

## 5. Project ideas for international support

### **Project Title: Improving the climate change modeling capability of Thailand by establishing an integrated national data center equipped with integrated national data transfer/management**

Climate change is known to cause hydro-meteorological hazards (e.g., floods, droughts, heat waves, and storm surges) of increasing frequency and intensity, which potentially put quality of life, social systems, and economic systems in jeopardy. Climate change also affects the onset, duration, and variability of seasonal rainfall, which introduces uncertainty in natural ecosystems (including fishery spawning and bird migration) and tradition cropping calendars. The social and economic impacts of these increasing vulnerabilities often vary among communities, stakeholders, and vulnerable groups. Climate change impact modeling is an essential tool for climate change adaptation and mitigation for various sectors, including the water resource management, agricultural, energy, health, transportation sectors. As thoroughly discussed in the sections on barrier identification and the possible solutions to addressing the barriers to climate change modeling for Thailand, an integrated national data center equipped with an effective integrated national data transfer/management process is imperative and is proposed here as a project idea for international support. Implied by the project title, the main objectives of the project idea are to (1) establish a national data center for data collection, integration, and distribution to all impacted sectors and (2) implement effective mechanisms to collect, transfer, and manage domestic, regional, and international data relevant for climate change impact modeling. This project is beneficial for both governmental agencies and private institutes of all sectors utilizing climate change modeling for planning and decision making. The national data center maximizes the efficiency of data utilization, promotes cross-sectoral coordination and data exchange, and minimizes the total cost of the country's data transfer/management by reducing data transfer/management repetition and redundancy. Last but not least, this initiation will strengthen Thailand's potential to become a hub of climate change knowledge in the region. This project is essential for the success of Thailand's sustainable development priorities, especially for the water resource management and agricultural sectors. This project is proposed to address the barrier identification and the TAPs discussed above. The project scope, possible implementation, timeline activity, and estimated budget can be seen in Table 51 -53 and Fig 28 - Fig 29 respectively depict the TAPs for the establishment of the national data center and the national data transfer/management process. The estimated budgets for the national data center and the data transfer/management process are five and ten million Thai baht, respectively. Evaluations of the success of the project can be made by (1) surveying the user ratings of the data center's performance, (2) accounting for the number of the center's domestic and international partners, (3) verifying the improvements in climate change forecast accuracy, and (4) measuring the number of members or subscribers of the data center. The potential responsible institutes and coordinators of the project include, but are not limited to, the Center of Excellence for Climate Change Knowledge Management (CCKM) at Chulalongkorn University, Thailand, and the Thai Meteorological Department.

