Additional Notes to PowerPoint Presentations

Workshop on
“Formulation of Investment Projects in Agriculture and Rural Development”
Ankara, 12-16 October 2009
FOREWORD

These “Notes” are to be read in conjunction with the PowerPoint Presentations (PPPs) on the Project Cycle. They include additional background on the various topics discussed in the PPPs and may be useful as source of information related to project preparation work and as preliminary introduction to subject matters that are part and parcel of project preparation including methodological tools and lessons of experience. Where relevant, information sources are detailed in footnotes together with web online addresses.

The “Notes” presented in the following chapters should not be considered either exhaustive or prescriptive on any of the topics discussed. By and large they reflect considerations deriving from practical Investment Centre experience or reproduce texts (mainly FAO, World Bank and IFAD) that deal about arguments of particular interest as models of best practices.

The presentation of the subject matters follows the same sequence as the PPPs Modules but it does not necessarily coincide with all the slide presentations. In a number of instances it has not been considered necessary to go beyond what already shown in the PPPs, particularly in those cases when the presentation was sufficiently clear and self explanatory.

The many topics mentioned in the “Notes” reflect the complexities of project design. Readers should however bear in mind: i) that each particular project will have to be analysed in its own merits giving particular attention to those issues that need more detailed analysis given the local needs; ii) that the logical sequence and steps in project design refer particularly to public investment projects for international financing; iii) that as each International Financing Institution (IFI) has its own requirements in terms of substantive priorities and formats it is essential that in the analytical work, the team in charge of project preparation give particular attention to what is relevant to justify the project to the IFI’s Board; and finally iv) that work on project preparation requires by definition, flexibility in design and adaptation of whatever standard formats are suggested to the Government planning priorities and the requirements of the stakeholders and the target groups that are the ultimate beneficiaries of project activities.

And last but not least, the reader may at first glance, come out with the impression that many of the steps of the project cycle are well known, not necessary and therefore redundant. This consideration should be carefully weighted according to each specific case. Many of the problems encountered in projects implementation derive from superficial identification, wrong judgement about priorities or deficiencies in strategic planning and limited stakeholders’ participation. Following the logical sequence of the project cycle may help preventing these problems to occur.
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FAO has calculated that worldwide, resources of the order of US$24 billion per year would be needed to reduce by half the number of food insecure people by 2015.

This figure of US$ 24 billion has by now, probably increased substantially for the worldwide increase in production factors and infrastructure costs and the ongoing economic crisis.

At the World Food Summit meetings Heads of State and Government, from around the world have committed to promoting public and private investment in agriculture as a contribution to the goal of reducing by half the number of hungry people by 2015.

However, despite this, foreign aid for agriculture and rural development has continued to decline. Over the past 20 years, it has fallen dramatically – from over US$9 billion per year in the early 1980s to less than US$5 billion.

The sharp rise in food prices in 2008 and the economic crisis have increased the number of undernourished people in the world to an estimated 923 million. Lower international commodity prices have not yet translated into lower domestic food prices in most low income countries.

World agriculture is facing serious long-term issues and challenges that need to be urgently addressed. These include:
- limited economic availability of land and water resources not yet utilized,
- low investments in rural infrastructure and agricultural research,
- expensive agricultural inputs relative to farm-gate prices, and
- difficult worldwide consensus on priorities for adaptation to climate change.

To feed a world population of more than nine billion people by 2050 (around six billion today), global food production must nearly double.

Population growth will take place mostly in developing countries and for the greater part in urban areas. A shrinking rural work force will thus have to be much more productive.

This will require more investments in agriculture including infrastructure, machinery, tractors, water pumps, harvesters etc., as well as more skilled, better-trained farmers and more efficient supply chains.

Why has public investment in agriculture fallen so sharply? Part of the reason is the disappointment with the performance of the agriculture sector in low income countries. But it is also linked to the reconsideration of the role of governments and hence of the public sector in economic management.
What is clear is that the bulk of investments in the rural sector has to come from the private sector, with public investment playing a crucial role, especially in view of its facilitating and stimulating effect on private investment.

Privatisation has led to the divestment of State-owned enterprises and the role of the State has shrunk significantly. This has in turn led to a reconsideration of public goods in agriculture and hence a redirection of where public resources are spent.

In other words, the view of the proper role of the State in agriculture has been challenged and the diminished role of the State has led to fewer public resources for the sector.

Limited domestic capability for investment project and programme preparation particularly, has also been contributing to this state of affairs. Within public services that are generally weak, expertise for project and programme planning needs to be strengthened.

It is important to have a clear understanding of where public investment needs to be made in support of the private sector in agriculture and agro-processing.

Most of the world’s farmers are small-scale farmers and, as a group, these men and women are the biggest investors in agriculture. But small producers face obstacles that are beyond their control: lack of credit, insecure land tenure, poor transport, low prices and poorly developed business relations with agribusinesses at the commercial end of the agricultural supply chain – to say nothing of natural factors such as drought, flood, pests and diseases.

Private investment in agriculture needs, as in all sectors, a favourable incentive framework which provides farmers and processors with good incentives to adopt new and sustainable technologies and diversify production into higher value crops. Agribusiness is, in particular, key to agriculture sector growth since the employment created by the many businesses in the supply chain enables still more people to live a decent life.

Public policy and public investment can create an environment that makes agriculture a good investment. What then should the State do for facilitating investment? An attractive climate for investment is one where there is:

- good governance and transparent public administration,
- macroeconomic discipline and stability, and
- political stability.

And which role should the State play? As examples:

- putting in place the public infrastructure necessary for the efficient operation of the private sector,
- enacting and enforcing rules and regulations that create a safe and predictable environment for private investors,
- establishing a regulatory role in land tenure, ensuring through land registration and enforceable contracts that land ownership is secure,
- establishing viable financing opportunities for agricultural enterprises.....
For a number of countries, the ability to produce primary agricultural commodities sufficient to feed their population and meet export demand is not a prime concern. In other countries agriculture has been heavily subsidized in the past, in terms of both production and consumption, particularly for the basic grains and livestock.

With the removal of the support systems during the early years of the transition from state controlled to market economy, agricultural production fell sharply. Also during this period, there was a progressive weakening of the governments’ agricultural services - from research and extension through market information, to drainage and irrigation, animal disease control, seed testing and certification, and upkeep of rural roads.

The entire range of entrepreneurial economic actors in the countryside, from traders to brokers, lenders, cooperatives of all sorts (production, processing and marketing, credit), and for that matter, farmers themselves, had to be created more or less from scratch.

The first major impact of these new conditions was the major loss of employment, incomes, and services of all types (including education and health) for rural dwellers. A second one was the transition of much commercial agriculture to subsistence farming, which provided, and still provides in many areas, a vital social safety net during a period of sharp declines in income.

While commercial agriculture is beginning to recover, living standards in the rural areas of many Eastern European and Central Asia countries are still low in respect to potential.

In the European Union countries, agricultural policies have gone through a series of changes starting from direct price support and farm subsidies in the early years of the Common Agricultural Policy to recognizing the multifunctional role of agriculture which placed farmers at the centre of rural development, and the need for holistic approaches.

