Activities and Status on GEOSS in Korea

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Background of Korea's Participation in GEOSS

- Over the past 100 years, average surface air temperature in Korea rose 1.5 ℃
- Economic losses by disasters jumped
  - During the last 10 years, annual average property damage by natural disasters recorded USD 4.6 billion
  - In particular, damage in 2002 reached to USD 15.1 billion
- According to UN Population Action International Korea is grouped into one of water shortage countries
- Energy demand rapidly increased
  - A total amount of energy consumption was 168 million TOE in 2004

- Achievement of GEOSS societal benefits is a very important problem for Korean Government to solve

International Activity

- **Korea has participated in GEOSS activities since the first Earth Observation Summit (EOS-I) with sharing the objectives of GEOSS**


EOS-I

EOS-II


EOS-III


GEO-II

GEO-III

Vision and Target for Korea GEOSS

Vision

To promote the national economic development to protect life and property, and to contribute to sustainable development by sharing integrating and utilizing the Global Earth Observation data and information

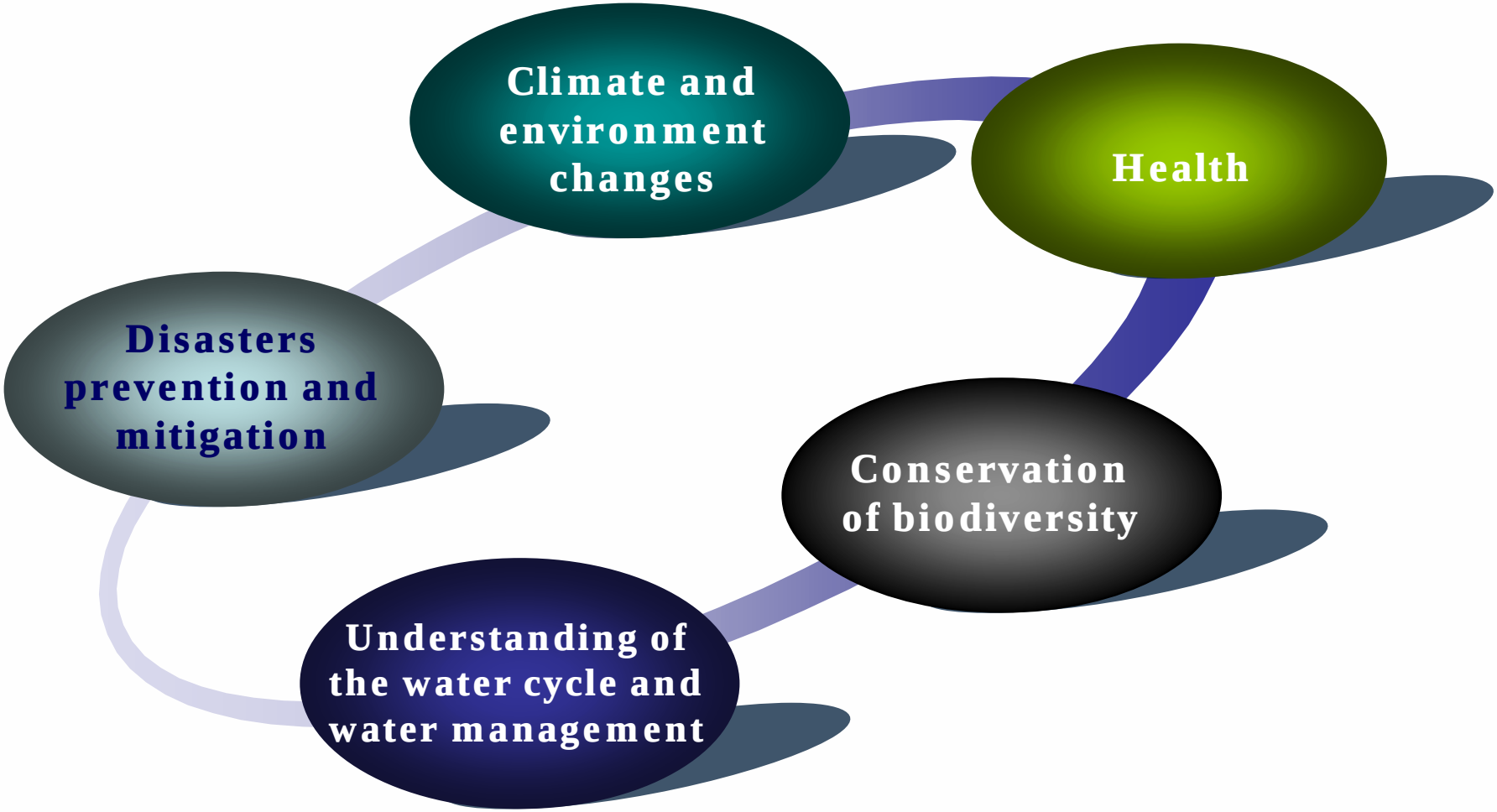
Target

- **Improve better understanding of global environmental changes and its predicting**
- **Strengthen national GEOSS information**
- **building on national GEOSS initiatives for exploring, strengthening and outreaching sustainable observation component**
- **Building the infrastructure of science and technology and training personnel in relevant areas**

