Introduction:

A developing country like India is generally faced with the problem of a rapidly growing population coupled with the pressure on the arable lands. The rapid growth of population has created problems of unemployment and under employment in such countries. An underdeveloped country suffers from a chronic deficiency of capital resources. The capital per capita is very low to the tune of $350. It is the opinion of most demographers that population pressures are likely to increase still further in future in the underdeveloped countries. As such it becomes necessary to step up the rate of development in order to outstrip the rate of population increase.

Therefore, it is better to emphasize the need for comprehensive economic planning for a backward, underdeveloped economy on the ground that it assured a high rate of economic growth through a quicker process of capital formation. Hence, sound and effective planning is necessary for development and again this planning will be a success with good projects and both move together.

What is a Project?

Project is an investment activity in which financial resources are expended to create capital assets that produce benefits over an extended period of time. That's why projects are often referred to as the cutting edge of development. Project preparation is clearly not the only aspect of fisheries development or planning. Identification of national fisheries development objectives, selecting priority areas for investment, designing effective price policies, and mobilizing resources are all critical. Unless, projects are carefully prepared in substantial detail, inefficient or even wasteful expenditure is almost sure to result—a tragic loss in nations short of capital.

Often projects form a clear and distinct portion of a larger, less precisely identified programme. Again, all we can say in general about a project is that it is an activity for which money will be spent in expectation of returns and which logically, seems to lend itself to planning, financing and implementing as a unit. It is a specific activity, with a specific starting point and as a specific ending point, intended to accomplish specific objectives. Hence, project acts as a “time slice”.

It will have a well-defined sequence of investment and production activities and a specific group of benefits, that we can identify, quantify and usually in fisheries projects, determine a money value for.
Its development can be pictured as a progression with many dimension - temporal, spatial, socio-cultural, financial, and economic. Projects can be seen as temporal and spatial units, each with a financial and economic value and a social input that make up the continuum.

Therefore, project is the smallest operational element prepared and implemented as a separate entity in national plan as a part of development.

An investment - project may be anything from a single programme to an entire integrated programme that includes the entire following programme:

a) Fish pond
b) Hatchery
c) Feed plant
d) Ice plant
e) Cold storage
f) Processing plant
g) Wholesale and retail market.
h) Training, Extension etc.

Advantages of projects:

1) The project gives us an idea of cost year by year, so that those responsible for providing the necessary resources can do their own planning. Project analysis tell us something about the effects of a proposed investment on the participants in the project, whether they are farmers, small farms, governments enterprises or the society as a whole.

2) Projects enable a better judgment about the administrative and organizational problems that will be encountered.

3) The project encourages conscious and systematic examination of alternatives.

4) Another advantage of the project is that it helps contain the data problem.

Limitations of Projects:

- The quality of project analysis depends on the quality of the data.
- It is impossible to quantify completely the risk of a project.
- Project analysis is a species of what economists call "partial analysis"
- Another limitation of the project is an underlying conceptual problem about valuation based on the price system.
PROJECT CYCLE

There is a natural sequence by which projects are planned and carried out and this sequence is called 'Project cycle'. International development agencies tend to use the World Bank methodology [Baum, 1982]. Under this scheme the cycle is broken down to six stages.

1) Identification or conception
2) Formulation or preparation
3) Appraisal or analysis
4) Implementation
5) Monitoring and control
6) Evaluation

I. Conception or Identification of the projects:

It is the first phase of the project cycle and here we find or identify potential or suitable projects. There can be many sources from which ideas may come for the identification of good projects.

a) Ideas for new projects can evolve from the present programmes.

b) Analysis of import and export trends may also bring in new ideas.

c) The most common will be well informed technical specialists and local leaders - A survey of the state or district to project the future needs over the next decade or so will also enable to identify potential projects.

Fig. 1.1 The Project Cycle
d) By investigating local markets:

e) By review of old projects:

f) By observing experience elsewhere:

After the generation of new ideas for a new project these ideas are screened with the assistance of subject matter specialists, experts, engineers, economists etc who have specialized knowledge of factors affecting the feasibility of projects in the various fishery sectors, the screening should be continued until the list of these new ideas for a good project is narrowed down to the most desirable possibilities.

In identification phase, it is also important to see whether the project is implemented in high priority areas and whether on prima-facie grounds the project is economically feasible. It is also imperative to identify problems and objectives of the projects and whether the government gives sanction for the project implementation or not.

The important stages in the process of identification are:

a) Preliminary study

b) Pre-feasibility study

c) Feasibility

A summary of the major points to be covered in a pre-feasibility study a listed below:

a) The economy and national status of fisheries.

b) Biological review (resource base, ecology, ocean conditions etc.)

c) Technical review (vessel, gear, infrastructure, posts etc.)

d) Processing, marketing and distribution (including market functionaries, indebtedness to traders, fish transport system)

e) Socio-economic review (human factors, manpower requisite, institutional arrangements)

f) Description of the projects (its status in fisheries sector and impact on the national economy).

g) Status of state fishing and marketing corporations, but also the functioning of cooperatives, banks and other services and an assessment through the ministry of finance and planning of the availability of foreign exchange for fisheries development.

