

# Selection of suitable site for aquaculture

Gulshan Kumar  
School of Fisheries

# Introduction

- Selection of of a suitable site is the first and foremost step in the design and construction of an aquafarm. A mistake made during the phase of site selection may result in higher costs of construction and culture operation, and creates problems as well.
- For high production and efficient management, knowledge of local area and experience coupled with scientific and engineering expertise is required.

- No site will possess all desired characteristics. Topography changes from site to site making it very difficult to formulate a standard approach for site selection.
- However the basic criteria for selecting a good site should be to obtain maximum production at minimum cost of construction and management

- Criteria of selecting a site mainly depends upon the following points. 1. The species to be cultured 2. The targeted production level 3. The physiological requirement of species

# Important criteria for site selection

- **A. Main factors**
  - 1. Topography and tidal amplitude
  - 2. Type of soil and its quality
  - 3. Water source and the quality of water
  - 4. Drainage facilities

# 1; Topography

- Topography refers to the changes in the surface elevation of natural ground i.e. whether the ground is flat, sloping, undulating, or hilly. The best area for fish ponds/shrimp ponds is where the ground is leveled (flat) or where there is a slight slope.
- The optimum slope is between 0.5 to 1.0 %. The ground slope shouldn't be more than 2%, as it needs construction of high and costly embankments.

## 2. Type of soil and its quality

- The type of soil and its composition at a given site is of crucial importance. It has direct bearing on the productivity of pond.
- A sandy clayey soil to clayey loam soil is the best soil type for fish/shrimp pond construction.
- Clayey loam is an ideal soil as it has low permeability and also rich in organic matter. In case of mixed soils, a clay content up to 30% is desirable.

### 3. Water resources and its quality

- Water of proper quantity and quality should be available in accordance with the cycles of aquacultural operation.
- Therefore when selecting an aquaculture site, the water supply must be thoroughly investigated.
- Optimum quality pollution free water supply is required.



# Additional factors

- 1. Environmental factors (Meteorological factors)
- 2. Accessibility
- 3. Socio-economic conditions
- 4. Pollution problems
- 5. Availability of seed and feed
- 6. Availability of freshwater & electricity (public amenities)
- 7. Transportation and Marketing facilities (communications)
- 8. Social and political factors 9. Availability of technical guidance 10. Security, etc.