



ISAP 2020

International Forum for Sustainable Asia and the Pacific

IGES
Institute for Global
Environmental Strategies

Initiatives to Advance Circulating and Ecological Sphere Concept for Greater Resilient City Regions in Asia

Senior Researcher, Natural resource and Ecosystem Services

Bijon Kumer Mitra

Since 2018, IGES has been working to promote the CES concept as a means of implementing sustainability and resilient society in Asia

- Prof. Takeuchi, introduced the CES concept in the STS Forum 2018.
- IGES launched the first project to promote the CES concept outside of Japan (India and Bangladesh)



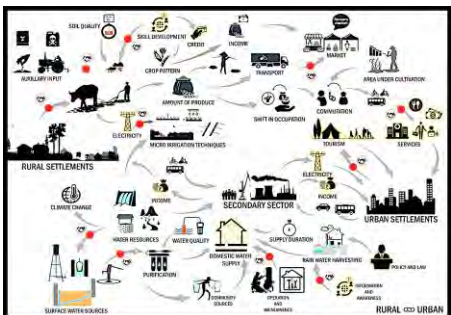
- Sign MOU with START to promote CES concept in the South Asia and South east Asia
- Signed MOU with APN to promote the concept in developing countries

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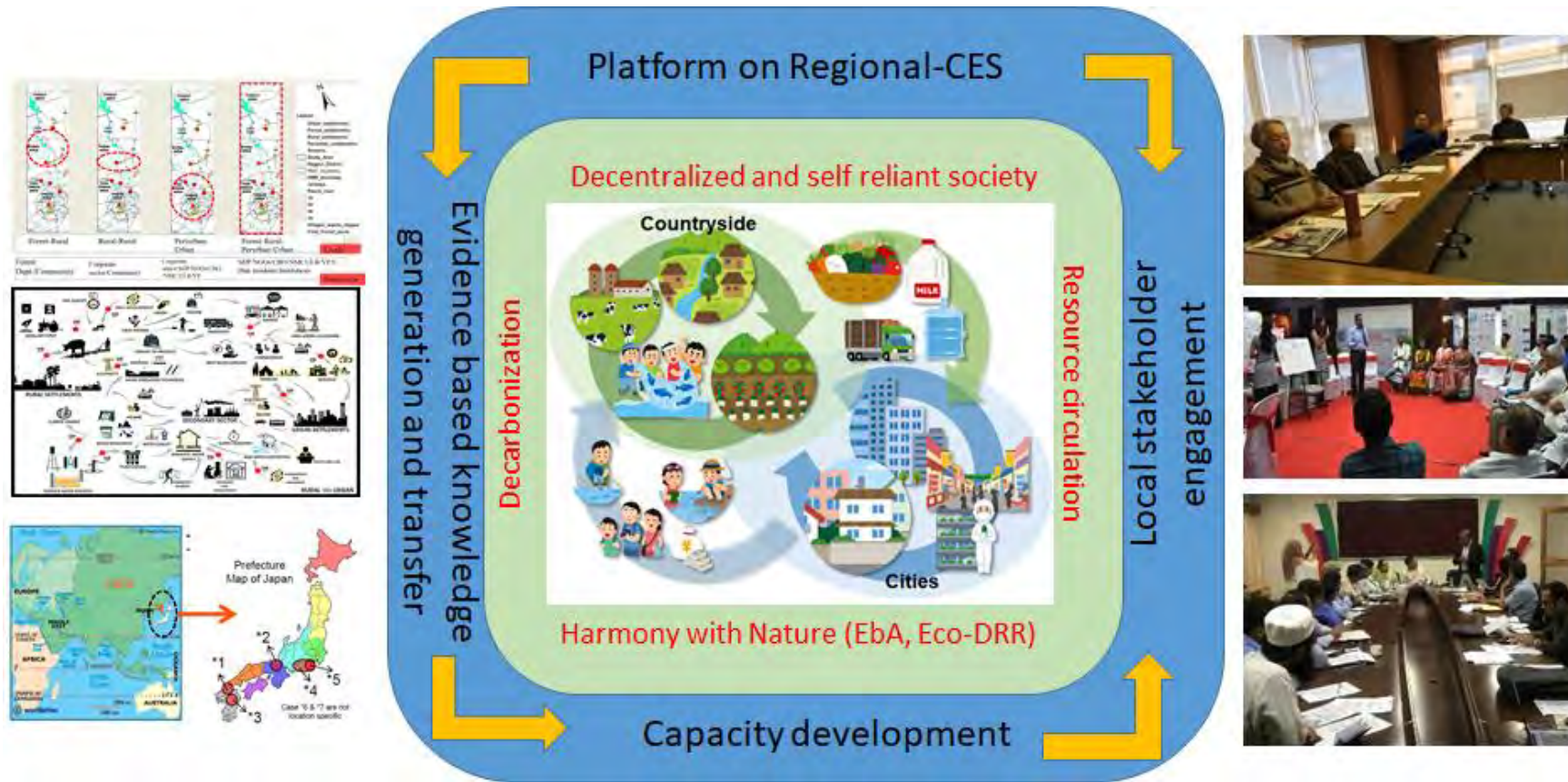
- Launched IGES proposal on Circulating and Ecological Economy - Regional and Local CES at the 6th APFSD 2019
- Organize CES session at ISAP 2019 in order to facilitate knowledge sharing