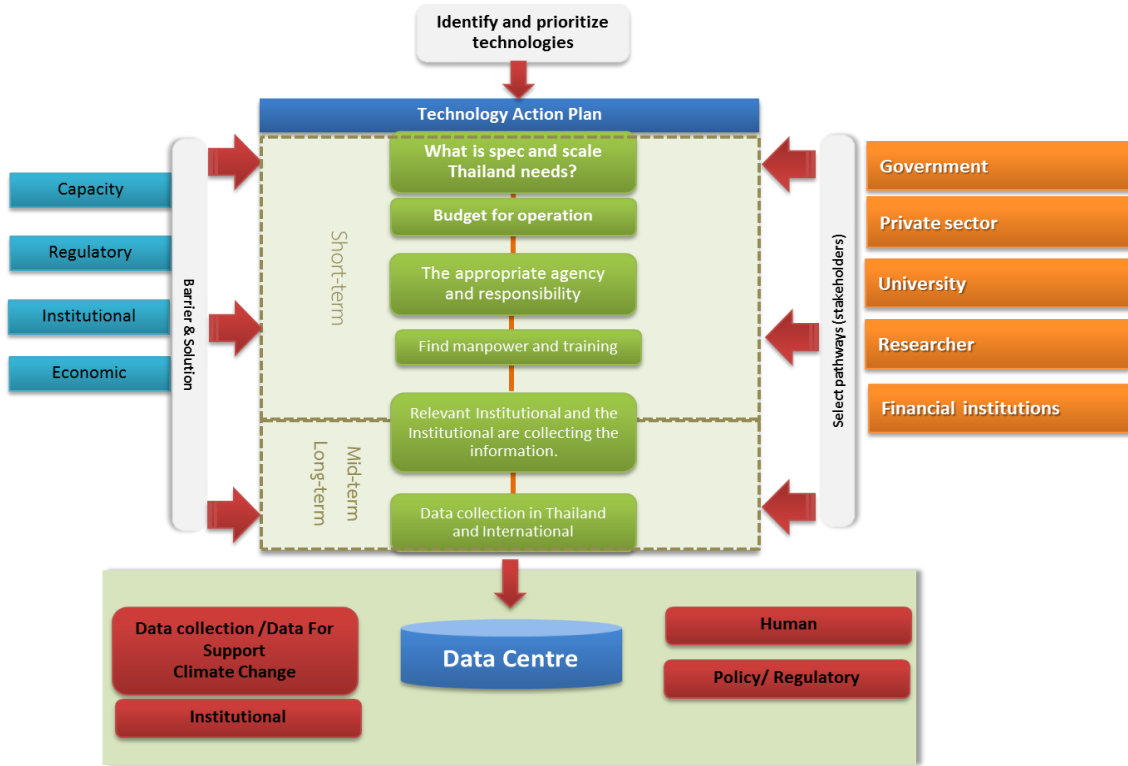


Fig 28 Technology action plan for the national data center

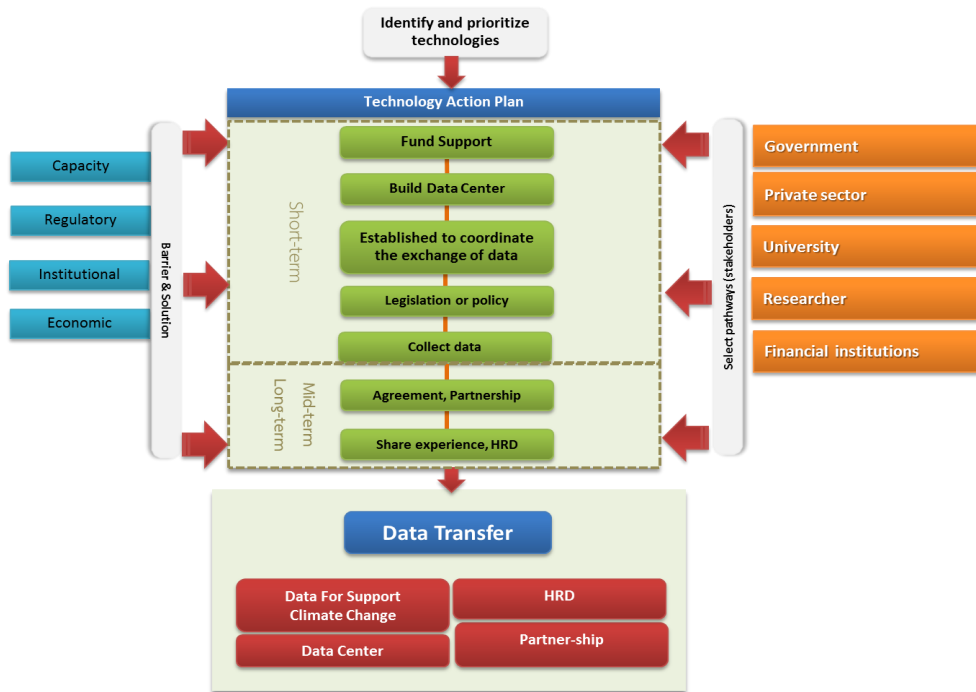


Fig 29 Technology action plan for the national data transfer and management process