

Economy + Environment + Equity



R-CDTA - 8616

Strengthening Capacity for Environmental Law in the Asia Pacific

Train The Trainers Program

Chiang Mai,

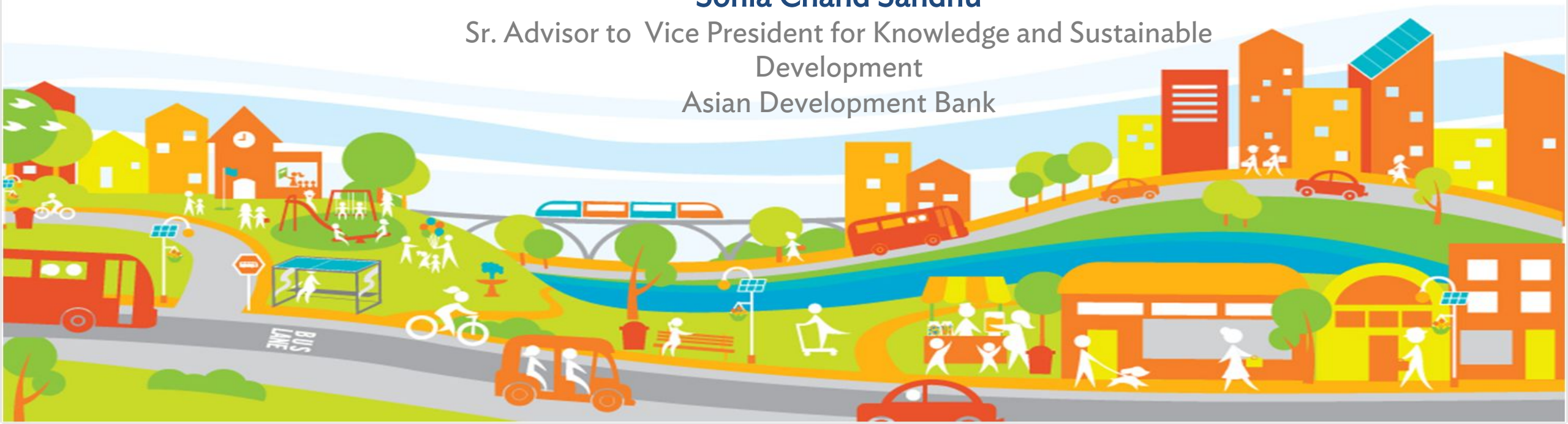
Thailand,

19 June 2017

“GrEEEn Solutions”
An Integrated Approach to Sustainable Development

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Development
Asian Development Bank





SUSTAINABLE DEVELOPMENT GOALS



SDGs : an aspirational agenda that links **people, planet and prosperity.**

17 goals, 169 agreed targets, and 232 officially negotiated indicators.

COP 21: Road through Paris

From 1988 through 2015

Cooperative mechanisms for commitments for all countries.

