5th Vietnamese–Hungarian International Conference on Animal Production and Aquaculture for Sustainable Farming
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Challenges of aquaculture research in Asia: Perspectives for Vietnamese-Hungarian R&D collaboration

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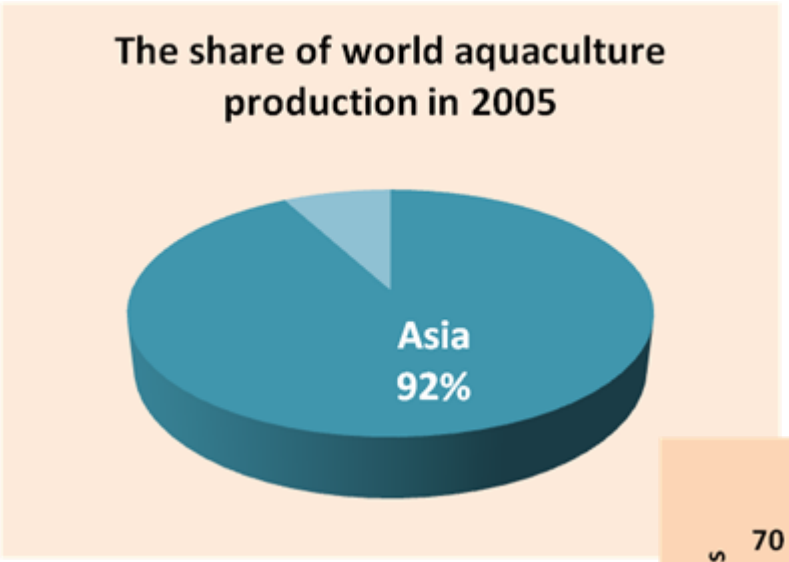
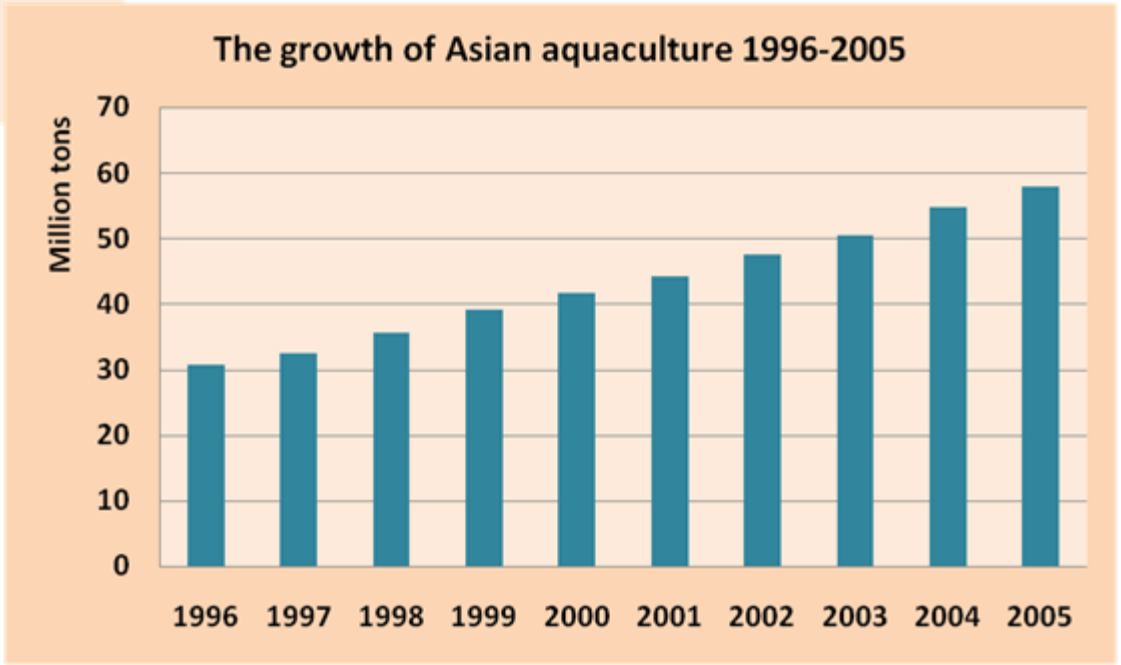
Aquaculture in Asia



Significant R&D support for aquaculture development



Source: FAO FishstatPlus, 2007

Workshop on research needs in Asia

Network of Aquaculture Centers in Asia-Pacific

Research Needs in Sustaining the Aquaculture Sector in Asia-Pacific to Year 2025 and Beyond

June 4th to 7th, 2007, Rayong, Thailand

Funded by the International Development Research Centre (IDRC), Canada

27 experts including representatives of CTU and HAKI

Summary of research needs

1. General aspects
2. Farming systems
3. Genetics and biodiversity / Broodstock management
4. Climate change
5. Aquaculture and human health
6. Feeds and feeding
7. Inland water: fisheries and aquaculture
8. Marketing, consumer needs

