

Farming system

- Farming system may be defined as a unique and reasonably stable arrangement of farming enterprises (e.g., crop, livestock, fisheries etc.) that a HH manages according to well defined practice in response to the physical, biological and socio-economic factors and in accordance with HH goals preferences and resources
- Fish farming system is a part of large system e.g., the local community. The farming system can be divided into sub-systems like cropping, fish farming, animal production, agro-forestry etc.

Interactions of Fisheries system with other systems

Fisheries system has got more or less direct or indirect interactions with other subsystems of farming systems. So special attention must be given to the interactions of fish production with other components.

1. Fisheries- crop

- Fisheries component has **direct interaction** with crop component.
- In integrated rice fish or rice-prawn culture, both the components derive benefit out of it.
- Moreover, rice and wheat bran and oil cake serve as feed for fish and on the other hand, fish by-product, and fish meal can be used as fertilizer for crops
- Intensive and extensive crop production greatly altered and reduced the area of fish habitats conversely, shrimp/prawn farming in coastal regions greatly reduced the crop areas
- The excessive use of fertilizers and pesticides adversely affected the fish and fish food organisms

2. Fisheries-livestock

- Fisheries component also has **direct interaction** with livestock component.
- The animal by products such as cowdung, poultry droppings etc. are used as fish feed and fertilizers whereas, fish meal is one of the important protein rich feed for poultry
- In integrated duck-fish culture both the components derive benefit from it
- Besides, poultry-fish and pig-fish culture also integrated culture systems

3. Fisheries- homestead and women development

- With homestead and women development component, the fisheries component has also interactions
- The family members take care of fishes by providing necessary inputs in the ponds for improving production and in return, fish provides them protein rich animal food and improves the family income as well as generates employment opportunities
- Homestead vegetables and residues can be used as fish food

4. Fisheries- agro forestry

- The bund of the fish pond provides scope for raising fruits, vegetables and small trees, but big trees conversely hamper fish production by obstructing the sunlight into the pond

- However, the leaves of certain trees can be used as fish feed and fish meal can be used as fertilizer for raising trees

5. Fisheries- Engineering

- With engineering component, the fisheries component has good as well as adverse interactions
- The irrigation water in rice field provides scope for rice fish or rice-shrimp culture whereas, flood control dam on the mouth or along the sides of the river for crop production adversely affected fish production by obstructing fish migration routes and altering the fish habitats to a great extent.