2018

The 5th Basic Environmental plan of Japan



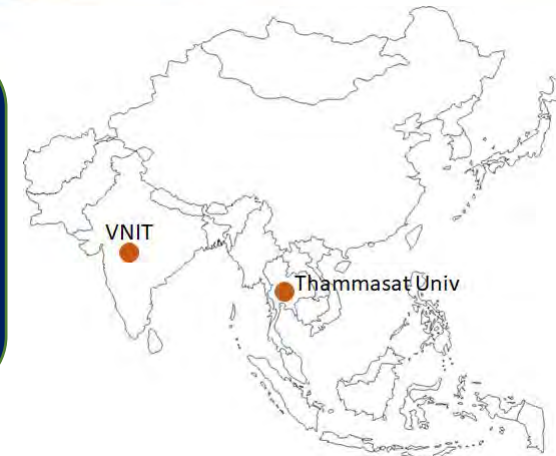
Our approach to advance CES in the Asia Region



- Establish regional platform on CES
- Mapping issues that need Region-CES approach
- Conduct case study (in Japan and Outside)

- Analysis of good practice (eg. Kanagawa water environment conservation program) and transfer knowledge to other regions
- Co-design of Regional-CES framework base on local needs
- Capacity development program

IGES-START Collaboration
 (Elaboration of concept, Mapping studies, Regional workshops)
 Regional collaborators: Thammasat Univ, Thailand
 Visvesvaraya National Institute of Technology, India

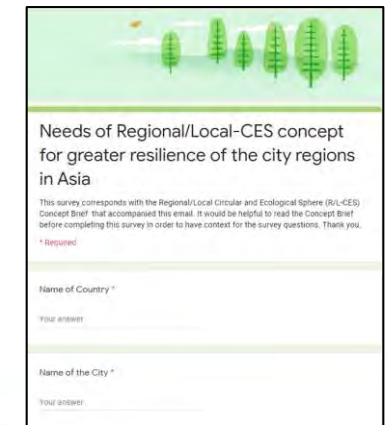
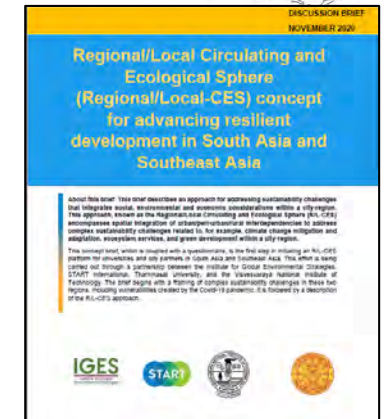


