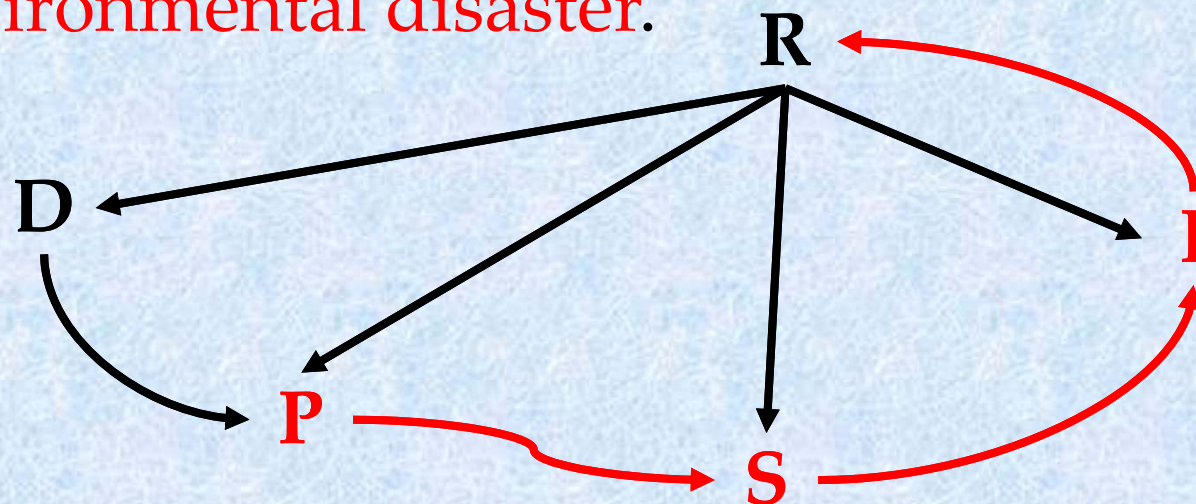
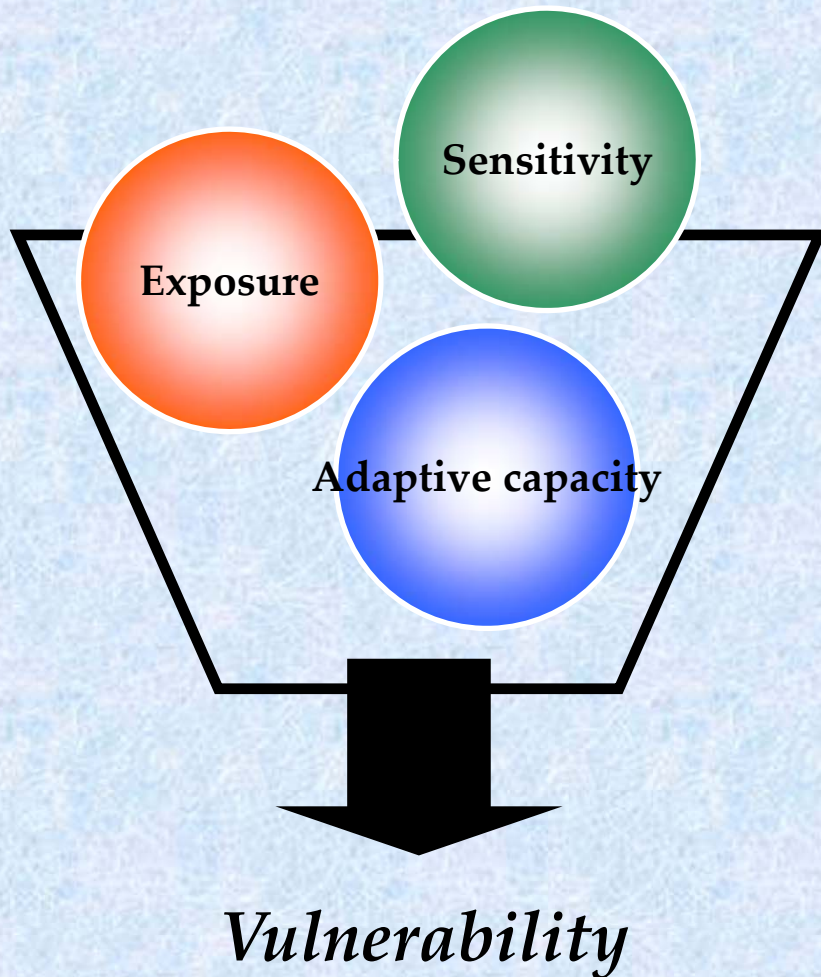


