

Methods of coastal aquaculture and mariculture

- **Site Selection**

- Selection of the right site is probably the most important factor determining the feasibility of viable operations.
- Many farms laid out on poor sites have been abandoned after a considerable investment of money and effort leading to heavy losses.
- However, ideal sites may not be always available and some compromises may need to be made.
- Selection of the site is generally based on species to be cultured and technology to be adopted.

- However, some factors are common to all sites such as agro-climatic conditions, access to hatcheries/ seed centers, roads, and communication, access to markets, protection from natural disasters, availability of skilled and unskilled labor, public utilities, etc.
- All available meteorological and hydrological information needs to be collected. Soil characteristics, quality, quantity of available water, ease of filling, and drainage, especially by gravity, are basic considerations.
- Land elevation and flood levels have to be ascertained.
- The maximum flood level in the last 10 years and the highest astronomical tide should not be higher than the normal height of the dikes.

- It will be advantageous to select land with slopes not steeper than 2 percent.
- The area should be sufficiently extensive to allow future expansion and preferably be of regular shape to facilitate farm design and construction.
- Among other important general factors to be considered are the existing and future sources of pollution, developmental plans for the neighborhood areas, and legal and social aspects of farm establishment.
- The possible effects of the discharges of the farm on the environment need to be considered.

- This can greatly influence the attitudes of the local communities to the proposed farming and hence their future cooperation.
- Sites generally available for the coastal pond farms are tidal and inter-tidal mud flats in protected areas near estuaries, bays, creeks, lagoons, and salt marshes.
- If the ponds need to be supplied water through tidal flow and information on tidal amplitude at the site is essential.
- Data on high tides and low tides need to be collected from tide charts available at the nearest port.

- The elevation of the land relative to the tides is important to decide on the type of ponds to be constructed (whether tidal-fed or pump fed) and the amount of excavation necessary for constructing the ponds.
- The construction of ponds in areas reached only by the high spring tides would require excavation, leading to the high cost of construction.
- For tidal fed ponds sites with an elevation of between 0 and 140 cm relative to tides is necessary.
- However, if tidal energy can be replaced with other forms of energy the above limitation would not apply.