Observing Sectors in Korea

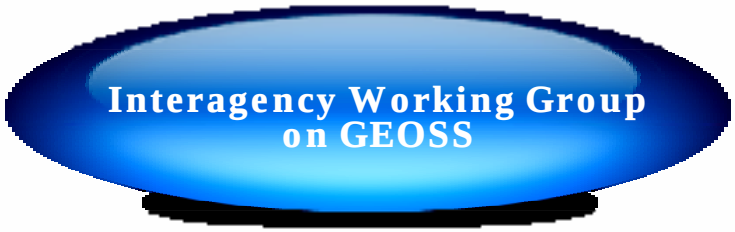
Selection of twelve observing sectors required for maximizing the nine GEOSS societal benefits

The Implementation Areas with High Priority



Governance

- Consisting of high level officials of relevant ministries and administrations including MOST, MOCT, MOE, MOMAF and KMA
- Devising and assessing the Korea GEOSS strategic plan, implementation plan and R&D policy, and support the GEOSS activities



- Establishment under the National Strategic Committee
- Consisting of officials and experts from relevant organizations
- Reviewing the short- and long-term implementation results and taking the improved measures

- Play a role of contact point with the GEO Secretariat
- Carry out the administrative and technical business

Responding Status

2005.Mar.08. Reporting the plan of National Responding System for GEOSS to Cabinet council

2005.Mar.~Jul. Organizing and operating Task Force Team on National Responding Strategy for GEOSS

2005.Jul.28. Hosting National Strategic Committee for responding to GEOSS Interagency Working Group on GEOSS

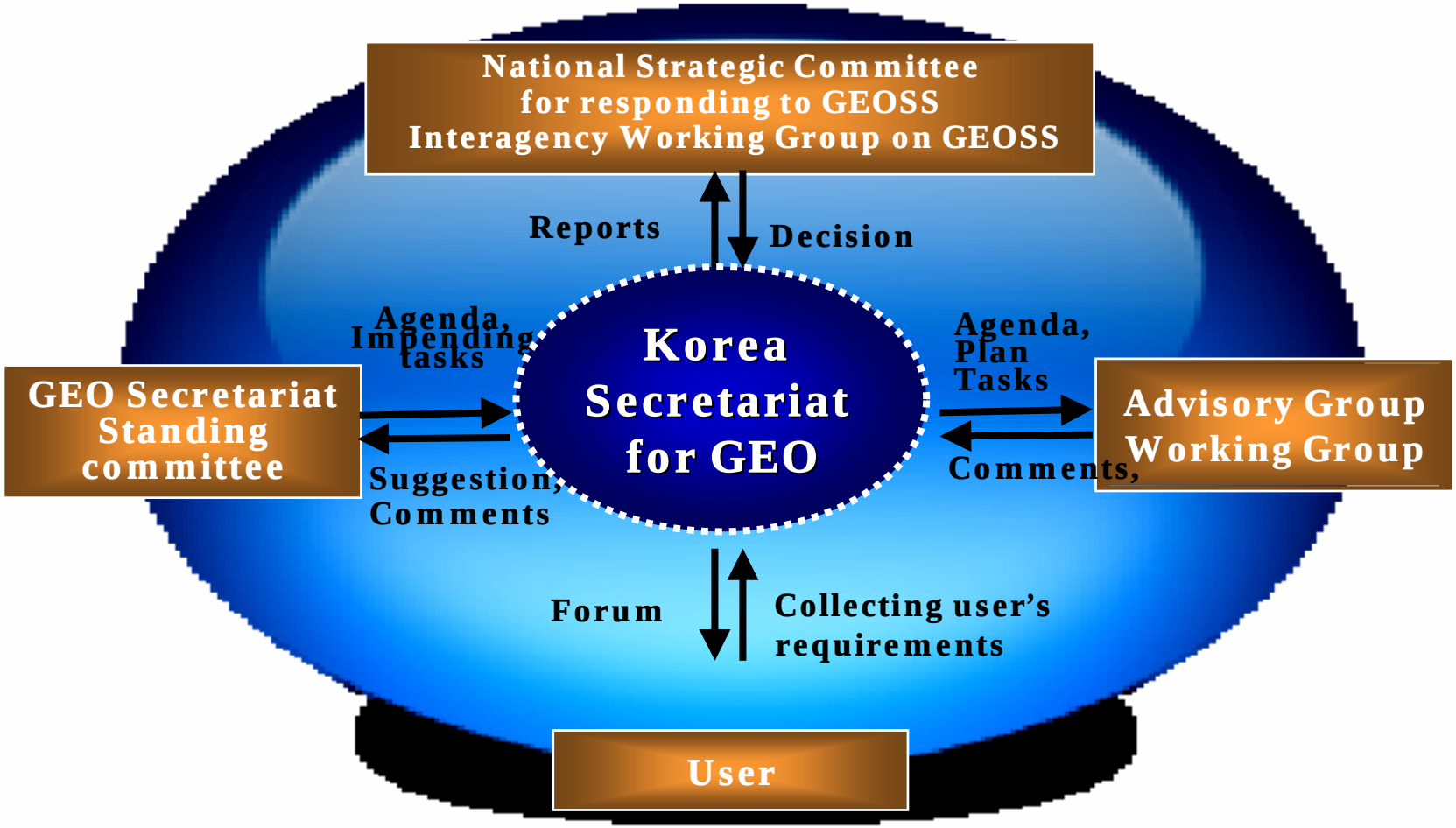
2005.Aug.30. Reporting the National Strategy Plan for GEOSS to a Cabinet council

