Resources needed

- Expert coordination with stakeholders (KKP, local Fisheries Department, Fish farmer group/ Fishermen, Entrepreneurs, Institutions of funding sources,etc.).
- Technical expert for detail planning, financing and implementation of project activities.
- Manpower availability and equipment (cage) locations to be used as training and production facilities.
- Milkfish fish floating cage system.
- Energy for supporting facilities, training and socialization of milkfish cultivating techniques with floating net cage system must be environmentally friendly.
- Application of facilities and infrastructures in various regions of Indonesia such as survey equipment of the location for environmental impact assessment study.
- Pilot unit of milkfish cultivation technology in floating net cage and its facilities for training and monitoring activities.
- Facilities and infrastructures of mariculture aquaculture monitoring and evaluation.

Regulatory change

1) Law Number 16 Year 2006, on Extension System for Agriculture, Fisheries and Forestry
2) Act No.17 2007, on Long-Term Development Plan of 2005 to 2025
3) Law Number 26 Year 2007 regarding Spatial Planning
4) Law Number 27 Year 2007 on the Management of Coastal Areas and Small Island.

Coordinating or Implementing Agency

Coordination with stakeholders from the central to district level, such as KKP, especially Marine and Coastal Research and Technology (P3TKP)-KKP and the Center for Marine and Coastal Resources (P3SLP)-KKP, Center for Agricultural Production Technology - BPPT, Kepulauan Seribu Fisheries Office, Fisheries Office of City of Batam, other Local Government Fishery Offices, Fish Farmers/ Fishermen groups, Private Companies, particularly the owners of milkfish hatchery feed producers, Institutions of funding sources, and others in the trade sector and downstream industries, NGOs accompanying the application of milkfish cultivation technology.

c. Cultivation Engineering of Beef Cattle Technology

Description

The main program of cultivation engineering of beef cattle technology is the development of the cattle breeding technology to fulfill the sertification standard. The purpose of this certification is to maintain and increase the price of seed produced by the breeder. The calf quality standard is determined to implement the method of the parent's breeding to produce good calves.

Timeline

First year:

Formulation of village breeding center (VBC) criteria based on the scientific references.

Second year:
Increase the number of good quality calves for the cattle ranchers who have intensive experiences in cattle breeding.

Third year:
Training and assisstance to groups of breeders in order to implement good breeding practices.

Geographic scope

Areas that become a choice location of cow breeding is Blora (Central Java), Nganjuk (East Java), South Sulawesi and East Nusa Tenggara. The reason for selecting those locations is because people there have good skill for cattle breeding for longtime. Table 2-4 shows the potential locations of the local cattle breedings in Indonesia.

Table 2- 4 Source of local cattle breeding in Indonesia

No.	Types of local cattle	Breeding locations
1.	Bali	Bali, West Nusa Tenggara, South Kalimantan, West Sulawesi, South Sulawesi, South East Sulawesi, Gorontalo
2.	PO	North Sumatera, West Java, Midlle Java, East Java, North Sulawesi
3.	Madura	Madura
4.	Aceh	Aceh
5.	Coastal	West Sumatera
6.	Bali and PO	South Sumatera, Lampung and South East Sulawesi
7.	PO and SO	East of Nusa Tenggara

Source: Directorate of Breeding, Directorate General of Animal Husbandry

Resources needed

Facilities and infrastructures such as business district location, land, water resources, buildings and barn equipment and calves availability must meet the requirements of the guidelines of Good Breeding Practices.

Regulatory change

Judging from the current regulations, there is no need to change them. However, they need to be transparently socialized particularly for import mechanism regulation of calves. Some existing rules that support this program are as follows.

- Agriculture Ministrial Regulation No. 19/ 2010, on Program guidelines of beef self-sufficiency, 2014.
- Agriculture Ministrial Regulation No. 54/Permentan/Ot.140/10/2006, on Guidelines of good cattle breeding (Good Breeding Practices).
- Agriculture Ministrial Regulation No. 40/Permentan/Pd.400/9/2009, regarding Regulation on guidelines of business credit for cattle breeding.

Coordinating or implementing agency

Executor of this program at the central level is the Directorate General of Animal Husbandry and Agency for Research and Development of Livestock, Ministry of Agriculture (BPTP), and Universities. At the local level, the program is guided by the Regional Office of Animal Husbandry and at the village level, the program is conducted by Cooperation of the Group of Farmers (GAPOKTAN)/ Farmers (POKTAN).

2.1.4.2 Project ideas for international support

a. Dissemination of technology of drought and flood tolerance rice cultivation

Judging from the positive response toward the farm paddy integration system (SIPT) by the establishment of agricultural groups, dissemination of technology on drought and flood tolerance rice cultivation will be made based on dissemination effort by forming agricultural groups through agricultural field schools. Dissemination will be practiced by the agricultural group approach, and is a socialization strategy developed together with the utilization of third-wave technology, which are telecommunication and data processing by using information technology related to new varieties. Therefore, the socialization will enable agricultural groups to comprehend, try out, and inform the farmers about beneficial varieties on their work areas. The farmers' competitiveness will also be increased by utilization of this telecommunication technology.

This strategy would be the dissemination model expected to be utilized by national rice program to increase the effectiveness in increasing rice production.

Type of technology transfer

Types of technology that require international support, among others are technology that can support the plan of rice seed development activities and information technology in the form of software of dynamic planting calendar.

Capacity building

To train human resources' skill and seed breeding institutions, a training on technology transfer must be conducted for example on the method of paddy seed cultivation training for and also the application of information technology of dynamic planting calendar both for individuals and for institutions (legal entities).

Financing

Source of financial can be grant from international institutions with low interest rate and national budget (APBN) for co-financing. The use of fund is classified as:

- Pre-installment cost: planning, Feasibility Study (FS) and Detailed Engineering Design (DED).
- Capital cost: construction and laboratory equipment installation.
- Operation and maintenance cost: salaries, utility bills, tools and supplies, maintenance of laboratorium equipment, etc.

Resources requirement

The components in the success of seed certification program involve the following resources:

- Manufacturers and dealer' groups including seed breeding farmers.