## 4.Impacts of climate change on water resources and options for the improvement of water management systems.

**Key research themes in this program are:** 

- Impacts of climate change on the hydrological cycle in different river basins in Thailand.
- Assessment of the implications of climate change for river basin planning in key river basins where climate change impacts are likely to be high.
- Water resources management: in many areas adaptation is profoundly conditioned by changes to water resources availability.









## 4.Impacts of climate change on water resources and options for the improvement of water management systems.

Key research themes in this program are:

- ➤ Water demand patterns in different areas and sectors and the potential of demand management and improved water efficiency as effective adaptation responses.
- Implications of climate change for water quality, with this related to other factors such as waste disposal and saline intrusion.









### 5.Climate change and health. Key research themes in this program are:

- ➤ Future spread in different parts of the country of health problems associated with changing distributions of disease vectors.
- Health impacts of predicted increases in extreme weather conditions, including storms, floods, heat waves, droughts and others.











### 5.Climate change and health. Key research themes in this program are:

- ➤ Health consequences of changing environmental conditions, especially changes to the distribution and severity of air pollution and water-borne pathogens.
- > Health effects of poor access to food, safe water, shelter and other basic needs resulting from climate change.
- > Changes needed to health services to adapt to the potential health impacts of climate change.









# 6.The impact of climate change on urban development, including industrial and transport sectors, and the assessment of options for sustainable urbanization.

- Assessment of the possible impacts of climate change, including sea level rises, on urban areas of Thailand.
- Climate-friendly design, for buildings, infrastructure and urban planning and zoning.
- Analysis of the GHG emission levels of different urban areas and sectors and the development of integrated strategies for reducing emission levels.









# 6.The impact of climate change on urban development, including industrial and transport sectors, and the assessment of options for sustainable urbanization.

- Potential co-benefit approaches to urban air quality.
- Integrated transport planning options to reduce congestion, improve road safety and reduce GHG emissions from the transport sector.





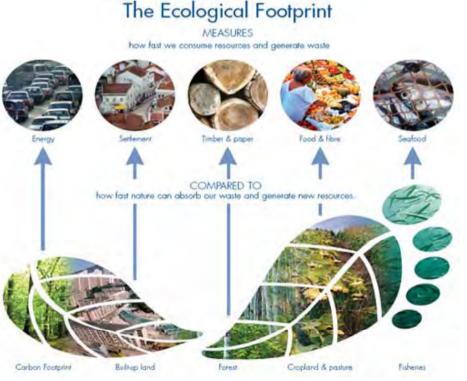






# 6.The impact of climate change on urban development, including industrial and transport sectors, and the assessment of options for sustainable urbanization.

Life-cycle assessments and the use of ecological footprint approaches to assess the production, distribution and consumption chains of specifindustrial products.











#### 7. Climate change adaptation.

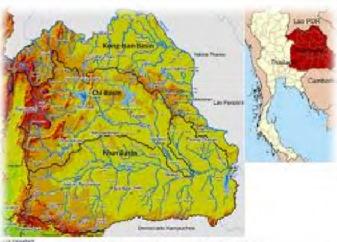
- 7.1 Research into autonomous adaptation at the community level, seeking to understand and strengthen the effectiveness of spontaneous responses of livelihood and resource management systems to changing conditions:
- Resilience and vulnerability, especially into the nature of risks and the ability to cope with risks at the community level.



#### 7. Climate change adaptation.

- This should include a focus on action research, working with local communities and civil society/NGOs.
- Policy and institutional processes that either encourage or discourage autonomous adaptation responses at the community level.















#### 7. Climate change adaptation.

- Economic analysis of local level adaptation processes and intervention options is essential, including the valuation of livelihood systems and ecosystem services.
- Geographical variations in adaptation needs and opportunities and the nature of autonomous adaptation responses in different parts of Thailand.

