

Development of analytical methodology of sustainable development by “Regional Circular and Ecological Sphere”

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“Regional Circular and Ecological Sphere” (Regional CES, R-CES)

“**Recommendation**” of the Central Environmental Council (2014)

- Integrated approach for environment, economy and society
- “Integration and collaboration of environmental policies”
- Utilization of local recyclable resources

“With the aim of further improving ‘environment, economy, and society’ in an integrated manner and realizing a truly sustainable ‘circular and ecological society,’ economic and social issues are delved into using the synergy effects gained through the integration and collaboration of environmental policies in line with the six basic strategies (including ‘integrated approach’...”

“ One of the ‘integrated approaches’ is the creation of a Regional CES that consists of cities and agricultural, mountainous and fishing villages—independent and dispersed communities within each of which locally unique recyclable resources (natural resources, materials, human resources, money, etc.) are circulated—and where such local resources are shared as appropriate among the communities.”

“Regional Circular and Ecological Sphere” (Regional CES, R-CES)

5th Basic Environmental Plan (Japanese Government, 2018)

- Producing new value chains in natural and economic connections
- Circulation of material, energy, money, people, and information
- Building self-resilient and decentralized society
- Means to achieve SDGs in local scale

→ **The plan uses two pages to introduce the philosophy of R-CES. Interpretation is necessary for concrete application.**

“This plan aims to create a ‘Regional CES’ that produces new value chains, complements and supports regional resources by building broader networks, and which is composed of natural connections (connections among forests, the countryside, rivers, and the sea) and economic connections (comprising human resources, funds, etc.), while making full use of mountainous, agricultural and fishing villages, and cities. Each region will demonstrate its strengths by utilizing its unique characteristics, thereby building a self-reliant and decentralized society where different resources are circulated within each region, and symbiosis and exchange with neighboring regions occurs according to the unique characteristics of each region.”

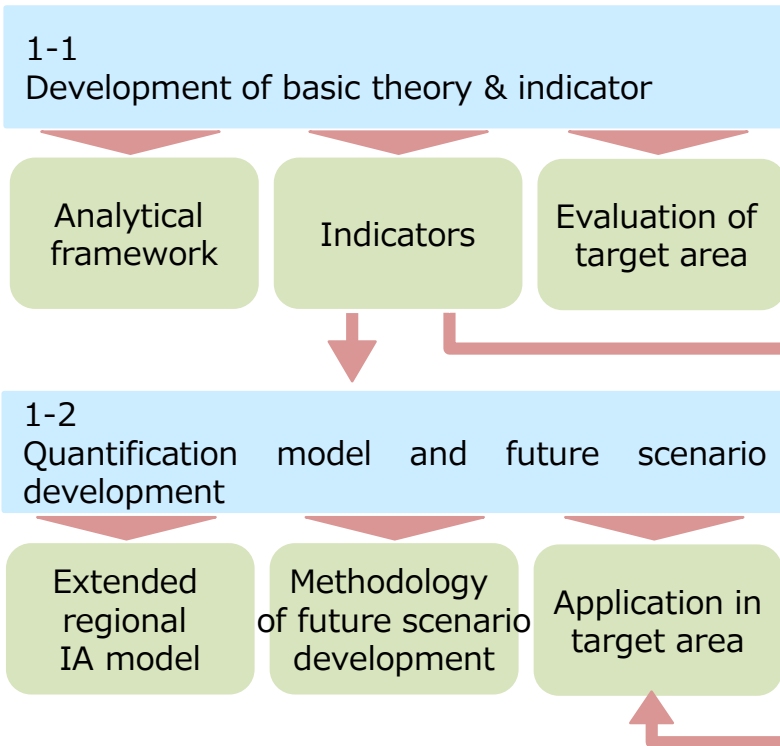
Objective

As a basic study to support effective policy making and program implementation with the philosophy of R-CES, the objective of this study is to develop a general theoretical framework of analysis of R-CES in which actions in different fields can be treated in a common manner, and a method to quantify impact of the development of R-CES.

Research components

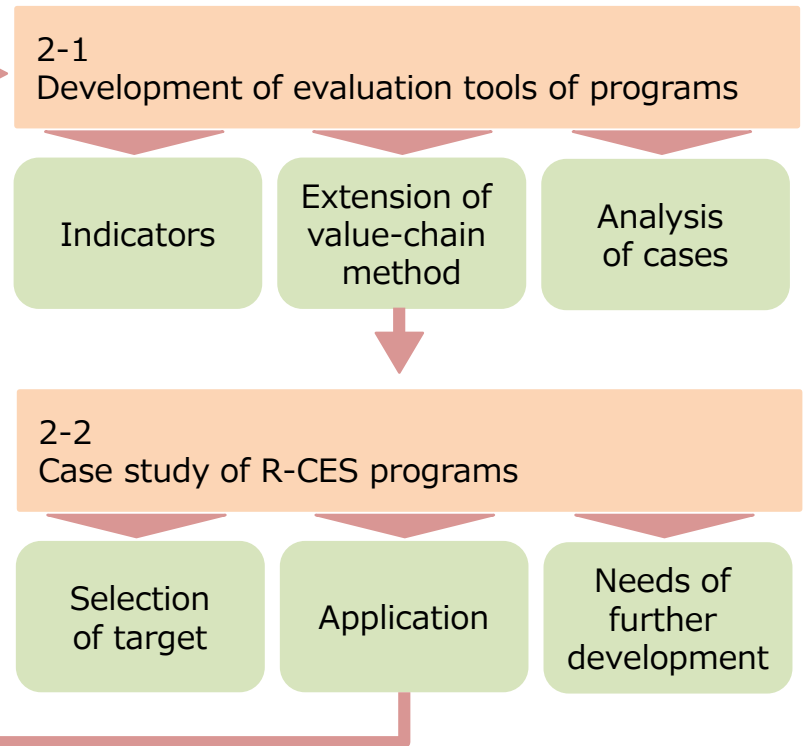
Sub-theme 1

Development of quantification methodology of impact of R-CES **actions in a society**