Today, EU policies are seeking to foster labour productivity by developing a knowledge-based economy at the regional and rural level. Investments are targeted to capacity building in the rural areas through better education and training which in turn will enable economic actors to introduce best practices and technologies. The overall strategy is to create an environment for self-sustaining endogenous development. Knowledge—and therefore the mobilisation of human capital—is believed to be the basis on which productivity gains and local economic development can be achieved.
MODULE 2

THE INVESTMENT CENTRE

The FAO Investment Centre was established more than four decades ago (in 1964) to assist developing countries to identify and prepare agricultural and rural development investment programmes and projects up to a standard suitable for appraisal and financing by the World Bank.

Gradually, the scope of the cooperation agreement with the World Bank expanded from an almost exclusive focus on project design to other stages in the investment cycle, ranging from sector analysis and assistance in strategic, policy and regulatory review and reform to public expenditure review and investment planning, and to implementation support and impact evaluation. Over the years, similar agreements were also formalized with regional development banks (see later).

Furthermore, the Investment Centre assists FAO member countries in accessing FAO Technical Cooperation Programme funds for investment identification and start-up activities, identifying resources under new lending modalities, and facilitating public-private investment policy dialogue. Its work has also contributed support to emergency relief and rehabilitation efforts provided by FAO and its financing partners following tsunami, earthquake and hurricane devastation, as well as to developing strategies for natural disaster prevention and response to global threats as in the case of avian influenza (HPAI) preparedness and control.

In recent years, with the trend toward greater national ownership over externally financed aid programmes that has brought into sharper focus the need for enhanced national capacity in formulating and implementing results-based investment strategies and associated operational frameworks, the Centre has increased its efforts considerably to provide not only traditional on-the-job training, mentoring and coaching of local teams, but also formal training and guidance materials (in some cases utilizing an internet platform), as well as the development and dissemination of specialised tools and packages — such as RuralInvest — ensuring training of national trainers and continued technical assistance to users.

Over the last 40 years, through its cooperation agreements with financing agencies, FAO has helped 165 member countries to obtain funding for almost 1,600 agricultural and rural investment programmes and projects, with funding commitments by these partners and governments of nearly US$82 billion.

Each year it works on projects and programmes that represent an average total investment of approximately US$3 billion.

The FAO Investment Centre has also had a major role in boosting capacity in project and programme preparation. From the start of a project, the Investment Centre works closely with institutions, national governments and the beneficiaries to ensure that project proposals are not only technically viable and serve the needs of small farmers and the rural poor, but also meet the objectives and criteria of governments as well as of the lending institutions.
Major International Financing Institutions partners are:

THE WORLD BANK

The World Bank is a source of financial and technical assistance to developing countries around the world. It is made up of two development institutions—the International Bank for Reconstruction and Development (IBRD) and the International Development Association (IDA).

Each institution plays a different but collaborative role. The IBRD focuses on middle income and creditworthy poor countries, while IDA focuses on the poorest countries in the world. Together the two institutions provide low-interest loans, interest-free credits and grants to developing countries for a wide array of purposes that include investments in education, health, public administration, infrastructure, financial and private sector development, agriculture, and environmental and natural resource management.

Total agricultural lending per year is of the order of US $ 4 billion about 10% of the total.

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**World Bank Support for Europe and Central Asia**

The focus of support will be to assist completion of the transition towards a market economy and international integration, to make better use of under-utilized high potential land for rainfed production of temperate crops and livestock production (to assist in meeting global food demand), to overcome the negative environmental legacy of the Soviet system, and to support rural non-farm incomes and eventual exit from agriculture. The ongoing IDA/IBRD program focuses on these areas with priority given to irrigation and drainage (13 percent of program), public administration (26 percent of program), and infrastructure (12 percent). The focus over the next three years will be to continue support for key productivity and competitiveness investments such as irrigation and drainage (only 10-12 percent of arable land is properly drained) and land administration; continue support for EU approximation, accession, and integration; continue support to rural non-farm income and exit; and to do more on environmental services. The analytical agenda will focus on public expenditure analysis, farm-level competitiveness, and climate change.

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THE EUROPEAN BANK FOR RECONSTRUCTION AND DEVELOPMENT

The European Bank for Reconstruction and Development was established in 1991 when central and eastern Europe and ex-soviet countries needed support to nurture a new private sector in a democratic environment. Today the EBRD uses the tools of investment to help build market economies in countries from central Europe to central Asia.

The EBRD is the largest single investor in the region and mobilises significant foreign direct investment beyond its own financing. It is owned by 61 countries and two intergovernmental

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institutions. But despite its public sector shareholders, it invests mainly in private enterprises, usually together with commercial partners.

It provides project financing for banks, industries and businesses, both new ventures and investments in existing companies. It also works with publicly owned companies, to support privatisation, restructuring state-owned firms and improvement of municipal services. The Bank uses its close relationship with governments in the region to promote policies that will bolster the business environment.

The EBRD participates in financing about 3/400 projects per year for a total commitment of about 6 billion euros.

THE INTERNATIONAL FUND FOR AGRICULTURAL DEVELOPMENT (IFAD)

IFAD assists countries with projects dealing with poverty alleviation, food security, rural development, microfinance, community-based development, natural resources management, grass-root organizations' capacity building, promotion of small-scale income-generating activities, women's education and decentralization. Projects notably finance irrigation development, land and other natural resources management while also stimulating the private sector and improving access to markets.

THE INTERAMERICAN DEVELOPMENT BANK (IaDB)

The Interamerican Development Bank lending programme is about US $ 9-10 billion per year with agriculture representing less than 5% of the total. IaDB assists countries in Latin America mainly on infrastructure projects, power, structural adjustment, education, health facilities.

THE ASIAN DEVELOPMENT BANK (ADB)

Poverty reduction is the overarching objective of the Bank's mission. The three pillars underlying ADB's Poverty Reduction Strategy are pro-poor, sustainable economic growth, social development, and good governance. Total lending is about US $ 8-10 billion per year of which agriculture is about 5-10 %.

THE AFRICAN DEVELOPMENT BANK

The African Development Bank (AfDB) is committed to the fight against poverty in Africa. As many African countries are critically short of experienced people and institutions, the AfDB works with the Investment Centre on the varying stages of complex project design from identification to the writing of the completion report. AfDB lending (all sectors) is around 3-4 billion US$ per year.
OTHERS

The Investment Centre works with many other global financing institutions and organizations. These are valuable partners in the fight against hunger and poverty and actively promote investment in agriculture and rural development.

Banks
- Arab Authority for Agricultural Investment and Development
- Arab Fund for Economic and Social Development
- Banco Centroamericano de Integración Económica
- Banque Arabe pour le Développement Economique en Afrique
- Banque de Développement des Etats de l'Afrique Centrale
- Banque Ouest-Africaine de Développement
- Caribbean Development Bank
- Corporación Andina de Fomento
- East African Development Bank
- Islamic Development Bank

United Nations organizations and agencies
- United Nations Capital Development Fund
- United Nations Development Programme
- World Food Programme

Funding Institutions
- Global Environment Facility
- Kuwait Fund for Arab Economic Development
- OPEC Fund for International Development
- Common Fund for Commodities
A few concerns that characterize the most recent views on some strategic issues regarding agricultural and rural development projects.

First concern:

As the limitations of top-down state planning in agriculture have become increasingly apparent, it has been more widely recognised that, if projects are to succeed, rural people (including rural women) must play a more determining role in project design and implementation.

