

Ecosystem-based Evaluation of long-term Energy System Resiliency and Sustainability

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AIM

- Develop an ecosystem-based evaluation method for supporting the success of energy system transformation to be sustainable and resilient

BACKGROUND

- The energy system is in the transformation of being sustainable and resilient
- Climate uncertainty and environmental disturbance have challenged the energy systems all over the world
- Innovative development and construction of energy systems are in high demand
- The transformation roadmap and stakeholders' involvement demand appropriate technologies and strategies with the consideration of all relevant elements and impact factors to secure success
- Little research has focused on the ecosystem level or provides a systematic method

OBJECTIVES

Several cases via to-be involved projects

Development of ecosystem-based evaluation framework and method

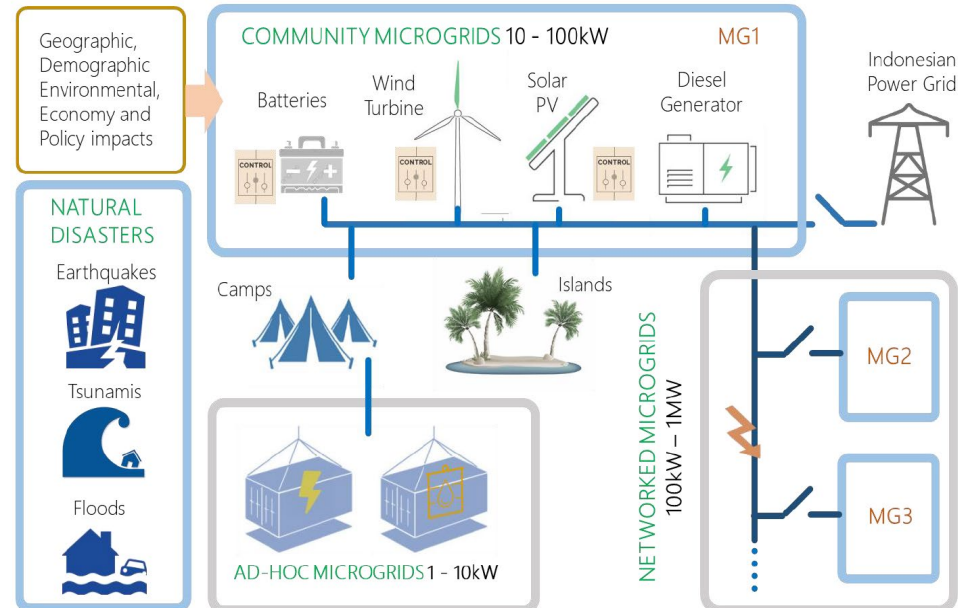
Development of simulations for testing, verification, and validation of the method

Programming (Java and Python) for simulation and tool integration

METHODOLOGY

Various big data and AI analytics and forecasting methods will be applied based on the scenarios.

Several simulation tools (e.g., AnyLogic, OnSSET) will be evaluated and applied in the project.



CASE STUDIES



Danida Fellowship Centre
- sustaining development through research and learning