Submit updated NDCs by 2020

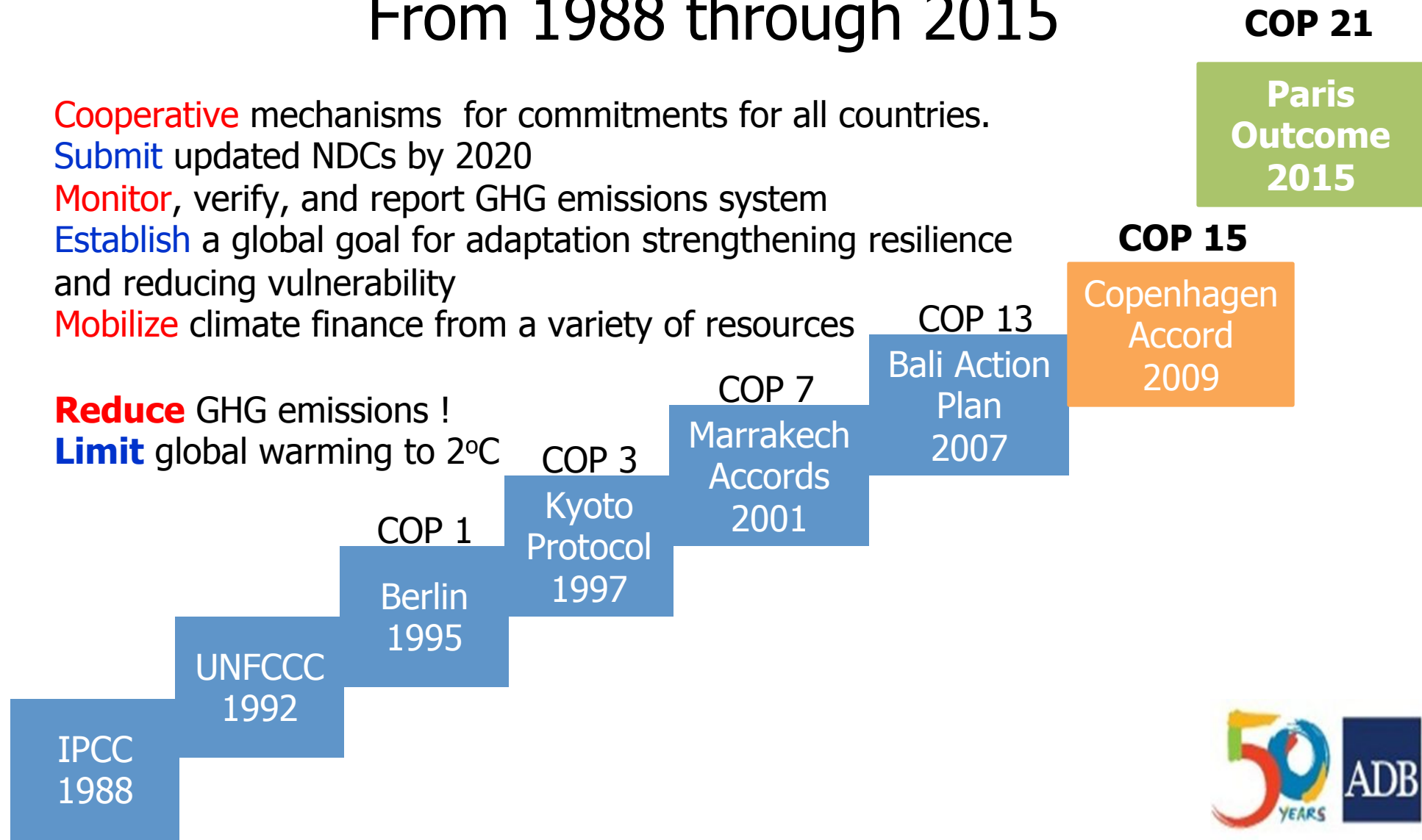
Monitor, verify, and report GHG emissions system

Establish a global goal for adaptation strengthening resilience and reducing vulnerability


Mobilize climate finance from a variety of resources

Reduce GHG emissions !

Limit global warming to 2°C



Changing Asia - Pacific



Quality of growth
Livability for all !

The dynamic landscape of Asia and the Pacific continues to pose challenges and frame a “new normal” to shared and balanced growth :

- (i) rapid growth of ADB members to middle-income status
- (ii) demographic changes leading to increase in ageing populations;
- (iii) rapid urbanization leading to development of megacities requiring paradigm shifts for improving livability for citizens;
- (iv) rising inequality in income and opportunities since the early 1990s, resulting in less inclusive growth; and
- (v) significant increase in risks from severe environment degradation climate change and increasing frequency of natural disasters.