Second concern:

Another, and most notable, change has been the growing public concern for the environment and for the sustainability of natural resource use. This has not only led to new types of projects being put up for financing but also to the introduction of more rigorous procedures for assessing the environmental impact of all investment proposals being considered for external financing.

And third concern:

The context of project design has also changed. Projects are seldom seen as isolated vehicles for funding self-contained actions. Instead they tend to complement or reinforce country commitments to adjustments in economic and institutional policies.

Thus projects may underpin adjustments in prices, subsidies or land tenure, with the aim of encouraging farmers to adopt more sustainable land use practices; or they may explicitly support institutional reforms, for example by strengthening the support services required to encourage a stronger private sector role in agricultural trade.

The investment project cycle is defined as the sequence of events (or steps) between the conception of a project idea (project concept) and the point at which implementation can be started. Each step may merge with the next depending on the particular requirements of the financing agency or on the clearance procedures necessary for the go ahead authorization.

....it goes without saying that it is not necessary to go through all the steps when preparing projects when the required policy and programmatic decisions are already available (see national policies and strategies....).
The logical sequence that leads to the identification of investment projects should in principle, be the following:

- First of all the necessary coherence with national policies,
- Second, the priority of the proposed project in the national development plans, the national development strategies including sector and sub-sector plans, programs, and
- Third, if the investment has to be financed by external sources it should be agreed as a priority in the country assistance strategies of the concerned donors.

A project idea can be originated by its priority expressed in:

- National policies
- National development plans
- Development strategies
- Sector and sub-sector plans
- Programs
- Structural adjustment
- International Financing Institutions (IFIs) Country Assistance Strategies

What characterizes a National Policy?

National Policies indicate the general objectives for economic development: ...for example...

- faster growth of national output
- poverty reduction,
- improvement in the balance of payment...

The National Policy is concerned with the instruments and indicators which control and signal changes in the structure and functioning of the economy (prices, taxes, exchange rates, resources rents, profits...).

It is of concern to the National Policy how the society should be organized to achieve the general objectives for economic development and the structure and functioning of the economy, for example:

- the role of the state and of the private sector,
- state intervention in economic policy,
- the incentive framework for private investors,
- ownership of, and access to resources,
- income distribution,
- .....................
Key policies to promote a competitive agriculture

- **Macroeconomic**—ensure undistorted exchange rate policy, removal of implicit taxes and market barriers, nondiscriminatory taxation, macroeconomic stability, and government credibility.

- **Trade**—facilitate exports, participate in trade negotiations, reduce protection on import-substitute goods with relatively low and uniform tariffs, and remove nontariff barriers (while providing protection from acute price volatility).

- **Labor**—ensure agricultural employment meets core labor standards, especially with regard to child labor, hazardous work, and equal employment opportunities for women.

- **Competition**—reevaluate the role of marketing boards, promote competition in input markets, establish labeling regulations for grades and standards.

- **Environment/natural resource use**—establish sustainable management, internalize externalities where possible, and develop markets for pollution and carbon credits.

- **Land**—develop land markets, security of tenure, titling and recording of land transactions, and land reform for fair distribution of land ownership.

- **Technology**—maintain public good research activities and foster private sector participation in research and extension.

- **Welfare and food security**—establish social safety net programs to cope in times of extreme price changes and natural disasters.

### National Development Plans (NDPs)

NDPs reflect interinstitutional pluriannual Government commitments providing general priorities and guidelines for programmes and projects.

- NDPs set a framework for programming the flow of resources within the economy and towards the rest of the world.

- NDPs set quantitative targets for inputs/outputs.

*Note that the projected difference between public sector commitments and the availability of resources indicates the need for foreign investments requirements.*

- NDPs may include expenditure plans and lists of major projects.

### Development Strategies

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http://worldbank.org/agricultural investment sourcebook
Development strategies formulate a plan of action for moving the economy and the society towards the policy goals enunciated by the National Policy and the National Development Plan.

Strategies are generally sector or sub-sector oriented. For example, agricultural/rural sector strategies provide the general guidelines for agricultural development plans, programs, projects.

Strategies provide the general guidelines for sector or subsector developments. They:

- Identify specific weaknesses and constraints;
- Examine main strengths and opportunities;
- Explore strategic options and operational programmes;
- Outline a sector investment programme.

Strategies are drafted in reports which provide:

- A snapshot of the current status of the agricultural sector;
- A national vision of agriculture;
- A diagnosis of the key constraints and an analysis of main opportunities;
- An action plan for implementing the vision.

**Sector and Subsector Plans**

Sector analysis and sector plans are mainly concerned with assessing the potential productivity of available resources and devising plans for the allocation of those resources.

Sector analysis is the bridge between policy, strategy, and project analysis. Sector Plans may include expenditure plans and lists of major projects.

Many countries have an agricultural sector plan, based on a thorough analysis of the sector.

Such plans:

- explain agricultural development, production or resource management objectives and their relationships with national planning priorities and goals;
- outline the strategies through which the government intends to achieve these sectoral objectives;
- describe any adjustments in policy which might have to be adopted to provide incentives for the developments to take place;
- and indicate financial and other resource needs of the government and producers, and how these would be allocated amongst priority objectives or programmes.

Sectoral plans sometimes also make explicit reference to projects, but often these will be defined in name only, with few details of their possible components, cost or feasibility.
Sub sector plans may concern irrigation, livestock, food and tree crops, forestry, fisheries or specific institutional responsibilities like extension, research...when these are assessed at national scale.

**Programmes**

Programmes are elaborated within sectors or subsectors. Programmes include various sets of activities usually referring to one or more administrative/institutional departments.

Programmes generally include policy initiatives, expenditure plans and lists of investment projects.

Programmes need to be consistent with the NDPs and the programmes of work and budget.

**International Financing Institutions Strategy Papers**

For IFIs operations there are strategic documents that underline IFIs priorities as agreed with Governments. All IFIs have similar types of documents. They are generally elaborated by IFIs staff in close cooperation with Governments, mainly Ministries of Finance and Planning Departments.

**The World Bank**

The World Bank prepares a Country Assistance Strategy (CAS) for borrowers from the International Development Association (IDA) and the International Bank for Reconstruction and Development (IBRD).

The CAS is developed in consultation with country authorities, civil society organizations, development partners, and other stakeholders.

The purpose of the CAS is to set out a selective program of Bank Group support linked to the country’s development strategy and based on the Bank Group’s comparative advantage in the context of other donor activities.

The CAS includes a comprehensive diagnosis of the development challenges facing the country, and it identifies the key areas where the Bank Group's assistance can have the biggest impact on poverty reduction.

In its diagnosis, the CAS takes into account the performance of the Bank’s portfolio in the country, the country’s creditworthiness, the state of institutional development, implementation capacity, governance, and other sectoral and cross-cutting issues.

**IFAD**

For IFAD the main such document is the COSOP - Country Strategic Opportunities Programme - which is a framework for making strategic choices about IFAD operations in a country, identifying opportunities for IFAD financing, and for facilitating management for results.
The central objective of the COSOP is to ensure that IFAD country operations produce a positive impact on poverty. The document reviews the specific rural poverty situation as the basis for determining geographic sites and related thematic areas where IFAD would operate and highlights the innovation it intends to promote in the country programme.

**Investment Projects**

A project is a scheme or set of activities for organising the use of resources and achieve particular results within a given period.