- **PGGM Project:** this Pacific Greenhouse Gases Measurement (PGGM) Project aims to observe the amounts and the **horizontal resolutions of greenhouse gases** in the atmosphere over the Pacific Ocean for the next 20 years to facilitate the scientific researches on climatic changes (NCU, 2009).
- **Collaboration:** PGGM project collaborates with the European **IAGOS -ERI** project by in-service Airbus aircrafts from **China Airlines and EVA Air** (Wang, 2009).

- **VA task:**
 - developing **vulnerability assessment model**,
 - understanding ultimate potential **Impact** (*human-natural* impact) regarding vulnerability comprised of **Pressure** (*natural* exposure) and **State** (*human* sensitivity and adaptive capacity),
 - across domains of such **water resource, public health, ecological system, food security, and environmental disaster.**



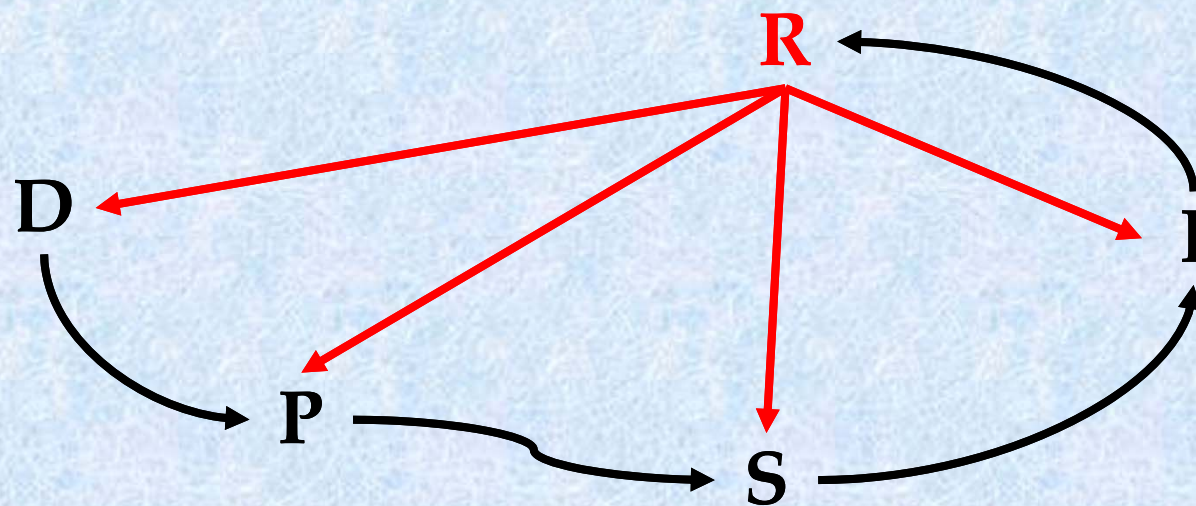


- **Exposure**
 - Climate-induced natural hazards and
 - environmental change
- **Sensitivity**
 - Land use
 - Industry
 - Population
- **Adaptive capacity**
 - Planned, autonomous
 - Centralized, decentralized

$$Vulnerability = f (exposure, sensitivity, adaptive capacity)$$

- **AP task:**

- developing **adaptation planning prototype,**
- understanding adaptation including such **anticipatory, autonomous, and planned action** as **Response to D, P, S, and I,**
- from the aspects of such **risk management, technology development, policy and governance, and spatial planning.**



- **Functional context:** focused on the **linkages** among D, P, S, I, and R components that refer to the **information flow**, underlining the **interdisciplinary** approach.
- **Spatial context:** focused on the EA, VA, and AP-tasks on D, P, S, I, and R **components** that refer to adaptation action in **Coastal, Urban, Rural, river-Basin, Offshore island, Mountain (CURBOM) study regions**, underlining the **transdisciplinary** approach.