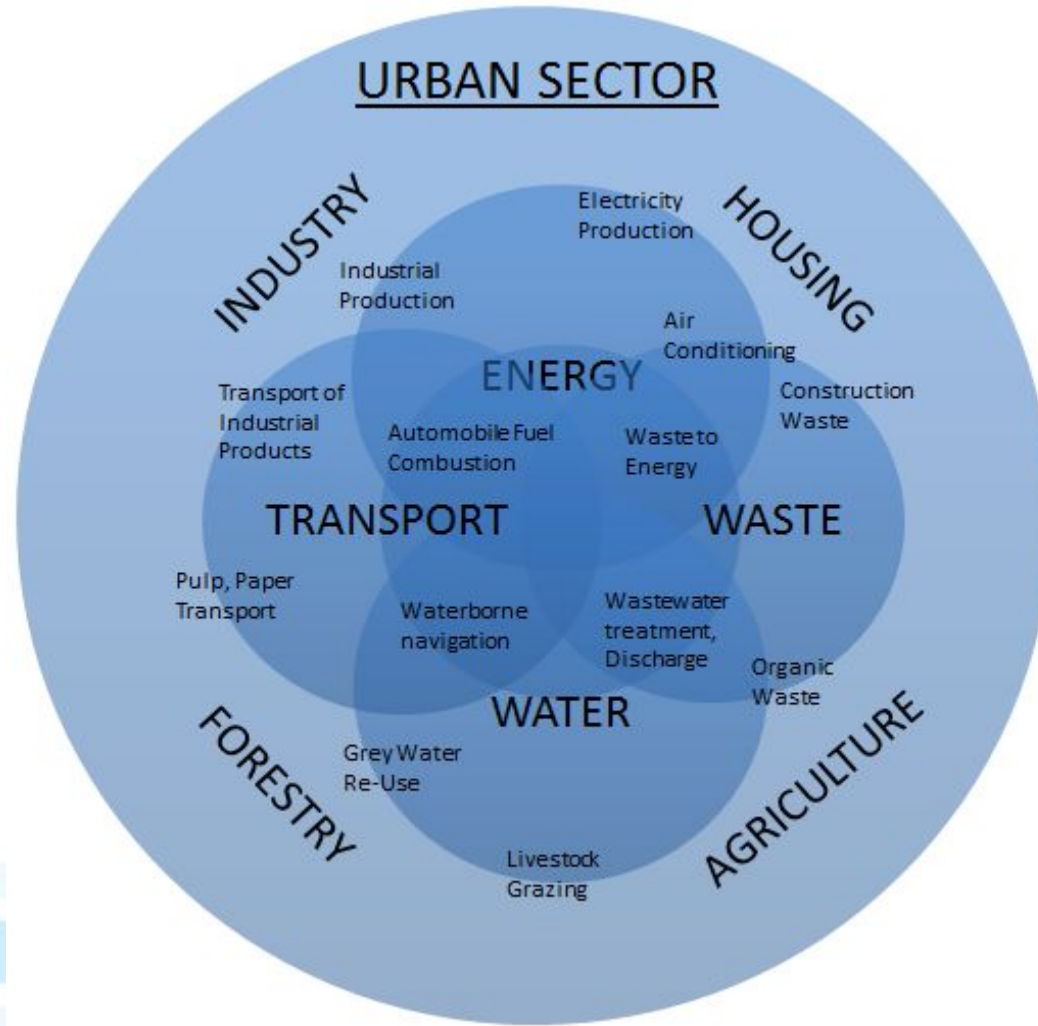
Source : 2017. Adapted from article for the UNA-UK journal on “Sustainable Infrastructure for Asia and the Pacific: The New Normal” by Bambang Susantono, Vice-President, Knowledge Management and Sustainable Development, Asian Development Bank



The logo for the Asian Development Bank, consisting of the letters 'ADB' in white serif font on a dark blue rectangular background.

Institutional Complexity

