

Assistance to develop freshwater aquaculture in Indonesia

Following the Tsunami in 2005, Akvaplan-niva staff donated 6 months staff time to rehabilitation of aquaculture in the affected areas supported by Norad. One of the projects in Indonesia was to assist with the improvement of culture technology and methodology for freshwater species, to review the potential for freshwater aquaculture development and to assess impact of freshwater aquaculture on the environment and make recommendations for mitigation. The project took place at the Freshwater Aquaculture Development Centre Jambi.

Bottlenecks for production

Bottlenecks for freshwater aquaculture development were identified:

- **Water quality** in the river: input and help to establish a monitoring program
- **Site management:** develop site selection criterias for optimal production and utilization of the river areas



Water quality

The turbidity has increased in the river most likely due to legal and un-legal logging of the rain forest in the catchment area and increased erosion in the small river tributaries. Much of the drainage area consisted of brown, fine grained sand, and due to erosion of the river.

Gold mining is one of the main sources to high levels of mercury in the water. From 2002 there is no mining (officially) in the river. However, illegal mining is still going on. There are also numerous rubber production- and palm oil production sites are situated in the catchment areas. In these plants organochlorides are frequently being used (e.g. DDT, PCB's), and it suspected that these compounds are transported to the river by run-off of surface water. Akvaplan-niva suggests that a water quality monitoring program is established specifically for the Jambi region where aquaculture will be developed.

Site management

Site selection is important to secure optimal growth with good water exchange and located away from harmful pollutants. Akvaplan-niva did a series of environmental surveys to study sediments under the farms.



Akvaplan-niva competence

Akvaplan-niva undertook the following;

- Identification of bottleneck to production
- Identification of production and health risks
- Environmental surveys
- Recommendations on water quality surveys
- Project proposals for future research