II. Formulation or preparation:

The following points are considered while formulating the projects. The location of the project and project site must be based in technical analysis and technical feasibility of the project. The location of the project depends upon available physical resources, market conditions. Marketing facilities, alternative investment prospects, administrative experience,
farmers' objectives, technical skills, motivations, demand for products etc. Technical analysis must take into consideration all aspects of technology to be used in the project, and account for all inputs of goods and services. Assessment of suitability and adequacy of natural resources in advance based on the scientific investigations is also essential. Alternatives to the resource use are to be considered in formulation of the project. Due consideration is to be given to all the aspects such as technical, financial, commercial, managerial, organizational, social, economical etc. in the formulation of the projects. Identification of the missing links in the infrastructure system particularly in relation to adequacy of communication systems, markets and storage facilities is important.

Aspect of project preparation and analysis:

According to RIPMAN, 1964, project preparation and analysis can be divided into six aspects:

a) Technical aspects
b) Institutional-organizational-managerial aspects
c) Social aspects
d) Commercial aspects
e) Financial aspects
f) Economic aspects

III. Appraisal or analysis:

Appraisal should take place before the implementation of the project. When a project is fully prepared it is appraised before being accepted as an investment suitable for borrowing. A team of independent experts appointed by government, the project sponsor, the funding agency, or the multilateral bank concerned undertakes appraisal.

The objective of appraisal is to check the thoroughness of the project by making a completely objective and independent study of the project as it has been presented, data have to be checked for reliability, consistency, the reasonableness of its projections, its accuracy in calculations and the validity of its assumptions. It is also necessary to examine the banking, administrative and commercial structures, which will be involved in project implementation and to ensure these have been properly conceived.

There are five criteria for appraisal of fisheries projects.

1. Technical review
2. Commercial review
3. Organization and Management review
4. Financial review
5. Economic review
IV. Implementation:

This is the most crucial phase of the project cycle. The secret of successful implementation depends upon the extent of realism put into the plans drawn before hand. It is often not uncommon, to notice our plans getting deviated from the reality. Here the role of prudent decisions by the personnel incharge of implementation to tackle the situation comes into play. Project implementation can be divided into three different periods viz. Investment period, developmental period and Full-production period.

V. Monitoring:

Monitoring is the timely collection and analysis of data on the progress of a project, with the objective of identifying constraints, which impede successful implementation. This is highly desirable, particularly when projects fail, to be completed as per time schedule or in the process of attaining the set goals. It is imperative to get the feedback on the problems faced so that effective measures can be taken up to plug the deficiencies, which hamper the speedy implementation. Monitoring has to be done continuously to offset various shortcomings that crop up from time to time with regard to various aspects of implementation.

VI. Evaluation:

This is last phase of the project cycle. It is not confined to the completed project. Evaluation can be done several times during the life of a project. In the evaluation process, it is important to see how far the objectives set out in the project are achieved. Deficiencies, snags or failures to achieve the objectives may be analysed and appropriate solutions to such failures answered. Evaluation process is to be completed in three phases. They are mid course evaluation, concurrent evaluation and ex-post evaluation.

Identification of project costs and benefits

In fisheries projects, costs are easier to identify than benefits because the expenditure pattern is easily visualized. The various types of costs involved in the project are:

- Project costs: These include the value of the resources in maintaining and operating the projects for e.g. physical goods, land labour, debt service, taxes etc.
- Associated costs: Costs that are incurred to produce immediate products and services of the projects for use or sale.
- Primary costs or direct costs: These include costs incurred in construction, maintenance, and execution of the projects.
- Indirect costs or secondary costs: Value of goods and services incurred in providing indirect benefits from the projects such as houses, schools, hospitals etc.
- Real costs and nominal costs: costs at current market prices are nominal costs, whereas if costs are deflated by general price index, these are termed as real costs.
- Social costs: these are technological externalities and technological spill over accrued to the society due to the presence of projects i.e., pollution problems, health hazards, salinity conditions etc.

- Replacement costs: Many aquacultural projects require investments that have different lifetimes. A good example is found in the case of water pumping scheme in which the earthworks and pump platforms may be expected to last twenty-five of fifty years but the pumps themselves may have a life of only seven to fifteen years. In preparing the analysis, allowance must be made for the replacement costs.

Next to identifying the costs, the estimation of benefits is imperative to ascertain the impact of the project. Taking into account two situations i.e., 'with' and 'without' the projects generally does this. The difference is the net additional benefit (incremental net benefit) arising out of the project.

Tangible benefits of aqua projects can arise either an increased value of production or from reduced costs.

- Increased production
- Quality improvement
- Change in time of sale
- Losses avoided

Other kinds of tangible benefits:

Transport projects are very important for aquaculture development. This is for not only from cost reduction, but also from time saving and development activities in areas newly accessible to market.

Intangible costs and benefits:

Almost every aqua project has costs and benefits that are intangible. These are creation of new job opportunities, better nutrition as a result of improved water supply. Such intangible benefits are real and reflect true values. They do not however lend themselves to valuation.