Sub-theme 2

Development of assessment methodology of R-CES impact of **individual programs**



Theoretical framework and quantification methodology of R-CES

9 Elements of the R-CES philosophy

Five
Goals

Climate change (M/A)

Resource circulation

Symbiosis with nature

Social issues

Economic issues

Two
Methods

Cooperation of regions

Utilization of regional resources

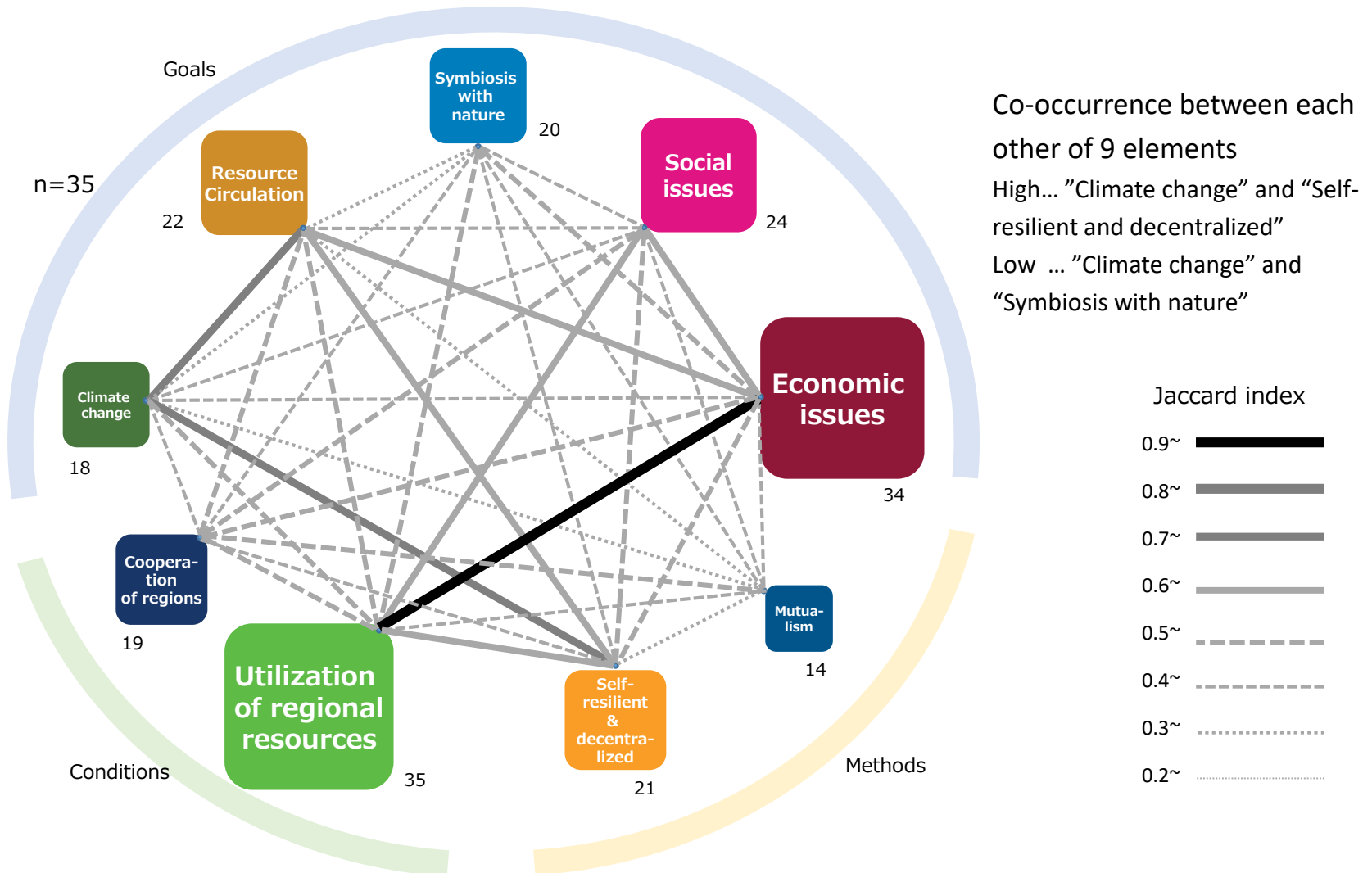
Two
Conditions

Self-resilient and decentralized

Mutualism

Frequency and Co-occurrence of 9 elements in current R-CES programs

- 35 groups joined a platform program of R-CES by MOEJ
- Average 5.9 elements mentioned, 6 groups mentioned all 9 elements
- Maximum: Regional resources (35), Minimum: Mutualism (14)



Decomposition and structuration of actions of R-CES

