6. Conclusions

During 2005, experts in six different regions were surveyed using the Delphi methodology. Questions in the initial round were different across regions because of different aquaculture experiences; second and third-round questions were adapted from answers given in the first round.

Not surprisingly, all experts advocated the development of aquaculture in their regions, although different rationales were given. While aquaculture's contribution to employment and growth was to be expected, the potential role of aquaculture in improving sustainability of capture fisheries was unexpected. In three regions, this positive contribution was ranked as either "very important" or "important".

In all regions but Africa, market demand was considered critical and also propitious to aquaculture development. The main concern in Africa was the lack of suitable macro policies. However, experts thought that there would be improvements in the future if more emphasis were placed on private-sector investment in aquaculture. Also, intra regional and international trade offer important market opportunities for Africa.

In Asia, ensuring quality control to gain access to markets was seen as critical. Technology is seen as a key factor in the Americas and Europe, whether to offset public opposition to aquaculture, develop offshore aquaculture technology, or to increase productivity and therefore competitiveness.

As expected, the Delphi method promoted innovative thinking and some consensus on major issues at the end. Deficiencies of policy in Africa were considered a major cause of aquaculture's slow development in that continent. Too much emphasis on small-scale aquaculture and not enough attention to commercial aquaculture were seen as a primary cause; the current situation is likely to deteriorate unless changes are implemented.

In all regions except Africa, the business-orientation of farmers was acknowledged as a primary factor in aquaculture's success. In Asia and the Pacific, the Americas and Europe, this business approach was seen as a motor of development. Consumer preferences for fish provided an incentive for entrepreneurs by raising fish prices; in some regions this price rise was reinforced by declining output from capture fisheries. In Eastern Europe, for example, profitability of salmonid culture played a very large role in developing aquaculture and was expected to become even more important in the future. In all regions except Africa, maintaining access to markets was ranked as a major challenge for the future. This will require policy intervention on fish standards, and compliance with importers' regulations.

References

- **Bunting, S.W.** 2008. Horizontally integrated aquaculture development: exploring consensus on constraints and opportunities with a stakeholder Delphi. *Aquaculture International* 16(2): 153-169.
- Caffey, R.H. 1998. Quantifying sustainability in aquaculture production. Louisiana State University, Baton Rouge, United States of America. (PhD thesis)
- IIT. 2006. *The Delphi method*. Chicago, IL, United States of America, Illinois Institute of Technology (available at www.iit.edu/~it/delphi.html).
- Ministerio de Economía. 2003. *La industria de la acuicultura en Chile*. Programa de Prospectiva Tecnológica de Chile. Santiago, Chile. pp. 64.
- Ridler, N., Wowchuk, M., Robinson, B., Barrington, K., Chopin, T., Robinson, S., Page, F., Reid, G., Szemerda, M., Sewuster, J. & Boyne-Travis, S. 2007. Integrated multi-trophic aquaculture (IMTA): a potential strategic choice for farmers. *Aquaculture Economics and Management* 11(1): 99-110.