Outputs

Regional platform on CES
 Knowledge generation and sharing

CES framework to address local needs

Outreach of the CES concept

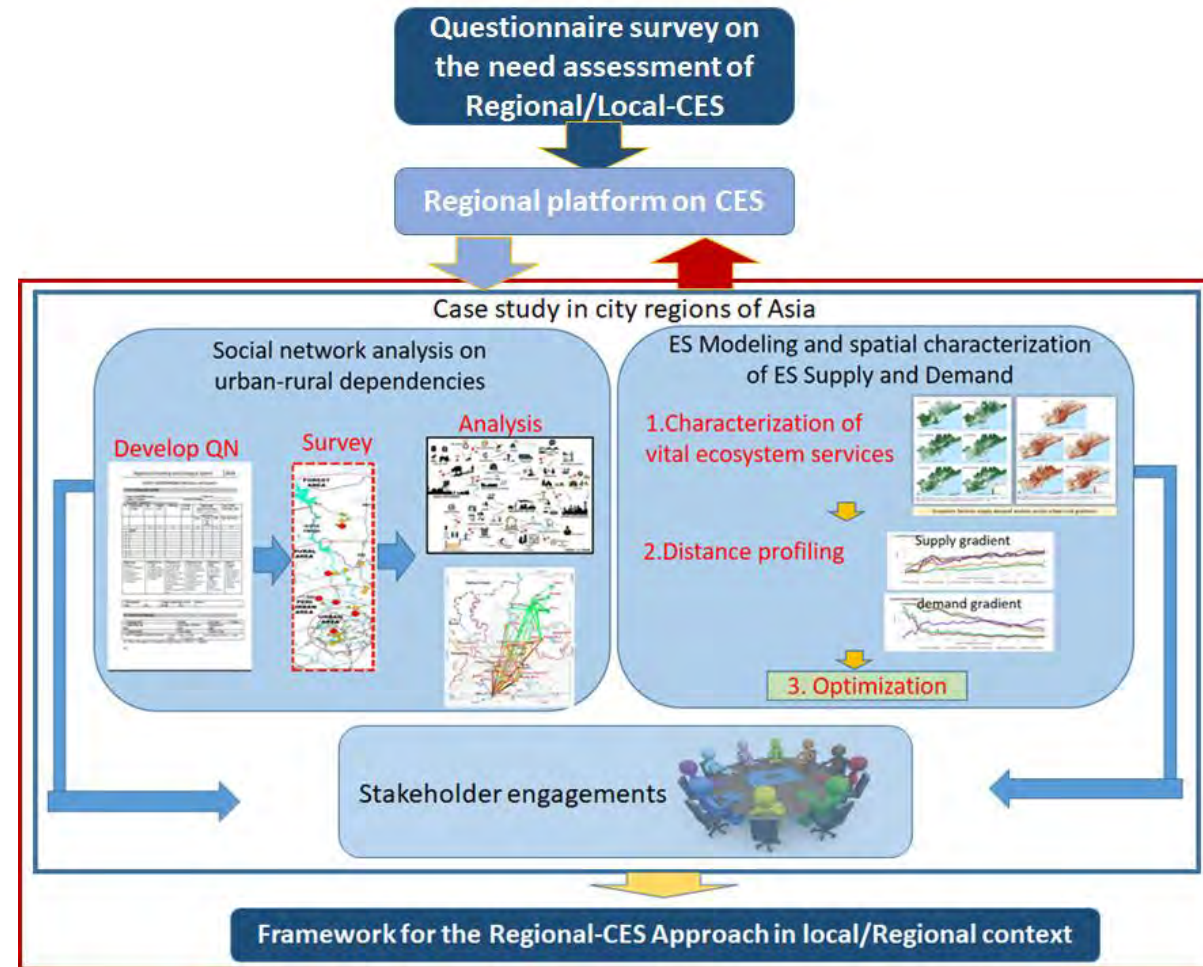
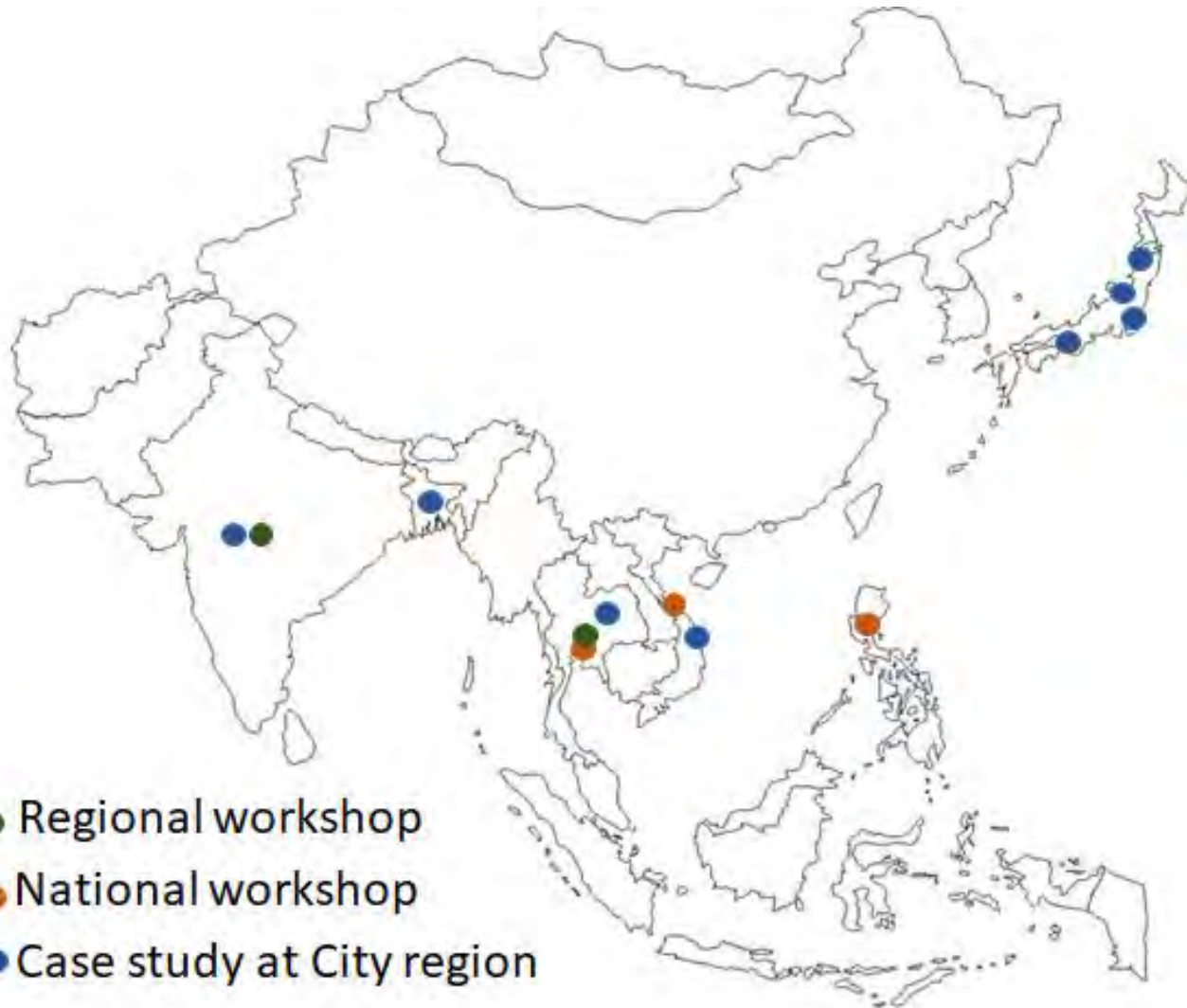