Example The Urban Space - Complex bubble of sub-sectors



Challenge for Decision Makers !



“ Eye” on livability



Livability Pyramid

Integrated planning
Prioritization
Asset and Natural Capital
Management

“Core of Improving Livability”

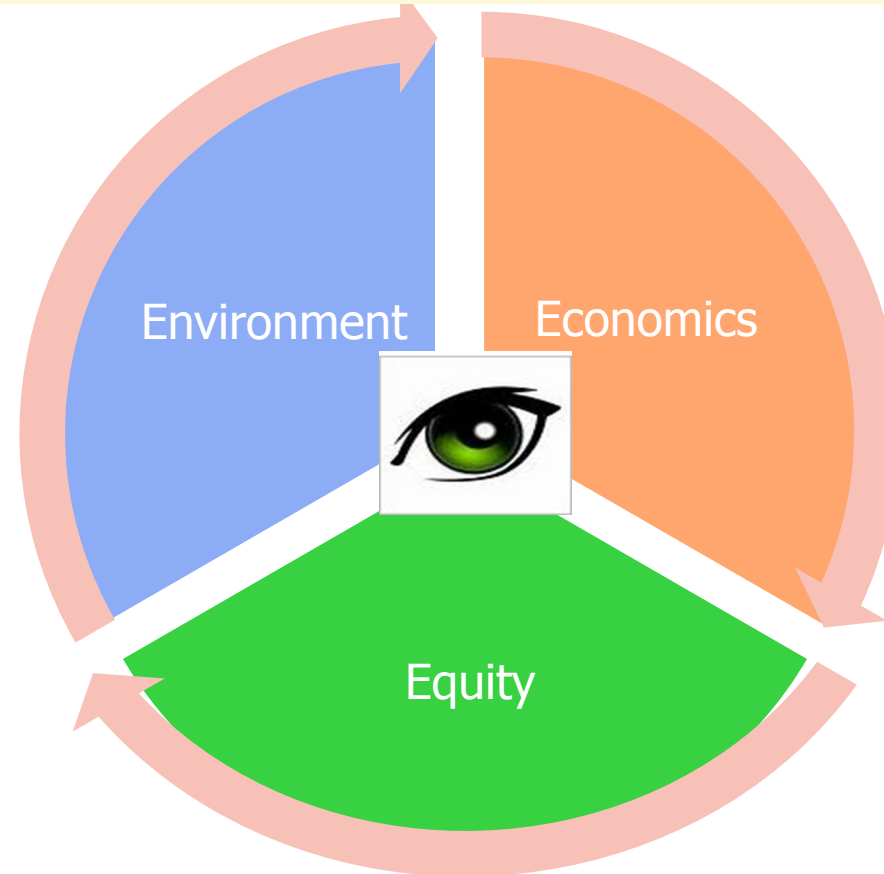
Source: Sandhu Chand, S. and Naik Singru, R. 2014. *Enabling GrEEEn Cities: An Operational Framework for Integrated Urban Development*. Southeast Asia Working Paper Series No. 9. Asian Development Bank. Manila.