It is the concrete expression of national policy, development plans, and sector strategies.

An Investment Project is a plan of action that includes those activities and components that will create an asset (a stock of productive material and/or human resources).

This asset will later provide a flow of goods and services.

The distinct stages of project formulation follow a logical sequence otherwise called: Investment Project Cycle

- It has become conventional to distinguish in the “Project Cycle”, a number of major stages starting from policy formulation to project implementation,
- Each stage or step of the “Project Cycle” ideally merges with the next and the time required to pass through each stage varies considerably.

In current practice a number of steps of the “Project Cycle” may be “telescoped” into one....

**The Investment Project Cycle**

The Investment Project Cycle defines the sequence of events between the conception of a project idea (project concept) and the point at which implementation can be started.

It broadly includes a number of stages or steps; RECONNAISSANCE/ IDENTIFICATION, PREPARATION, APPRAISAL, SUPERVISION, COMPLETION REPORTS...

The first two steps (reconnaissance/identification, including socioeconomic and technical surveys often called “Diagnosis”- see below) may frequently coincide in one step only or be superseded by the detailed indications provided in strategy papers or IFIs Country Assistance Strategies (see later).

For projects in which investments are to underpin policy or institutional reforms, the sequence usually begins with a sectoral or sub-sectoral review aimed at establishing long term goals and priorities, identifying constraints and examining possible strategies for overcoming them. However, even in the presence of sector plans, project identification may still be necessary and justified especially when the issues to be confronted require detailed investigations and a choice between competing alternative designs.
Reconnaissance

It is generally defined as a lightweight input aimed at generating sufficient information on project options to enable the government and financing agency to select a priority project.

This reconnaissance stage also provides an opportunity for reaching agreements among stakeholders on arrangements for preparation work, including the setting up of steering committees or national preparation teams.

Diagnosis\(^3\) is part of project reconnaissance or identification (see below).

Literature on project analysis often takes it for granted and too often in practice it is given insufficient attention. However Diagnosis is a very important step as it may involve a number of essential investigations of a technical, institutional or socioeconomic nature like:

- Soil Studies
- Socioeconomic surveys of the Target Groups
- Hydro geological investigations
- Other baseline surveys
- Environmental Impacts Assessment

Mistaken diagnosis in project design may lead to problems such as:

- a failure to understand the motivation of the intended project beneficiaries;
- the possible negative environmental impact of actions which appear to be otherwise sound from a financial, social or technical point of view;
- limited demand prospects for the commodities to be produced in larger quantities by the project and of the impacts on markets and prices;
- the possible unattractiveness to entrepreneurs of the services which a government seeks to privatise;
- the difficulty of maintaining soil fertility on which the sustainability of annual cropping depends........

Identification

Identification defines the initial process of deciding what kind of project amongst different alternatives, is most needed to achieve the goals set by the national policy and the national development plan.

As mentioned, Project Identification may draw from the NDP, the sector strategy, the sector programme...the reconnaissance work. Identification involves:

- a review of alternative approaches or options for addressing a set of development problems and opportunities;

\(^3\) See RRA (Rapid Rural Appraisal), Module 6a
• the definition of project objectives and scope at the degree of detail necessary to justify commitment of the resources required to undertake and complete the needed feasibility studies; and
• the identification of the major issues that must be tackled before a project based on the identification concept can be prepared, financed and/or implemented.

Project identification is a critical step of the project cycle: it leads to confirming one project concept and design amongst several alternatives and it initiates a preparation process difficult to retrieve at a later stage when all stakeholders (government and beneficiaries and other private sector groups) have committed their agreement and/or participation.

Needless to repeat therefore that:
• to propose a project for a given target group implies that they will welcome and respond to the development opportunity that the project offers. To do so without a clear appreciation of how the intended clients view the world, their problems and possible means of overcoming them, makes it impossible to know with an acceptable degree of certainty whether or not the opportunities offered by the project will in fact be taken up; and that
• even if the financial analysis of proposed technological change shows apparently attractive results for the intended beneficiaries, this is no guarantee that the changes will in fact be adopted. What is needed is a thorough analysis of the socio-cultural setting of the project, of the farming systems.....

Recent surveys have underlined the main design related problems encountered during implementation. These by and large depend on errors or misjudgements in identification including poor attention to the problems likely to be encountered, optimism over possible solutions and misinterpretation of implementation capacity issues.

In brief the main problems encountered relate to:
• too many project components, that is to say project too big – exceeding implementation capacity;
• implementation schedule too tight;
• gross underestimation of costs and therefore of likely economic and financial benefits;
• wrong assumptions on available production technologies and pick up rate;
• wrong organizational structure, bad management and staffing;
• engineering complexities not perceived at identification;
• misjudgement over the effectiveness of technical assistance;
• prices and marketing problems;
• not sustainable;
• inequitable benefit distribution;
• insufficient government commitment and recurrent budget shortages;
• land tenure related problems;
• limited flexibility to adapt to changing circumstances.....
For more effective identification the approach to project design must be adjusted to take into account the state of maturity of the project idea when the exercise formally begins. This is a bit long but necessary...Typical questions to be asked at identification:

- are the constraints, problems, opportunities to be addressed, properly diagnosed and understood, are there over-riding constraints which cannot be readily overcome?
- is there really a need for a project?
- why has the proposed investment not already been made?
- are the stated objectives realistic and attainable, or are revisions needed in the goals? Should these be scaled down?
- does the proposal fit with the national and sectoral policies and priorities?
- is it consistent with the current financing policies of the intended funding institution?
- are the proposed project actions the most appropriate for the declared overall aim, a coherent response to the specific constraints, problems and opportunities to be addressed, and on the right scale? Or would an alternative strategy and scale be better?
- is the technological basis for the proposed actions well established?
- is the government fully committed politically to playing its allotted role?
- can the government mobilise the local resources?
- is the suggested time-frame realistic?
- does the design offer the intended beneficiaries sufficient incentives?
- will the returns justify the costs or perceived risks, as well as compete successfully with any other options which beneficiaries may have to improve their lives?
- are there any cultural barriers to the project's acceptability?
- even if all the prospective participants respond, would the project make the expected contribution to national development and to the economy, which is claimed?
- does preliminary analysis suggest any alternative strategies that might be more effective in meeting social or economic goals?
- has the country the financial as well as the natural resources to maintain the project in the longer term, after investment funding ends? That is, would the project be fiscally and environmentally sustainable?
- will the benefits be obtained at the expense of unacceptable environmental or social side-effects? Can modifications be introduced into the project which would enhance its beneficial impact on poorer members of the population and on the environment?

To summarize, the most appropriate sequence for project identification:

1. Review of the national and sectoral analyses, plans and priorities both of the government and of the potential financing agency, and relevant available information;
2. Recognition of the opportunities which the project is expected to exploit or the problems which the investment project is intended to overcome; Diagnosis of the underlying causes of the problems or of the factors which underpin the opportunities;
3. Clear definition of ultimate and immediate objectives;
4. Review of alternative possible solutions or development strategies, including an objective assessment of past and current development efforts in the same or related fields;
6. Evaluation and comparison of the more promising options;
7. Outline of the preferred solution;
8. Assessment of detailed steps for the follow-up required for preparation.
MODULE 4

PROJECTS AND PROGRAMMES – MAIN TYPES

A) MORE FREQUENT TYPES OF PROJECTS

The typology of projects defines the need for different kinds of investigative and design activities. There is a large number of project types: the ones illustrated are the most common.

i) Area Based Projects

These are types of projects that confine their activity to a particular geographical location though the activities may concern more than one sector or agricultural subsector. Example:

- watershed development projects,
- land settlement projects,
- Irrigation/drainage projects,
- on farm development (land clearing, tree crops, greenhouses establishment),
- ...........

