Technology Fact Sheet

Development of milkfish farming technology[i]

Cultivation in sea fishery that is known as marine culture is an effort to farm fishes in a controlled floating cage under human interference. This technology can be applied in the fisherman location because it does not need a wide field. Therefore, this marine culture technology can be prioritized to anticipate the decrease of fishery due to climate change. Marine culture must meet the following important criteria, such as:

- Seedling should be done by the farmers in order to have the seed supply not dependence on the season and natural seed;
- The cultivation technique of pond or floating net must be mastered and it is technically easy to apply and profitable;
- The farming is tolerable to the salinity changes from 0 – 158 ppt, therefore the cultivation area is significantly wide from the non-salinity to the salinity/sea water;
- It is able to survive in a crowded floating net (100-300 fishes/m^3);
- It is fast growing fishes (1,6% / day);
- It is efficient on feed used (FCR: 1.7 - 2.,2);
- Commercial feed for fish is suficiently provided up to the rural area/ villages; and
- The potential market is still available domestically or internationally.

Table 1 Criteria of disemination of drought and flood tolerance rice varieties

Technical Criteria	Description
Technology Maturity	• It is already applied
Local Availability	• Seed variety has been created from the germ plasm in its origin media taken fromswamp and dry field land of Indonesia
Operational flexibility	• It is done with planting calendar so it can be created rice production in whole year
Climate Suitability	• It is able to adapt to dry season or wet season (flooded time)
Technology to be included in prioritization	• Biotechnology is used for selection and nurturing of drought and inundatated resistant rice varieties
Environmental Criteria	
Resource Conservation	• The rice varieties are automatically conserved because they are planted in their suitable habitats
Land	• Dry and wet land
Social Criteria	
Employment	• Farmers and rice field supervisors
Public perception	• Farmers are not yet aware for drought and inundatated resistant rice varieties instead of local rice varieties
Community Involvement	• Farmer group
Economic Criteria	
Capital Cost	• US$ 10,000 – 20,000 TPD (low mechanical intensity)

	• US$ 25,000 – 50,000 TPD (high mechanical intensity)
Operational & maintenance costs	• S$ 30-50 /ton
Market availability	• It is already available

Technical criteria of disemination of milkfish mariculture is summarized in Table 2.

Table 2 Technical criteria of disemination of milkfish mariculture

Technical criteria	Description
Technology maturity	• Has already implemented
Local availability	• Can be farmed at fishermen's water zone
Operational flexibility	• Is easy to be carried out with unlimited water zone
Climate suitability	• Is able to adapt at any weather conditions (strong wind) because its location is at coatal bay with low wave
Technology to be included in prioritization	• Milkfish mariculture
Environmental Criteria	
Resource conservation	• Milkfish
Area	• Non-salinity to the salinity/sea water
Social Criteria	
Employment	• Fishermen and fish farming supervisors
Public Perception	• Not yet known by ordinary fishermen
Community Involvement	• Fishermen group and coastal communities
Economic Criteria	
Capital Cost	-
Operational & maintenance costs	-
Market Availability	• Domestic and export needs

[i] **This fact sheet has been extracted from TNA Report - Adaption for Indonesia. You can access the complete report from the TNA project website http://tech-action.org/**