NACA INITIATIVES ON ADDRESSING CLIMATE CHANGE IN AQUACULTURE AND FISHERIES

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http://www.enaca.org

ABOUT NACA

- **Intergovernmental Organisation established in 1990**
- *Promote rural development through sustainable aquaculture and aquatic resource management.*
- *Seek to improve the livelihoods of rural people, reduce poverty and increase food security.*
- **19 member Governments**

Our Current Members

19 NACA Current Member Countries

- Australia
- Bangladesh
- Cambodia
- China
- Hong Kong SAR
- India
- Indonesia
- IR Iran
- Lao PDR
- DPR Korea
- Malaysia
- Maldives
- Myanmar
- Nepal
- Pakistan
- Philippines
- Thailand
- Sri Lanka
- Vietnam

REGIONAL LEAD CENTRES OF NACA

The key to NACA's success is its large network of collaborating research centres distributed throughout the region.

(1) Freshwater Fisheries Research Centre, Wuxi, China (FFRC)

Focuses on improving the capacity of personnel and the usability of technology related to hydrobiology, aquaculture, farm planning and management

(2) Central Institute for Freshwater Aquaculture, Bhubaneshwar, India

Conducts research on nutrition, physiology, genetics, pathology, pond environmental monitoring and aquaculture engineering for development of intensive and extensive freshwater farming systems and acts as a nodal agency for scientific information and technology transfer.

(3) SEAFDEC Aquaculture Department, Iloilo, Philippines

Conducts research, develop technologies, disseminate information and organize training in the farming of fishes, crustaceans, mollusks, and seaweeds.

(4) Inland Fisheries Research and Development Bureau, Bangkok, Thailand

The bureau is responsible fro research and development planning on freshwater fisheries resources, including resource assessment studies, development and introduction of high-yielding production technologies and human resource development.

(5) Coldwater Fisheries Research Center, Mazandaran, IR Iran

The Center is part of the Iranian Fisheries Research Organization. It is located adjacent to the important coldwater aquaculture production areas of Dohezar and Sehezar, on the banks of the Tonekabon River by the Caspian Sea.

Work Programs Structure

Thematic Programs:

- Aquatic Animal Health
- Sustainable Farming Systems
- Food Safety, Quality and Certification
- Genetics and Biodiversity
- Response to Climate Change






Cross-Cutting Programs

- Education and training
- Gender
- Information and Communications

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CLIMATE CHANGE IS GLOBAL PROBLEMS

"Climate change is a global problem requiring a global solution. It requires urgent efforts on the part of every country, every citizen, every business community and civil society. The severity of cyclones, floods and other consequences of climate change are increasing. Strong disaster risk reduction and adaptation policies will be increasingly essential."

Ban Ki-moon
UN Secretary General

STRENGTHENING ADAPTIVE CAPACITIES TO THE IMPACTS OF CLIMATE CHANGE (AQUACLIMATE)

AQUACLIMATE is a three year project (2007-2009) funded by the Norwegian Agency for Development Cooperation (NORAD) and coordinated by NACA

- Collaborating agencies includes Bioforsk-the Norwegian Institute for Agricultural and Environmental Research; Faculty of Fisheries, Kasetsart University; Akvaplan-niva AS, Tromso, Norway; and Department of Primary Industry, Australia.

OBJECTIVES

- Aims to strengthen the adaptive capacities of rural farming communities to the impacts of climate change in four countries, namely; Vietnam, The Philippines, India and Sri Lanka;
- The project developed future scenarios based on the current trends, assess the potential adaptive measures for different aquatic farming systems and prioritize better management practices, suggest codes of practices and improved methodologies for such systems.

PROJECT CASE STUDIES

- **Vietnam** (Vulnerability and adaptation to climate change for improved polyculture farming systems in the Mekong Delta)
- **The Philippines** (The impacts of climate change on milkfish pond production in the municipalities of Borotok Nueva and Dumangas, Panay Island)
- **India** (Case study on the impacts of climate change on shrimp farming and developing adaptation measures for small-scale shrimp farmers in Krishna District, Andhra Pradesh)
- **Sri Lanka** (Impact of climate change on culture-based fisheries of seasonal reservoirs in Sri Lanka and resilience capacities of rural communities)

BASELINE ASSESSMENT

Environmental monitoring & early warning systems for fisheries & aquaculture (2015)

SCOPE

- Questionnaire Survey
- Focused on countries of the Lower Mekong Basin
- Addressing:
  - Current state of monitoring systems
  - Potential for future development
- Two-way information flows:
  - From authorities to fishermen/fish farmers
  - From fishermen/fish farmers to authorities

CAPACITY BUILDING NEEDS

- Financial resources
- Access to technology (monitoring instrumentation)
- Access to communication resources
- Public communication and relations
  - Develop awareness of environmental effects of fishing/farming
  - Develop appreciation of valuable contribution of these sectors