A GrEEEn Approach for Integrated Planning for sustainable development and improved **Livability**

MANTRAS !

- ✓ Keep it simple
- ✓ Do not re-invent the wheel
- ✓ Articulate peoples' vision
- ✓ Focus on livability



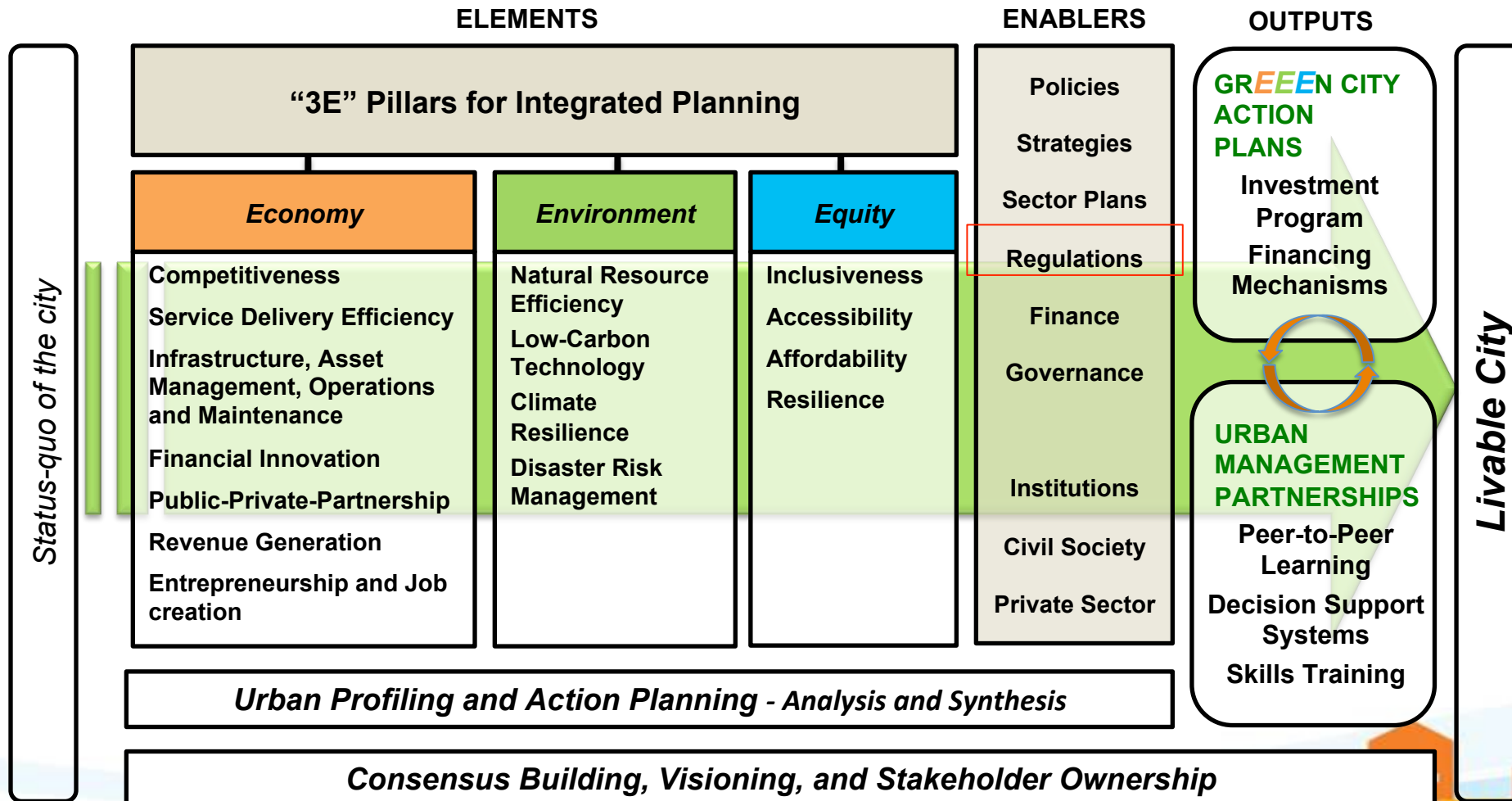
Green Mythbusters !