Korea Secretariat for GEO

2005.Sept.12. Establishing Korea Secretariat for Group on Earth Observation (GEO) in Korea Meteorological Administration

- Advisory group : 34 scientists from 23 agencies
- Developing 2-, 6-, and 10- year implementation Plan for Korea GEOSS (completed by the first half of 2006)

Function of Korea Secretariat for GEO



Activity of Korea Secretariat for GEO

2006.~ Advisory Group Meeting and Activity

- The First Meeting (Jun. 23.)
- The Second Meeting (Sept. 05.)
- The Third Meeting (Nov. 22.)

2006.Nov.22 ~ Nov.24. The Joint Convention for Developing the Strategic Plan on implementing the Integrated Management System of the National Earth Observation Data

Main Activity Areas of the 2006 Plan for GEOSS

Areas	No.	Abstract
Disaster	DI-06-01	systematically record data over coastal regions subject to tsunami risk and archive data
	DI-06-02	Seismograpghic networks improvement and coordination
Climate	CL-06-04	Identify lead international entities and national focal points for ocean observation efforts
Weather	WE-06-02	Space-based global observing system
	WE-06-03	THORPEX Interactive Global Grand Ensemble (TIGG)
	WE-06-05	Numerical weather-Prediction Capacity Building
Architecture & Data	AR-06-05	Initiate development of a publicly accessible, network- distributed clearinghouse
	DA-06-07	Define a model web portal system for access to all Earth observation data
Capacity Building	CB-06-04	GEONETCast

Examples of Activities and Plan for GEOSS

- **Observation**
  - **KMA and KORDI deploy 30 ARGO floats every year on East Sea, Western Pacific, and Antarctic sea to expand the array**
    - total of 147 floats deployed during the period of 2001 to now
  - **Established Korea Flux Network (KoFLUX , http://koflux.org) in collaboration with Asia Flux (Japan Flux , China Flux)**
  - **Installed the ocean bottom seismometer in the East Sea in 2006**
    - To detect earthquake rapidly
    - To share the international seismic data
  - **Plan to launch a multipurpose geostationary satellite (Ocean and Meteorological Satellite (COMS)) in 2008**
    - To provide higher resolution meteorological and oceanographic data
    - Meteorological data will be disseminated in real time to worldwide users either by direct broadcasting or land lines.

Examples of Activities and Plan for GEOSS

- **Capacity building**
  - **Host ASEAN-KOREA cooperation training workshop for the use of numerical weather prediction products**
    - Numerical weather-prediction capacity building workshop
    - Oct. 30 ~ Nov. 3 , 2006

- **Date processing and Modeling**
  - **Established APEC Climate Center (APCC)**
    - Designated as a GEOSS Modeling and data processing centers
    - Official opening during the 13th APEC Leaders' Meeting held in Busan, Korea, 18 November 2005
    - Products of the optimized multi-model ensemble climate prediction information for real-time dissemination to all APEC Member economies
  - **Developed Monitoring and long-term prediction system on El Niño/ La Niña(1999~2006)**

Future Plan

2007. ~

1. Development and implementation of the Korea Integrated Earth Observation System

2. Promoting Korea participating Tasks in GEO 73 Tasks 2007-2009

3. Contribution to send Expert to GEO in 2007

4. Hosting Numerical Weather Prediction Capacity Building Workshop in 2007

Thank you
for your attention!

Development and Implementation of the Korea Integrated Earth Observation System

- Establish a National GEOSS Operation Center to exchange and integrate the internal and external data and information, based on high performance computing and technologies

- Establish Data Archive Centers, Data Assembly Centers and Modeling Centers in accordance with fields, as necessary

- Set up Interoperability, Standards and Protocols as observational infrastructure