



The United Nations
University

FISHERIES TRAINING PROGRAMME

Criteria for education and training in fisheries development

**Fisheries and aquaculture in southern Africa
Development and management**

Workshop organised by ICEIDA and UNU-FTP
Windhoek, Namibia

21-24 August 2006

Tumi Tómasson

Looking into the future – education and training needs

- An example: professional training in food science in Iceland
 - In mid 1940s: A need for one microbiologist for the canning industry was identified in Iceland.
 - In the early 1980s: The demand for food scientists was estimated to be 15. The introduction of university training in this area in Iceland was controversial.
 - Now there 200-300 have graduated in food science, mainly employed by the private sector.
- Similar story can be told about training in biotechnology in Iceland

The future

- We don't always know what training programmes we need but we should at least be able to say something about how they should be run i.e. the criteria which we need to meet for training in the 21st century
- Fisheries is a rapidly changing field – how we train professionals could be as important as the knowledge acquired in the training

I believe that training for professionals should encourage

- Development of wider views
- Adaptability
- Taking responsibility
- Further learning

- One goal of the UNU - creating a community of scholars

My objective today

- Will outline criteria which we might use in designing or evaluating training or in funding participation in training programmes
 - Briefly review trends in fisheries and education
 - Present criteria, take examples from the literature, from colleagues and from the UNU FTP

Experiences

- University studies
 - Sweden, North America, South Africa
- Work experience
 - Iceland, Africa
- Training responsibilities
 - Development of aquaculture training in Iceland
 - SADC RFTP
 - UNU FTP

Trends in fisheries

- Proportion of market available to development countries increasing
- Developments in aquaculture
- Importance of quality assurance
- New technologies both driving production and responding to it
- The value of local knowledge
- Ecosystem approach to management
- Regional cooperation
- International treaties and agreements

Trends in education and training

- Training for both the public and the private sector
- New views of knowledge acquisition and knowledge transfer; distributed knowledge
- Links between the “classroom” and the workplace
- Tools influence learning and in turn affect the tool
- The role of ICT in learning
- The value of lifelong learning
- Ideas versus data

1. Fisheries training should build on both intra- and interdisciplinary knowledge

1950s-1970s:	Production oriented, emphasis on fish finding, new stocks improved technologies
Late 1970s to 1980s:	Research and management
1980s to present:	Aquaculture
1990s to present:	Quality and safety
1990-present:	Increasingly complex projects Environmental concerns Multidisciplinary Social issues, gender, poverty reduction, food security Regional-international

1. Fisheries training should build on both intra- and interdisciplinary knowledge

- Different definitions of EBFM
- Biodiversity orientation
 - Ecosystem and natural habitats management
 - Maintaining biological richness and ecological processes
 - To meet human requirements
- Sustainability orientation
 - Integrated management of land, water and living resources
 - Promotes conservation and sustainable use in an equitable way