Cross-spatial dimension

Urban area



Rural area



Offshore island



Mountain area



Coastal area



River-basin area



Cross-sectoral dimension

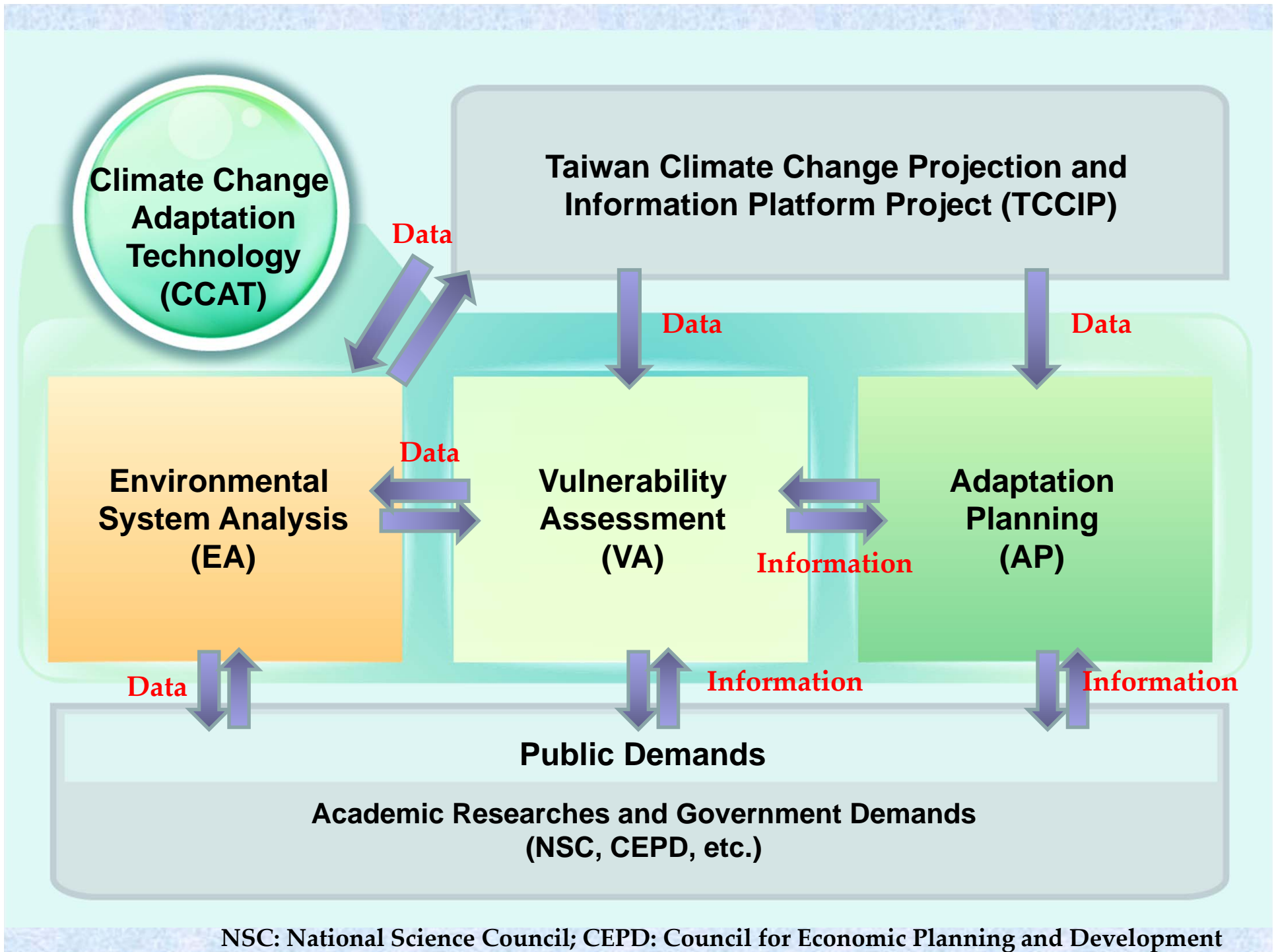
Environmental disaster

Public health

Food security

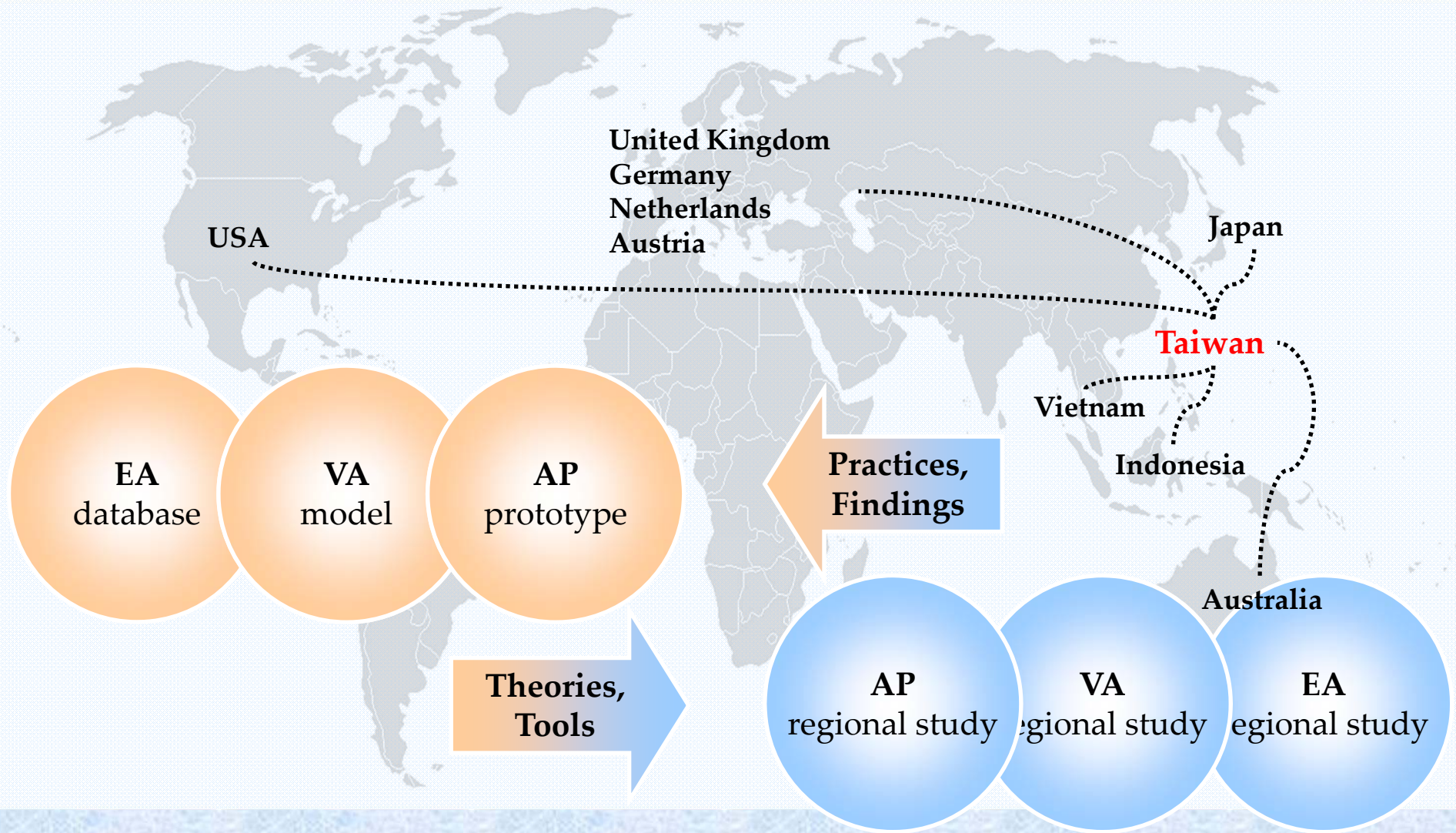
Ecological system

Water resource



NSC: National Science Council; CEPD: Council for Economic Planning and Development

Collaboration



Discussion

- **Prototype:** this research approach can serve as a science-based prototype for developing sensible **technologies**, and fostering international research **exchange**.
- **Roadmap:** (1) establishing **interactive** relationship among working groups, (2) developing **integrative** theories and tools, (3) producing **innovative** practices and findings, and (4) planning next steps in **3i**-circulation.