Important aspects to be considered in the preparation of area based projects are the following:

- the need for an accurate diagnostic of the socioeconomic situation and of the natural resources basis (climate, land, water),
- competitive and comparative advantages characteristics of the project area;
- settlement patterns and available infrastructure;
- farm size, agricultural production systems, labour availability, most representative farm types;
- on farm and off farm income. Migratory patterns;
- potential for development, availability of technological innovations;
- issues related to decentralized management, local authorities and interinstitutional coordination at local level;
- natural resources management and sustainability;
- ........................................

Agricultural production systems

Agricultural production systems depend on natural resources: land, water, biodiversity, forests, pastures and wildlife. Farm activities can have major impacts on the quality and availability of these resources well beyond the boundaries of the production system (for example, downstream pollution and soil erosion). Although natural resources are critical to agricultural production, farm households also frequently depend on them to meet other

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needs, such as fuel, construction materials, and supplemental foods. Thus rural livelihoods are intricately linked to the condition of natural resources, particularly for those 1.3 billion people living on fragile lands.

Over the last 40 years as food production has doubled, agricultural production systems have expanded, with significant impacts on the natural resource base:

• The amount of agricultural land going out of production each year due to soil erosion is about 20 million hectares, and approximately 40 percent of the world’s cropland is now degraded.

• Irrigated agriculture consumes about 70 percent of the total volume of fresh water used by humans, resulting in major environmental consequences: salinization, lowering of water tables, waterlogging, and degradation of water quality, with subsequent impacts on ecological systems affecting fisheries and wetlands.

• Agriculture currently contributes about 30 percent of the global emission of greenhouse gases resulting from human activity. This has major implications for global climate change.

• The unplanned expansion of intensive production systems, which are typically monoculture and often developed at the expense of primary forests and savanna woodlands, can contribute to a significant loss in biodiversity.

• Deforestation rates have reached almost one percent per year in some regions.

• The major findings of the recently concluded Millennium Ecosystem Assessment warned that approximately 60 percent of the ecosystem services supporting life on Earth was being degraded or used unsustainably and that the consequences of degradation could grow significantly worse in the next half-century.

*Sustainable NRM is important to agricultural development* for its impact on:

• General agricultural productivity. As mentioned, agriculture is the major user of most available land and water resources. However, many farmers lack essential knowledge, resources and skills to manage intensive farming operations on a sound basis. This leads to the use of inappropriate technologies and unsustainable practices that contribute to the exhaustion of natural resources and environmental pollution.

• Off-farm agricultural uses. Many agricultural systems rely on “off-farm” natural resources, such as livestock grazing on roadsides and woodlots. Forests provide building materials for farms, fences, and homes.

• Nonfarm employment. Natural resources provide off-farm income through employment in industries (such as fishing, timber extraction, and tourism) and through other uses, such as power generation. This income is often critically important for the purchase of production inputs to maintain the productivity of the farming system.

• Risk and vulnerability reduction. Sustainable NRM reduces the vulnerability of both farm and urban communities to natural resource disasters, such as droughts, landslides, and
floods and to the loss of biodiversity from overgrazing and deforestation. A healthy resource base helps mitigate vulnerability to climate variability and reduces risks of failed harvests.

• Pollution reduction. Pollution from agricultural production and processing can have major impacts on “off-site” natural resource quality. Water pollution from agricultural chemicals and livestock manure is a potential health hazard; irrigation can cause salinity problems; and the burning of crop residues may affect air quality and human health.

• Environmental services. Improved NRM provides extensive downstream benefits in the form of “environmental services” such as hydrologic function, sediment control, nurseries for fisheries, and biodiversity conservation. Environmental resources contribute to the health of the global ecosystem, because wild races of the major food crops and semidomesticated crops, located in forest reserves and natural ecosystems, are important sources of genes for crop improvement programs, and semidomesticated crops represent new market opportunities. Maintaining tree cover and following appropriate hillside grazing and crop cultivation practices will preserve soil and water resources and enhance the hydrologic functions of watershed areas. Coastal zone protection, mangrove and wetlands preservation, and border areas of parks and protected areas are important for the maintenance of environmental services.

• Cultural integrity. Indigenous cultures use land and other natural resources in unique ways which often help to define national identities, even in industrial countries. Indigenous technical knowledge coupled with scientific research provides significant scope for management innovations to conserve natural resources and develop new marketable products.

**Production practices relating to sustainable intensification**

*Integrated pest management (IPM)* is an ecosystem-based strategy that seeks to control pests or their damage through a combination of techniques (biological control, pest monitoring against economic thresholds, habitat manipulation, modification of cultural practices, use of resistant varieties), using less toxic chemical pesticides only after pest monitoring indicates their need.

*Conservation farming (CF)* encompasses four broad, intertwined management practices: minimal soil disturbance (no plowing and harrowing), maintenance of a permanent vegetative soil cover, direct sowing, and sound crop rotation.

*Low external input and sustainable agriculture (LEISA)* uses farmers’ knowledge and a range of management practices (agroforestry, IPM, intercropping, crop-livestock integration, microclimate management) to minimize the need for purchased inputs.

*Organic agriculture* employs agronomic, biological and mechanical methods to control pests and maintain soil fertility with virtual elimination of synthetic chemicals for crop and livestock production.

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ii) **Agricultural Science and Technology Projects**

The World Bank and the Food and Agriculture Organization (FAO) have developed the following guiding principles for Agricultural Knowledge and Information Systems (AKISs) program design.

AKIS strategic guidelines:

1. **There is a defined role for the public sector.** Research investments need to target public funding for the provision of public goods so that investments are:
   - Made within a sound policy framework.
   - Based on clear national strategies that articulate a long-term vision and national policies, plans, and objectives for research.
   - Economically efficient with benefits and expected outcomes that justify the investment.
   - Equitable with research results available to the poor and minority groups.

2. **There is also the need and demand for improved services.** Agricultural services need to be efficient, effective, and sustainable; this requires that investments should be:
   - Demand-driven, responding to farmers’ needs and interests and involving clients in program governance, priority setting, and evaluation.
   - Participatory, empowering local people to solve problems and mobilize resources.
   - Based on subsidiarity, with responsibilities devolved to the lowest possible level of government consistent with competency, comparative advantage, and efficient use of funds.

3. **Improved quality of services.** Management improvements essential to improving research execution require that research programs are:
   - Accountable for use of funds and for results, with incentive structures that ensure assignment of qualified staff who are given adequate support and held responsible for results.
   - Relevant to the needs and resource constraints of different categories of clients, balancing objectives of profitability, productivity, and sustainability.
   - Pluralistic, involving a range of institutions with different comparative advantages undertaking different research activities.
   - Well monitored and evaluated to ensure that they are results-oriented; account for impacts on human, social, and environmental capital; and demonstrate cost effectiveness.