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Listen ! Listen ! and Listen !

Convergence Platform

GrEEEn Cities Operational Framework



Sandhu, S. and Naik Singru, R. 2014. *Enabling GrEEEn Cities: An Operational Framework*. Southeast Asia Department Working Paper Series No. 9. November 2014. Asian Development Bank, Manila.

Economic Competitiveness



- Tariffs
- Asset Management
- Low-carbon Technology
- O&M

- Entrepreneurships
- Skills / TVET
- Jobs
- SME Development
- Land & Asset value

- Public Private Partnership
- Credit worthiness
- Municipal bonds
- SPVs
- Infrastructure funds



Tonle Sap Water and Sanitation, Cambodia



© ADB 2014. Enabling GREEN CITIES (TA-8314 REG)
Weaving industry, Myanmar



Retrofitting public buildings, Melaka

Environmental Resilience



- Urban design, Planning, construction standards
- Technology improvements
- Coping mechanisms

- Urban watershed based planning
- Solid waste
- WS, WW, Storm-water, drainage

- Increased protection of communities
- Public space mgmt
- Urban mobility, urban renewal



Urban renewal, Atlanta USA



© ADB 2011. Enabling GREEN Cities (TA-8314 REG)



River restoration community protection Melaka . Mal

Social Equity



- Connectivity to services
- Provision of municipal services
- Cross-sector optimization of benefits

- Willingness to pay
- Subsidies & Tariffs
- Taxes
- Community ownership

- Community level preparedness
- Coping mechanisms
- Urban renewal
- Livelihoods



© ADB 2014. Enabling GREEN Cities
Monitoring water quality, Viet Nam
(TA 8214 PFC)



Neighborhood Upgrading and Shelter Project (NUSP) Indonesia



Riverboat community, Mandalay, Myanmar

Asset Management for Resilience

The GrEEEn Cities Approach



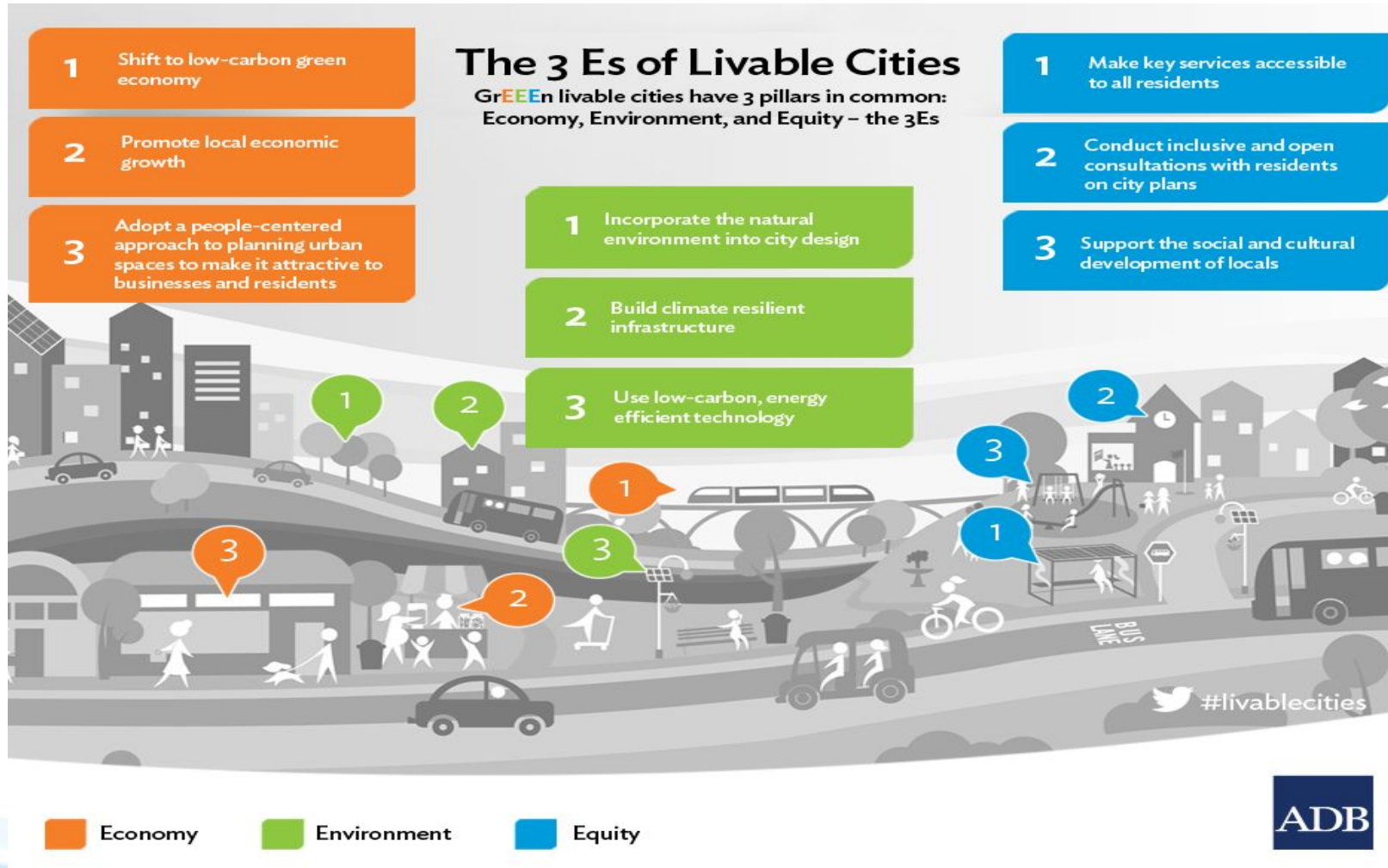
Institutional Capacity
Resources (human, financial)
Policy and Plans
Operation and Maintenance
City development strategy