1. General aspects

- contribution of aquaculture to human nutrition, particularly of rural communities, poverty alleviation and food security in the region

- confrontation of small scale farmers with challenges to comply with international trade standards and other WTO requirements, and to maintain competitiveness

2. Farming systems

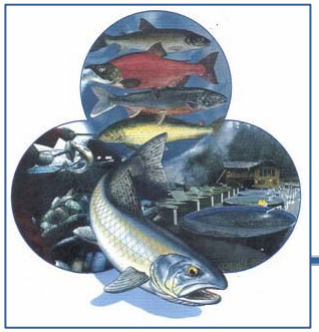
- relative contribution of small-scale farms and large “industrial scale” farms to total production
- changes of integrated farming systems from a production, socio-economic, food safety and bio-security view points, and from a “landscape” perspective
- economic viability of different kinds of aquaculture practices (e.g. rice-fish culture), and their comparative advantages, to permit comparisons to be made with other food-producing sectors
- development of BMP for major cultured species in the region

2. Farming systems (con’)

•assess the status of polyculture, determine the adverse effects of monoculture in relation to the degree of intensification

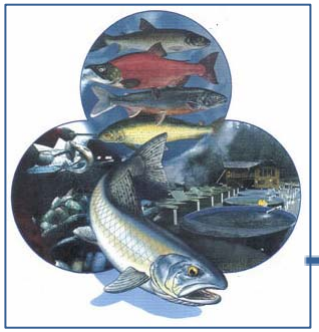
•determine carrying capacities and also to evaluate means of reducing effluent discharge into the surrounding waters, and provide suitable guidelines for policy makers to implement appropriate management measures

•treatment of effluents through integrated aquaculture/ farming systems, such as through hydroponics, mollusc culture and a landscape approach



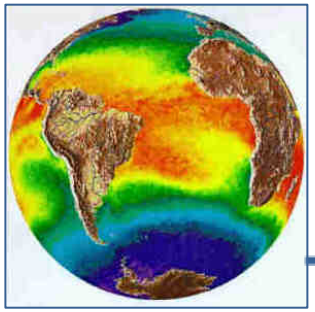
3. Genetics and biodiversity / broodstock management

- review of successes and failures in stock enhancements aspects (impacts on diversity; dilution of wild gene pool by alien species)
- evaluate the negative impacts on biodiversity arising from pollution and related development activities in the water sheds
- social, economic and environmental impacts of the use of gene technologies in aquaculture, and the regulatory and policy frameworks necessary to support responsible use of gene technologies in aquaculture



3. Genetics and biodiversity / broodstock management (con’)

- continuous monitoring of the impacts of “naturalized species” in time and space
- production of genetically improved strains through selective breeding on economically important species
- development of research based broodstock management and stocking strategies



4. Climate change

- improvement of livelihood through suitable aquaculture developments in brackish water areas

5. Aquaculture and human health

- potential connection between integrated aquaculture (in particular integration with poultry) and outbreak and spreading of avian flu, and the impacts of HPA1 outbreak on aquaculture
- development of disease control strategies (e.g. vaccines, immunostimulants) to minimize the use of chemicals in aquaculture
- development of BMP and GAP programmes for key aquaculture commodities in Asia to address production and food safety concerns

6. Feeds and feeding

- development of farm-made feeds (small feed mills catering to cluster of farmers) focusing on quality improvement of such feeds, efficacy and economic gains in their use
- use of trash fish/ low value fish in aquaculture: efficacy of their use versus pellet feeds; effluent quality; social impacts
- assess the suitability of animal industry by-products (e.g. blood meal, bone meal etc.) as feed ingredients, from a technical view point as well as from a consumer and legal view point

7. Inland waters: fisheries and aquaculture

- review on approaches to management and community-based organizations involved in inland fisheries
- development, and evaluate the successes, failures and lessons learned
- economics of alternative land and water use patterns

8. Marketing / consumer needs

- capabilities of small scale producers to meet increasing market demands for traceability, food safety, environmental responsibility and ethical issues
- consumer preference issues and trends/ projections, both domestically and internationally, and supply/ value chain structures for key aquaculture commodities
- impact of pandemics and world calamities on the demand and price of cultured commodities, and consequently on small scale farmers

Perspectives of R&D collaboration in aquaculture between Hungary and Vietnam

- development of BMP for pond fish production
- breeding and quality seed supply of common carp
- development of water efficient and environment friendly aquaculture systems
- fish health management with special regards to the use of immunostimulants

Framework and funding

- **Bilateral S&T collaboration**

  (carp breeding; immunostimulants)

- **Hungarian ODA (NEFE)**

  (BMP training; feed and seed supply)

- **European Union 7th FP**

  ASEM Aquaculture Platform Phase 2. ?

- **Other donor programs**

  (possibilities through WFC/CGIAR and NACA: BMP; water efficient aquaculture technologies; breeding of carps and indigenous species)

- **Inter-institutional collaboration** (bilateral and ViFINET)

  (e.g. carp rearing on rice fields)

Thank you
Xin cám ón
Köszönöm