- Coordination at institutional level
- Mobilizing village leaders

RECOMMENDATIONS: socio-economics

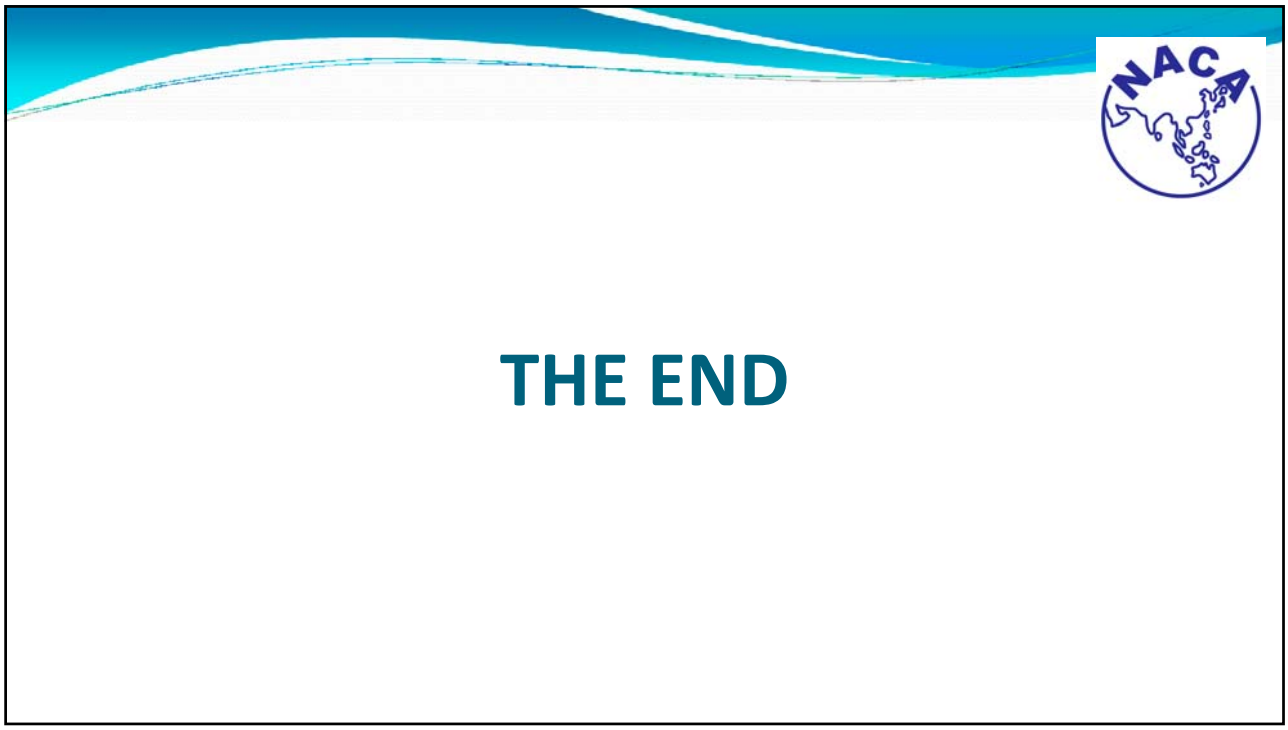
- Livelihood improvement programmes
- Support for alternative occupations
- Better support to fishermen/fish farmers
  - Reducing input costs
  - Fish stocking programmes
  - Provision of fish finders and locators
  - Early warning systems for disasters

RECOMMENDATIONS:
environmental conditions

- Better law enforcement
- Curtailing of illegal activities
- Reducing environmental pressures
- More effective protection of wild fish stocks
- Proactive measures

NACA CURRENT ACTIVITIES AND FUTURE WORKS RELEVANT TO CLIMATE CHANGE ADAPTATION & MITIGATION

- Culture-based Fisheries Development in Cambodia Project
- Adaptive Learning in Sustainable Aquaculture Best Practices for Small-Scale Shrimp Farmers in Thailand
- Organization of the Global Conference on Climate Change Adaptation within Fisheries and Aquaculture – FishAdapt – Sharing Experiences on the Ground and way forwards
- Cooperation with BOBLME Sustainable Management of the Bay of Bengal Large Marine Ecosystem: Component 4: Improved livelihoods and enhanced resilience of the BOBLME
- Strategic network programme to promote small-hold farmers in aquaculture genetic improvement (NBIN) in a variety of environments and farming systems
- The Installation of Monitoring and Early Warning System relevant to Fisheries and Aquaculture in the Lower Mekong Basin
- Regional Training Programme in Aquaculture Governance in the Asia-Pacific Region
- Women, Youth and Aquaculture Development Programme relevant to Climate Change Adaptation and Mitigation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