4. **Agricultural Services should be based on a sustainable system.** Institutional sustainability depends on principles listed above and on financial sustainability and development of institutional capacity through investments that:

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• Develop the human and social capital necessary for clients and local institutions to be capable of continuous learning and problem solving.

• Are cost-shared by major stakeholders based on agreed criteria, including ability to pay for and use research results.

• Develop political support from stakeholders as a basis for securing future financing.

iii) Rural Development Projects

These are projects with a multisectoral, holistic approach targeting in general the small resource poor, marginal farmers. The rural development projects may or may not refer to a particular geographic area. In general they do.

Rural development projects integrate and coordinate the interventions of different government ministries or departments at national and local level (and this is why they are particularly complicated to prepare and implement) with the aim of improving the income and livelihoods of the target group by investments to increase farm production and productivity, improve social services and social and economic infrastructure.

Important aspects to be considered in preparation are:

• implementation capacity of local institutions
• the need for coordination between the various participating public sector bodies. In fact these projects imply implementation of many components ranging from production components to health, infrastructure, sanitation, education etc.
• the need for decentralization of administrative and financial aspects and financing of project activities taking into account the multiplicity of institutions involved and the need for coordinated project implementation
• and finally, as many of these projects involve a number of preferential aspects for the target groups like for example, subsidies on farm investments, it is important to assess their sustainability after disbursement.

(Sustainability? The capacity of project activities and components to continue operating even after the project financing – and subsidies -has terminated, see later...)
iv) **Land Administration, Policy and Markets Projects**

Sound land administration systems require, *inter alia*:

- Development of a sound legal framework and a well-functioning land registry.
- Use of administrative titling, which has proven to be more efficient than judicial titling.
- Provision for a nationwide coverage, though not necessarily a uniform system throughout the country.
- Cadastre and registration functions to be combined in a single institution to improve efficiency.
- Use of a systematic titling and registration program in areas with high priority for regularizing titles, because this strategy can be cost effective and facilitate uniform coverage.
- Establishment of an effective means of resolving disputes. Conflict resolution is essential to sound land administration, and it can include empowering field teams to resolve conflicts with the participation of the local community at the time of adjudication.
- Use of public relations campaigns to educate property holders and encourage collaboration.

v) **Small Farmers Credit Projects**

Constraints to agricultural development are many. Access to financial services is only one response to these constraints, but improvements in the provision of—and access to—financing for agriculture can meet a range of needs, and it can be critical to the success of agricultural development programs. Indeed, many investments in agriculture depend on access to appropriate financial services. At the production level, financing for agriculture can enable farmers to introduce irrigation or other technologies; finance input and marketing costs; cofinance extension and information services; bridge the preharvest income gap; prevent sales of produce immediately following harvest at low prices; smooth seasonal income flows through deposit facilities, access to remittances, and existence of bank overdraft lines; or insure against price or yield fluctuations. If agribusinesses cannot access financial services, their capacity to finance and supply farmers, and to buy and process farm produce, is restricted.

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Institutions and individuals in the rural finance system

- **Agricultural banks**: Whether privatized or state-owned, these banks have a rural network that provides financial services specifically for the agricultural sector.

- **Postal and savings banks**: These banks often act as the principal source of deposit and money transfer services in rural areas. Traditionally owned by the state, they have been commercial banks in some countries.

- **Microfinance institutions (MFIs)**: Specialized institutions that can provide microfinance products targeted at the poor and low-income populations, including small-scale farmers.

- **Membership-based financial organizations (MBFOs)**: Membership-based organizations can include financial cooperatives or credit unions, and savings and credit associations. Members of these organizations usually have a common bond such as community, geography, or activity.

- **Processors and traders**: A wide variety of businesses and entrepreneurs that participate in the agricultural market system and principally engage in agricultural activities (such as processing, marketing, input provision, storage). They also provide credit as part of transactions.

- **Informal financial intermediaries**: These intermediaries consist of group-based models such as Rotating Savings and Credit Associations (ROSCAs), moneylenders, retail stores offering goods on credit, informal deposit collectors, and others.

The financial systems approach recognizes that rural and agricultural clients need a full range of financial services, including savings, short- and long-term finance, insurance, money transfers for remittances, and leasing. To meet these demands, financial products must be designed to meet client needs (by using client and market research), and delivery mechanisms must be adapted to provide low-cost, convenient access.
1. **THE MICRO LEVEL – DEMAND SIDE**

1. **The financial realities of poor rural women and men need to be understood in order for the promotion of rural finance to succeed.** Credit is not always the answer. A loan is an obligation, and thus a risk, for the borrower, and rural poor people may have very limited, if any, debt service capacity. Other kinds of support such as safety nets, asset transfers or non-financial services may be more appropriate for the very poor, and some needs may be met by other services with which clients may be less familiar, such as insurance.

2. **Savings are often more important to clients than other financial services.** They enable poor households to withstand shocks to their income and mitigate the effect of emergencies and crises. Access to secure savings services also promotes financial discipline. Regular savers are more likely to service their loans on a timely basis and build equity for their own investment purposes.

3. **Customer education and protection are critical to successful rural finance investments.** Savings should be adequately protected and any risks clearly explained. Financial literacy training can also help clients understand the benefits and risks of financial products and their specific terms (e.g. interest rates, premiums). Transparency on performance and innovative lending methodologies can increase the efficiency of financial service providers, enhance competition among institutions and thus reduce interest rates.

4. **Participation of clients and stakeholders is fundamental.** The effective planning and implementation of IFAD-supported operations requires the active participation of clients and stakeholders, including rural women and men, empowering them as users or user-owners of membership-based local financial institutions. Participation patterns may be culture-bound and variously determined by sex, social stratification or group affiliation. Where conflict arises, the stakeholders themselves must determine the balance between their social and economic concerns.

5. **Monitoring client satisfaction is good business practice.** An increasing number of financial institutions have introduced “social performance management” in their core operations to further understanding of the preferences and needs of clients, which allows them to track the profiles of their clients, their satisfaction with services offered, the impact of products and services on their lives, and drop-out rates.

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8 Source: IFAD Implementing the Rural Finance policy (excerpts...)

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2. THE MICRO LEVEL- SUPPLY SIDE

Institutional sustainability is fundamental for a financial institution’s growth beyond the period of initial donor or investor support. Sustainability hinges on profitability, outreach, resource mobilization and the appropriate legal status of operations.

The performance of a financial institution determines the extent to which it can reach poor rural households and provide long-term access to financial services. Service delivery differs greatly depending on an institution’s systems and procedures, the quality of management and skills levels, and incentives in place for staff.

Donor support is required mainly to strengthen the delivery capacity of financial service providers in rural areas and to upgrade non-formal institutions to higher legal forms as necessary. The provision of training and consultancy services, improvement of professional standards, and purchase of operating assets all constitute forms of subsidies.

There is only limited scope for lines of credit to retail institutions. IFAD’s experience shows that, in most cases, credit lines do not adequately respond to building an institution’s sustainability and may also undercut the market, alienating other donors and stakeholders and blocking the entry of other relevant service providers in rural areas.

Support to community-managed loan funds, often as components of larger projects and programmes, can be an attractive alternative for remote or sparsely populated areas and poor rural households that formal rural MFIs would find prohibitively expensive to reach.

