



EcoBank: Pioneering Standards for Ecological Data Sharing and Utilization in South Korea

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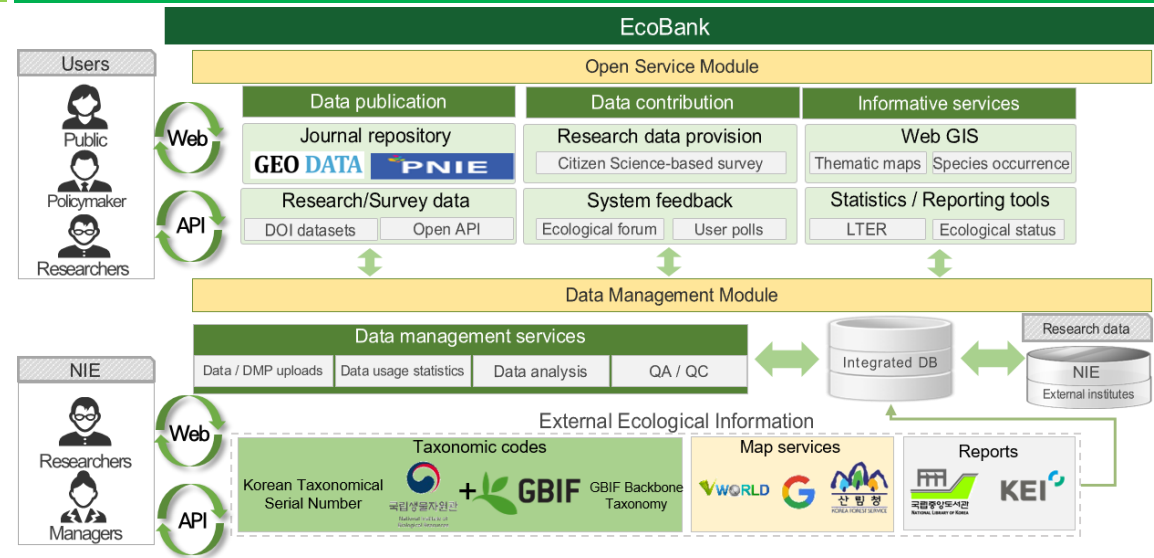
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1. About Ecological Information Bank (EcoBank)

- Purpose:** National Institute of Ecology (NIE), Korea aims to provide accessible ecological survey and research data for anyone through [EcoBank](#).
- Data status (the number of spatial features):** Original research data including 6 million field survey data, 15 million synthetic data (thematic maps), 5 million long-term ecological research data and 3 million from other sources (ecological corridor, roadkill, etc.).



2. EcoBank system overview



Extra information GEO DATA

- An open geoscience research data platform, publishing peer-reviewed scientific data and papers.
- <https://geodata.kr/>
- PNI**
- The official journal of NIE, publishing multidisciplinary ecological research from both Korea and abroad.
- <https://accesson.kr/pnie/>

4. Current directions & issues in standardization

- Application** of [Public Data Portal](#) (PDP)'s schemes by adopting DCAT-based schema ([TTAK.KO-10.1249](#)) and [Common Standard Terms](#) for metadata elements of datasets and standardization of research data, respectively.
 - PDP's schemes cannot cover or link ecological information (EI) as Ecological Metadata Language and Darwin Core do.
- Participation** in [ISO/TC 331](#) (Biodiversity) WG1 (Vocabulary) and WG2 (Measurement, data, monitoring and assessment), data journal conferences, etc.
 - Low priority and expertise in standards for ecological data.
- Collaboration** with data-producing or platform-managing stakeholders in NIE and other institutes for data integration.
 - Lacking data experts and physically detached platforms.

3. SWOT analysis for standardization strategies

S	W	O	T
<p>Continuity: The majority of data are produced in the same long-term projects.</p> <p>Networking: Active communications with system developers, data providers, ecologists, general users, etc.</p>	<p>Experts: The low number of NIE experts in data standardization.</p> <p>Diversity: Current standards designed for table-type data hinder the standardization of various types of ecological data (image, gene, etc.).</p>	<p>Policy: Promotion of Digital Platform Government with standardization guidelines.</p> <p>Demand: Rising interests in climate changes and biodiversity from private sectors.</p>	<p>Rigidity: Low flexibility and coverage of current PDP's schemes.</p> <p>Advancement: Demanding types of data become various as the advent of AI-based techniques.</p>

4. Future directions

S	W
<p>Reorganization: Unify data-related manpower in NIE for collaborating with different stakeholders to optimize standardization practices.</p> <p>Refinement: Utilize continuous data collection and communication channels to refine and expand the coverage of standardization practices.</p>	<p>Cooperation: Build a collaboration framework with the private sector, leveraging their capital and expertise to meet the growing demand for biodiversity data.</p> <p>Introduction: Benchmark against and align standards with leading initiatives such as DataONE, TERN and GBIF for linking systems and sharing data.</p>