 5, CORDEX)

Downscaled projections

Case studies identifying critical climate information needed for risk assessment, adaptation planning

## Online delivery platform

Web-based

Primary interface for clients (search, retrieve, communicate)

Access to distributed archives for climate information

# User services

Helpdesk

Expert advice

Discussion forum

Informational guidance

Training courses



# Next steps

User needs analysis: review of how climate information is used; survey of prospective users

Develop online platform 'use cases': geographic search, scenario search, help request

Launch helpdesk (advice, collect case studies)

Guidance documentation following CMIP5 model evaluation

Country-specific climate information products (modeled after CSIRO Pacific Climate Futures)

Communication and training

potential partners:

MRI KMA CSIRO

NCAR UKMO START

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funding:

ADB will facilitate resource development with international, bilateral, and multilateral partners



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