Detailed planning for fish farm construction

Once the site has been selected, then initiation of planning begins. There are two main related components of planning in construction. These include:

a) Organizational planning —decides where, how and which order the farm is to be built.

b) Physical planning — decides on layouts, detailed design and earthwork.

SITE SELECTION

Students are to be given practical exposure with training manual on the necessity of these aforementioned
factors

RECONNAISSANCE SURVEY

Water - soil - topolograpy No

Does site meet requirement? Return to site selection
process

Yes

DETAILED SURVEY Yes

Soil - Topography

Try out sketches of the layout

Do they meet your needs? Is there a problem with?

Yes the site?

Prepare detailed draft layout

Earthworks and water levels
satisfactory?

No

ALL ok?

Yes

Prepare final detailed
Design

Prepare final evaluation
of the site

Figure 2: Flow - chart on matching the fish farm and its layout to the selected site

Things include:

1. Time of construction
2. who will construct the fish farm ?
3. How will the construction be carried -out?

These when critically considered, may lead to further activities such as

a) Some more detailed plan and drawings

b) A series of specifications for the contractor

c) A detailed schedule of activities will be drawn.

Steps involved in earthen ponds construction

The following steps are required:

- Clearing of proposed site
- Setting-out which involves site clearing
- Mark-out the areas inlet and outlet
- Topsoil removal and storage
- Construction of embankment
- Construction of inlet drainage pipes / water control structures
- Construction of screen at both inlet and outlet.

Figure 2 is to be used in ensuring proper and appropriate appraisal of the work to be done.
Assignment: students are expected to visit any chosen location at COLERM field and carry-out fish farm site selection exercise and prepare a report

Steps involved in block tanks for fish farming

- Clearing of proposed site
- Settings-out which involves pegging and lining with the rope
- Topsoil stripping to form strong basement
- Surface blinding with concrete mixture (sharp sand, cement , and gravel/ granite at ratio 3:1:6)
- Block laying and stuffing of holes with concrete mixture
- Placement of water inlet and outlet pipes
- Plastering of tanks

Calculating dike and excavation volumes

Width of the dike base
Base width = crest width + (CH x SD) + (CH x SW)
Where CH (in m) = construction height
SD = slope ratio of dry side
SW = slope ratio of wet side
While estimating this, use the constructing height as well as the settlement