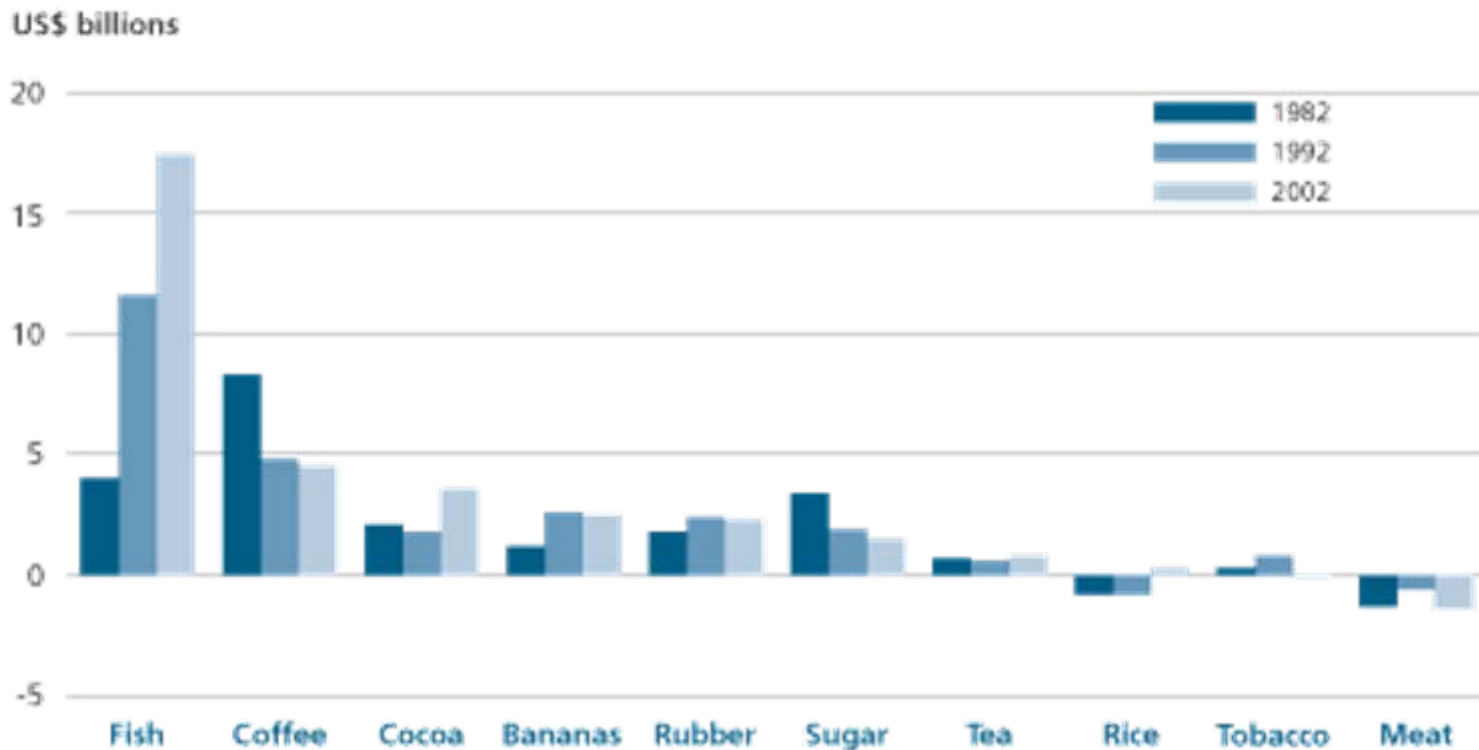
2. Fisheries training should reflect training in basic and applied skills and should encourage innovation

- Degnbol and Raakjær Nielsen (2002)
- Find a balance between training for immediate efficiency and training for innovative capacity
 - Specialist skills versus general skills
 - General skills encourage reflectivity and ability to learn from local and global experience
- Do we need more case-studies in training? Who has solutions?

3. Fisheries training should reflect local and global issues and trends

Figure 31

Net exports of selected agricultural commodities in developing countries



4. Fisheries training should encourage links between academic research, monitoring studies and the private sector

- Complexity of the field demands different sorts of knowledge
- Professionals should be able to move with some ease between different sectors
- Private sector funding of research and monitoring
- Employment options

5. Fisheries training should nurture a close relationship between workplaces and training opportunities

- Workplaces should provide a secure environment for the development of professionals
- Workplaces inform the activities needed in training – there is a need for an interactive relationship
- We could ask though: To what extent should the economy determine the nature of the training?
- Most workplaces are inherently conservative and provide skills training
- Innovation requires risks: Who is willing to take them?

6. Training should encourage individual, collegial and institutional development

- Degnbol and Raakjær Nielsen (2002)
- Incorporate training in the management process
 - Often the norm is to learn how to solve specific problems and meet formal requirements rather than the ability to make informed assessments
 - Emphasis on formality rather than adaptivity
- Learn to take responsibility
 - Hierarchies or teamwork
 - Using individual qualities to the advantage of the institution
 - Shared responsibility, willingness to accept responsibility
- Learning for innovation

7. Fisheries training should offer individuals the opportunity to develop both personally and professionally

- “Education is an investment”
- Who of you were trained for the job you are in today?
- Significant events
- Significant relationships

8. Fisheries training should promote competence in the use of information and communication technology and promote lifelong learning

- Escalation of information but not necessarily of ideas
- Value and validity of the information: Does it make sense?
- Recognise the affordances, benefits and risks in ICT, for example, Internet communication

Criteria for the education and training of professionals in fisheries

Fisheries training in the 21st century should meet the following eight criteria:

1. Training should build on both intra- and interdisciplinary knowledge and methods
2. Training should reflect training in basic and applied skills and should encourage innovation
3. Training should reflect local and global issues and trends
4. Training in fisheries should encourage links between universities, institutes and the private sector
5. Training should nurture a close relationship between workplaces and opportunities for development

Criteria for the education and training of professionals in fisheries (cont.)

Fisheries training in the 21st century should meet the following criteria (continued):

6. Training should encourage individual and institutional development
7. Training should offer individuals the opportunity to develop both personally and professionally
8. Training should promote competence in the use of information and communication technology (ICT) and encourage lifelong development opportunities

THANK YOU