Credit guarantees can support pro-poor financial transactions under certain conditions by offering the partial coverage of lending risks. Credit guarantees are only effective when fully integrated into the existing financial market and managed by finance professionals who know the market well. Governments or publicly owned special-purpose vehicles for risk management have had very limited success in effectively managing guarantees.
3. THE MACRO LEVEL – POLICY, INSTITUTIONS

An enabling and conducive policy environment is a prerequisite for an efficient financial system and effective rural development and poverty reduction. At the macro level, a number of factors are particularly important for preventing systemic risk. These include the development of a national microfinance or rural finance policy or strategy, deregulation of interest and exchange rates, liberalization of agricultural prices and foreign trade, establishment of a legal system that protects property and land-use rights and ensures due legal process, and support of autonomous financial institutions and regulatory authorities.

The prudential regulation and supervision of financial institutions is crucial for the evolution and stability of financial systems. Without properly regulated local financial institutions, which mobilize deposits and attract private capital, there can be no sustainable rural development. The appropriate level of regulation and supervision depends on the type of financial institution and, in particular, on the level of savings it mobilizes from the public. It is important to adopt appropriate legal forms for cooperatively and privately owned local financial institutions, build the capacity of self-regulating industry networks under the central financial supervisory authority, and enforce appropriate prudential norms.

Regulatory and supervisory authorities need to be supported in strengthening financial markets and avoiding market distortions, while enhancing the good governance of their partner institutions and their regulatory and supervisory agencies.

vi) Target Group Based Projects

Similar to rural development projects, target group based projects aim at a specific segment of the rural population (small or medium scale farmers, marginal landless groups for poverty alleviation, young farmers...). These projects may have a geographical area focus or be country wide.

Important aspects to take into consideration for target group based projects:

- government policies regarding the specific target groups and their effectiveness,
- necessary modifications to these policies,
- the need for socioeconomic surveys to identify the real needs,
- the need for detailed identification of beneficiaries and setting of criteria for inclusion/exclusion;
- the services for the concerned segments of the rural population. For poverty alleviation projects assessment of survival strategies,
- the availability and importance of off farm employment opportunities as an alternative to work on the farms.

Some target group based projects may specifically aim at Food Security and related investments to alleviate problems of food supply and nutrition for well identified segments of the rural or urban population. Food security projects may include a variety of investments from technology testing and dissemination, to farm development, seeds and fertilizers supply,
infrastructural investments, food quality and safety.....to address the real needs of the target group.

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<th>Food security, safety, and quality&lt;sup&gt;9&lt;/sup&gt;</th>
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<td>Food security depends not only on whether a sufficient supply of food is available at the national level, whether domestic markets function adequately to distribute this supply over time and space, and whether households can afford the supply available on domestic markets, but also on the provision of safe food of acceptable quality—because, at the individual nutritional level, food quality and safety interact so strongly with health status. Potential investment areas for food safety and quality include:</td>
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<td><strong>General:</strong></td>
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<td>• Policy analyses and food chain diagnostic studies.</td>
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<td>• Nutritional surveillance studies.</td>
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<td>• Food fortification or supplementation programs.</td>
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<td>• Promotion of micronutrient-rich foods.</td>
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<td><strong>Export focused:</strong></td>
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<tr>
<td>• Developing laboratory capacity (for residue testing and biological agents, for example).</td>
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<td>• Strengthening capacity for food inspection, auditing, and certification.</td>
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<td>• Training, risk analysis, and systems for product traceability.</td>
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<td>• Information on export market import standards.</td>
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<td><strong>Domestic market focused:</strong></td>
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<td>• Investments in water and sanitation.</td>
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<td>• Hygiene training for street food vendors.</td>
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<td>• Plant and animal quarantine infrastructure.</td>
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<td>• Vaccination programs against live...</td>
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**vii) Poverty Alleviation Projects.**

Poverty alleviation projects are the main types of target group based projects. These differ from conventional projects in that the actions are explicitly designed for the specific target group and the objective is to maximize the number of households which can be lifted permanently out of poverty with a given level of investment.

It is important to ensure that the benefits reach the intended beneficiaries and that strategic options limit leakage to people outside the target group such as big farmers, corrupt government officials, middlemen or moneylenders.

For this reason, poverty alleviation projects entail inter alia special types of analysis, namely:

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- identification of target groups,
- diagnosis of the causes of poverty,
- targeting of project actions, and
- close monitoring of the distribution of benefits.

**How to identify Target Groups?**

*Although per capita income levels in relation to the poverty line may be of interest, definitions based on income are hard to apply.*

*An alternative way is to develop (small) standardized loan or input packages for each project activity or to establish a ceiling on the maximum amount which any household can borrow or receive in kind from project resources.*

*Instead of trying to verify the farm size or borrower’s income for loan applicants to determine their eligibility, it can be easier from an administrative point of view to set an upper limit on the number of hectares which a single household can plant with project funded assistance or the number of livestock which can be purchased on credit.*

*Another option is to finance activities which are of great interest to the poor and of little or no interest to the wealthy, because they are too demeaning or the returns are too low.*
**How do IFAD-supported projects and programmes reach and benefit the target groups?**

In reaching its target groups, IFAD has learned a number of important lessons:

**Understanding poverty processes and livelihood systems – and their gender dimensions – is the foundation for effective targeting.** The analysis should capture the diversity of the livelihood systems of poor people, and the causal factors and processes through which people move in and out of poverty.

**Geographic targeting, where relevant, is an effective way of reaching areas with high concentrations of poor people.** National poverty lines and data on food insecurity and malnutrition, combined with other human development data (or other poverty mapping tools such as vulnerability analysis and mapping) are used to identify disadvantaged areas. Since these data are generally only available for broad administrative units (for example, the district), specific criteria need to be developed in consultation with local stakeholders to select villages and communities within a district.

**Activities and services must be self-targeted to the poor.** Success in targeting depends largely on whether, at the outset, the project, programme, or initiative is crafted around the assets, livelihood constraints, productive potential, development opportunities and priorities and aspirations of poor people. A project has a better poverty focus when the mix of benefits offered and transaction costs involved are attractive to the poor but not to the better-off, and when they take into account people’s availability in terms of time, labour and capital.

**Inclusive and empowering methods work best.** To ensure that benefits reach the identified target groups, the methods that work best are those that enable people who tend to be excluded, and have less voice and power, to participate in development initiatives, claim benefits and services, and influence policies and resource allocation. This implies specifically targeting information and communication to those who are generally less informed; focusing skills and management training on these groups; raising awareness and building confidence; ensuring transparency and involvement of project participants in decision-making on resource allocation (particularly in the case of development funds); and, above all, strengthening the organizations of the rural poor (community-based organizations and producers’ organizations) and increasing their social and gender representation.

**An enabling condition must prevail: a shared vision and commitment to targeting among stakeholders.** At both project and programme levels, the overarching condition for reaching and benefiting the poor is the existence among stakeholders of a common vision of and commitment to the identified poverty reduction and targeting goals.

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10 Source: IFAD. Targeting Policy-Reaching the Rural Poor (excerpts...)