Built assets & natural assets
Optimum design solutions
Environment, climate and social impacts
Planning and Engineering standards

Innovative Finance
Operation and Maintenance
Costs of environment and climate risks
Urban management partnerships (UMP)
Community participation & monitoring



Unbundling the 3Es in a City



Source: S. Sandhu, R. Naik Singru et. al. 2016, *GrEEEn Solutions for Livable Cities*. Manila: Asian Development Bank

TA – 8186 Urban Resilience in the GMS

“Train the Trainers” for climate change adaptation in three Greater Mekong Sub-Region sister towns

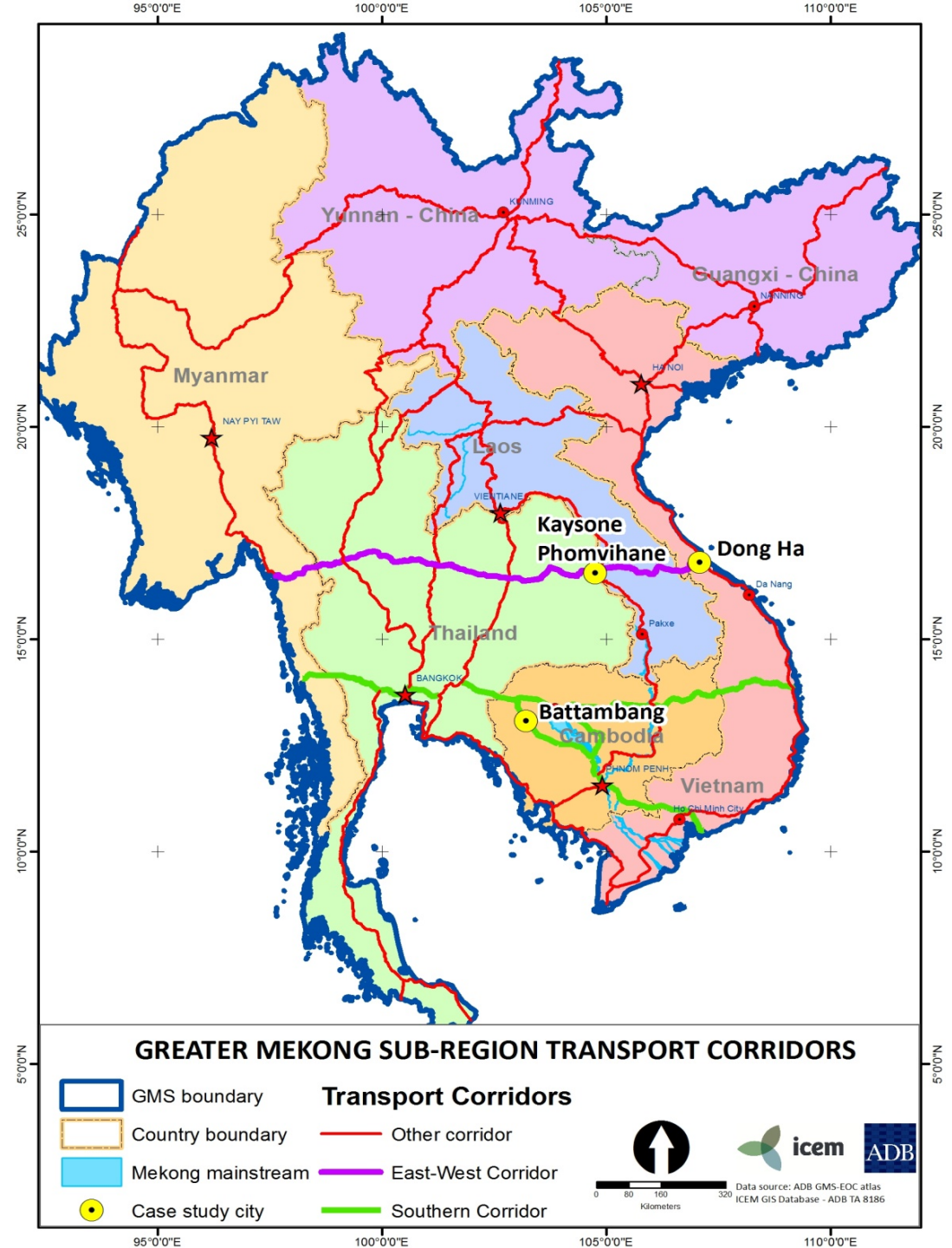


Climate change core groups: 100 local government experts from a broad range of line agencies, NGOs and private sector



TA 8186 - Urban resilience GMS

- Battambang, Battambang Province, Cambodia
- Dong Ha, Quang Tri Province, Vietnam
- Kaysone Phomvihane, Savannokhet Province, Lao PDR.



ADB and ICEM partnership



- **Battambang** (Cambodia) with its large flood and drought-prone watershed area and the Great Tonle Sap Lake;
- **Kaysone Phomvihane** (Lao PDR), facing frequent extreme flooding along the Mekong River, and
- **Dong Hoi** (Vietnam), the typhoon-prone coastline city threatened by sea level rise, storm surge and flash flooding.
- Learning covered climate change related issues ranging from:
 - process of assessing climate change impacts and vulnerabilities,
 - recording data, identifying and prioritizing adaptation measures and preparing and implementing adaptation plans.
 - Institutional mechanisms and technical measures for application and wider replication were identified from the experience gained from the three towns.

Source : ADB. 2017. Nature Based Solutions for Building Resilience in Towns and Cities: Case Studies from the Greater Mekong Sub-region



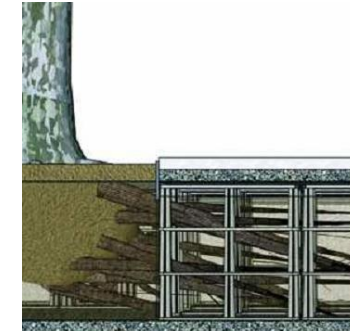
Green Infrastructure : Low Impact Development (LID)