APN-IGES (KRC) CES
 (National level workshop)
 To support formulation of a new model of collaborative regional projects on CES, and to promote the initiative in the Asia-Pacific region

IGES Core Research
 (International and domestic case studies)

- Generate evidence based knowledge
- Multi-stakeholder engagement

Our activities to advance the CES Concept in the Asia Region



Outreach and impact generations

ISAP TT-6: Towards New Paradigms in Urban-Rural Linkages: Fostering Innovations for Sustainable Resource Management and Collective Resilience



Kazuhiko Takeuchi
President, IGES



Rajib Shaw
Professor, Graduate School of Media and Governance, Keio University
PDF (1.4MB)



Tomoko Takeda
Policy Researcher, Natural Resources and Ecosystem Services Unit, IGES
PDF (990KB)



Sameer Deshkar
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CES in Urban planning syllabus, VNIT

VISHVESVARAYA NATIONAL INSTITUTE OF TECHNOLOGY, NAGPUR
Department of Architecture & Planning
M.Tech. Urban Planning & Smart Infrastructure

Course Code: UPLXXX	Climate Change & Resilient Urban Infrastructure
Level: M.Tech.	UPL-CT-3
Objectives:	The course intends to expose students to the emerging concepts of climate change and its predicted implications for urban infrastructure planning. The course deliberates on various issues and approaches for planning disaster resilient urban infrastructures.
Contents:	<ol style="list-style-type: none"> Meaning and definitions of climate change, climate forcing, emerging trends related with climate change, projected consequences of climate change on various development sectors and particularly on urban & rural infrastructures General introduction to urban basic infrastructures, overview of status of basic infrastructures in India, study of critical infrastructures & lifeline services, their typologies & role in sustainable development at various scales, issues & challenges in managing critical infrastructures, study of guidelines & standards for various critical infrastructures Study of vulnerability profile of Indian cities with respect to climate change, emerging climate disasters, consequences of disruptions in basic infrastructures, an overview of disaster management frameworks and guidelines in India Introduction to resilience theory and practice, associated terminologies & concepts, basic frameworks for risk assessment of engineered & non-engineered systems; Characteristics of resilient urban systems; study of various methods for assessing risk resilience, approaches for building resilient urban systems. News approach to regional Food-Energy & Water (FEW) infrastructures, their role in collective resilience of urban & rural regions, perspectives on Regional Climate Resilience System (RCRS), overview of principles of green infrastructure planning & their role in climate risk resilience. An overview of significant global frameworks such as SFDRR, SDG and New Urban Agenda and their significance to resilient urban infrastructure planning.
Method of Assessment:	Continuous Evaluation through semester exam, class tests, tutorials on relevant topics.
Expected Outcome:	Improved understanding of climate change, climate disaster & risk resilience. Clearer understanding of approaches for planning resilient infrastructures at urban & regional scale.
Key references:	<p>Climate Resilient Cities: A primer on reducing vulnerabilities to climate</p> <p>United Nations, Global Assessment Report on Disaster Risk Reduction: Lawrence J. Vale, The Resilient City: How modern cities recover from disasters</p> <p>Rajib Shaw, Ashish Singh, Gishshar Anu Parvin, An-Ul-Balham, Urban Disasters in Asia, Elsevier, 2016</p> <p>S.V.R.K. Penhaker, Adaptation Decision Making Frameworks and Tools, IGES, Nagpur, 2014</p>

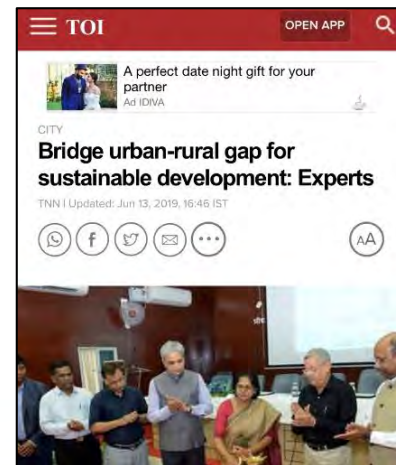
Stakeholder workshops



Letters from the honorable Mayor of Nagpur



CES got coverage in National and local news papers



Publications

IGES Discussion Paper
On Circulating and Ecological Economy
—Proposing a Regional/Local CES
2019

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Urban-Rural Partnerships
A win-win approach to realize
Regional CES
(Regional Circular & Ecological Sphere)
Compendium of Good Practices from Japan

Minex 慶應義塾 Keio University IGES

Progress in Disaster Science
Optimizing Food-Energy-Water (FEW) nexus to foster collective resilience in urban-rural systems

Vijhas Subhswar^{1,2*}, Rajib Shaw³, Bijon Kumar Mitra⁴, Wanglin Yan⁵

ARTICLE INFO ABSTRACT

1. Introduction
2. Research gaps of FEW nexus in urban-rural systems
3. Key issues & challenges in operationalizing FEW nexus
4. Discussion
Acknowledgements
References and recommended reading

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Regional Circular and Ecological Sphere Concept for Sustainable Resource Management and Collective Resilience of Urban and Rural: Lessons from Japan

Bijon Kumar Mitra, Rajib Shaw, Junichi Fujisawa, Atsushi Wakaba, Tomoko Sakaida

4th World Congress on Disaster Management
29 January to 1 February, 2019
Mumbai

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IGES Research Report
BUILDING
URBAN-RURAL
PARTNERSHIP FOR
RESILIENT FUTURE

Promoting Regional Circular Ecological Sphere
Concept for Sustainable Resource Management
and Collective Resilience of Urban and Rural
Regions in Nagpur Metropolitan Area

IGES 慶應義塾 Keio University IRDR

Book
Circulating and
Ecological Sphere:
Concept and
Applications
(Forthcoming)

Promoting concept of Regional Circular and Ecological Sphere (RECS) for sustainable resource management and collective resilience of urban-rural areas in Nagpur Metropolitan Region

Main Objectives:
• To understand the inter-dependency between urban and rural areas
• To arrive at sustainability guidelines along guidelines for RECS by applying RECS principles

Methodology:
• Selection of study area on basis of population and accessibility
• Questionnaire preparation
• Survey of all four zones
• Analysis

Study region
Nagpur city

Land use Land cover Analysis-2008-2018
Market Linkages and Recreation Linkages
Survey Analysis
Key Observations from Stakeholder Workshop
Field Survey by VNIT team
Workshop on Urban-Rural partnership at VNIT Nagpur

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ご清聴ありがとうございました。
Thank you for your attention.

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