2. Permeable pavement

- Structural grass
- Porous cement
- Reduced impermeable street width

3. Urban trees conservation

Preserve and enhance green Corridors

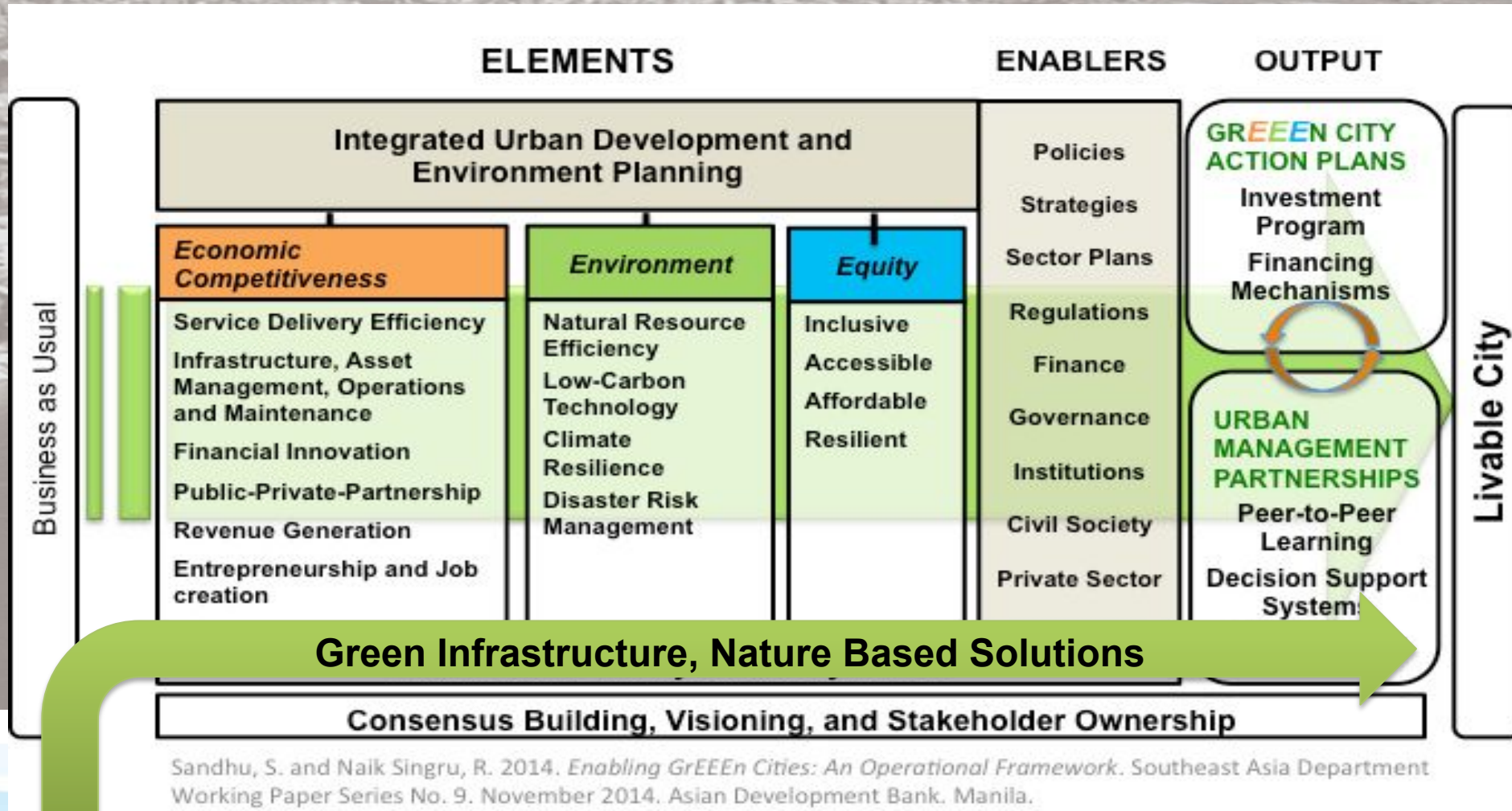


The three town climate change core groups have:

1. *Developed methods* for assessing the impacts of climate change on their town and for planning adaptation measures
2. *Overlaid climate change* on their town plans and assessed the adjustments that may be needed
3. *Assessed the impacts* of climate change on specific flood protection and drainage infrastructure and
4. *Developed adaptation measures* to address those impacts

Convergence Platform for Integrated Planning and Design

GrEEEn Solutions for Sustainable Infrastructure



Adapted from: ADB 2016. GrEEEn Solutions for Livable Cities. Manila: Asian Development Bank.

<http://www.adb.org/publications/green-solutions-livable-cities>

ADB. 2016. Nature Based Solutions for Building Resilience in Towns and Cities: Case Studies from the Greater Mekong Sub-Region, Manila: <https://www.adb.org/publications/nature-based-solutions-building-resilience-towns-cities-gms>



GrEEEn Solutions: Knowledge

Book: *GrEEEn Solutions for Livable Cities*

<http://www.adb.org/publications/green-solutions-livable-cities>

Nature Based Solutions for Building Resilience in Towns and Cities

<https://www.adb.org/publications/nature-based-solutions-building-resilience-towns-cities-gms>

First Regional Conference on Enabling GrEEEn Cities

- 13-14 May 2014, ADB HQ
<http://www.adb.org/news/events/enabling-green-cities>
- VP Groff's TED style talk
<http://www.adb.org/news/videos/green-cities-are-imperative-asias-future>
- Views of 170 delegates
<http://www.adb.org/news/videos/diverse-views-green-cities-initiative>

GrEEEn Cities Initiative multimedia webpage

<http://www.adb.org/green-cities/index.html#intro>

GrEEEn Cities videos

<http://www.adb.org/news/videos/greening-asias-cities>

<http://www.adb.org/news/videos/making-cities-climate-change-resilient>

11 GrEEEn City Action Plans (GCAPs) in 5 countries

3 Working papers

<http://www.adb.org/publications/enabling-green-cities-operational-framework-urban-development-southeast-asia>

<http://www.adb.org/publications/ghg-inventories-urban-operations-se-asia-opportunities>

<http://www.adb.org/publications/regional-balanced-urbanization-inclusive-urban-rural-poverty>