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Rapid changes in consumer demand, technologies, and organization of markets and supply chains present continuous challenges to producers. Competitive forces require producers to regularly adjust the technologies employed in production and marketing processes and to improve the efficiency of linkages within supply chains. Agribusinesses must have the flexibility to adapt as new technologies emerge, as new trade and market requirements are established, and as consumer demand evolves. Grades and product and process standards are taking on greater importance in light of consumer (and the retail gatekeeper) demands for quality, safety, authenticity, and sustainability of products. The need to meet these demands can represent a major challenge to market entry or continued market access. The government’s role is to efficiently provide the public goods that enable private enterprises to competitively produce for local and international markets, and to ensure that the benefits of these interventions do not bypass the poor but expand their production and income opportunities.

Defining public and private roles. One of the most difficult challenges for policy makers in a developing market economy is to find a good balance between public and private responsibilities. Although public goods are the responsibility of the public sector and private goods of the private sector, many goods and services, have shades of public and private characteristics that may require joint public-private action. Markets function imperfectly because of externalities, economies of scale, asymmetric information, non-excludability, and excessive contracting costs. These market imperfections often require public sector intervention. But the identification of market failures and the justification of public interventions are complex and require significant analytical capacity. To ensure that the costs of public intervention do not exceed the benefits, public sector involvement must be guided by high-quality analytical work with regard to markets and commodity chains. Important information needs, issues, and guidelines include:

- The public sector should not do what the private sector can do (for example, direct provision or distribution of agricultural inputs such as seed or fertilizer).

- Public interventions should be reserved for activities that have the highest potential net benefits (that is, where objective policy research and analysis indicate the greater economic and social returns—not where powerful political lobbyists prefer).

- Subsidies of variable inputs and credit are usually undesirable. Exit strategies for subsidization and border protection are needed where they exist, and some transition mechanisms (such as direct income support) may be appropriate.

- Public-private cofinancing of lumpy, one-time investments is often a preferable strategy (for example, for information systems or transport and storage infrastructure).

Communicating with the private sector. In developing countries with a legacy of state dominance of the economy, the voice of entrepreneurs is often weak. Communication between the government and the private sector is not well institutionalized and often limited.

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to larger companies with greater political influence. Smaller enterprises, in rural areas in particular, have little access to systems for public policy dialogue and therefore limited ability to influence political outcomes. In such situations, government decision makers may overlook important information and private sector concerns when preparing and implementing policies.

Public-private cooperation. Development of market institutions and provision of supporting public good services remain areas in which synergies can be obtained through cooperation between the public and private sector. Public-private cooperation is especially important for:

- Developing and maintaining market infrastructure, which reduces the costs of exchanging physical products.
- Developing and maintaining information systems for data on supply and demand, trade, prices, and technology.
- Preparing and implementing new rules and regulations related to agricultural, trade, fiscal, and economic policies.
- Facilitating efficient marketing functions through standardized terms for the delivery of products, their conditioning (sorting, packaging, grading, and labeling), the mode of payment, arbitration of commercial disputes, and policing of markets.
- Monitoring the quality of products through technical standards and norms.
- Research and development and training to improve skills of technical staff.
- Generic promotion of agricultural and food products in foreign markets.

Reducing risks faced by private firms. As a result of market liberalization, price risk has been shifted from governments to producers and consumers. The risks associated with private sector investment are exacerbated by ineffective systems for enforcing property rights and rules for contracts and by distortionary trade policies. Farmers and firms have “traditional” means of managing their risks (that is, through savings, diversification, and selective market relationships), but these strategies may result in lower than optimal investment and missed opportunities. A high-risk environment encourages a short-term perspective—it constrains the transition away from subsistence farming toward commercial systems, and it acts as an overall disincentive to the integration of the poor into the economy.

Governments can reduce risk for private entrepreneurs through a stable policy climate and better information services, technologies, and infrastructure. A functioning or enabling legal and regulatory environment and contract dispute mechanisms (for example, arbitration in the absence of an effective judicial system) are also important. The public sector can facilitate the use of traditional commodity exchanges (for example, spot markets) as well as more complex markets for risk management (for example, futures, hedging, and insurance), and in certain cases it can promote the establishment of new commodity exchanges. Safety nets will be needed in some instances to cushion some groups from adverse social and economic aspects.
Reducing barriers to market access and ensuring equitable outcomes. The impacts of market development are highly differentiated across rural enterprises, community groups, and individuals. Some stakeholders (the landless or women, for example) stand to lose from the development of more open and competitive markets, and these groups often require targeted efforts to mitigate potential negative impacts and promote equitable access to benefits. Small enterprises are more dependent on public services than larger enterprises, because they lack economies of scale for contracting their own technical and management services.

Public support initiatives, especially technology, information and advising services, and the strengthening of producer organizations, are often required to provide a level playing field that enables small enterprises and small farms to participate in free markets.

Promoting competition. In government-dominated markets, competition was seldom encouraged, whereas in a market economy it is crucial. An important issue for government policy is to promote competition through free market entry, and to curb monopolistic and monopsonistic market power. Since globalization forces can concentrate enormous market power, government capacity to apply legal and regulatory checks and balances is essential to ensure a level playing field for local enterprise. Promotion of regional markets across national borders with harmonized regulations, grades and standards, research and information systems, and business certification, can all expand the scale of production and marketing. This will improve market efficiency and also reduce market entry costs and expand opportunities for local farmers.

Labor markets. Availability of skilled labor and flexibility of labor markets are important considerations in investment decisions for private sector enterprises. Labor market regulations can have major impacts on the cost of labor.

Food safety and standards. International public sanitary and phytosanitary standards pose important problems for exporters from developing countries with their limited institutional and financial resources. These standards involve protection of public health, prevention of the spread of harmful animal diseases and plant pests, and protection of ecosystems. With the rapid increase in proportion of food products marketed through supermarkets (both in industrial and developing countries), it is critical that coordinated supply chains enable producers to meet the specific requirements of modern retailers. They should also certify that the grades and standards they set (as well as government implemented safety standards) have been satisfied.

Gender. In many countries, the management of certain crops and particularly agricultural processing is traditionally viewed as “women's work.” It is important to ensure that women producers are not discriminated against in terms of opportunity to participate in national and international markets through producers associations and contract farming. Similarly, female workers should have acceptable employment conditions, and women entrepreneurs should have equal access to credit, training, and market contracts. Gender-related issues in market and agribusiness development must be fully explored through sound gender assessments, as a basis for planning any new public investments.
ix) **Territorial Development**

Territorial approaches move away from top-down approaches typical of old style Rural Development Projects and emphasize the need to grow economic activities from the bottom-up, drawing on the distinctive strengths, and comparative advantages of a particular territory.

Territory is generally defined as a geographical area characterized by:
- a common cultural framework and historic traditions,
- the presence of social capital i.e. a shared set of values, virtues, and expectations within the rural society as a whole, and
- the presence of comparative advantages which characterize the territorial potential development possibilities.

The territorial approach characterizes a number of European Union programs and has generated interesting initiatives in all regions of the world, each one of these initiatives with its own particular adaptations to local conditions.

Approaches to territorial development have been increasingly adopted by governments in both developing and developed countries.

There is a wide range of models and frameworks that have been developed. Three broad frameworks encapsulate some of the core characteristics of these territorial development approaches
- Community Driven Development (CDD),
- Sustainable Livelihoods (SL), and
- Spatial programmes.

x) **Community Driven Development (CDD)**

CDD is a people-centered approach that gives control over planning decisions and investment resources for development projects to community organizations or representative local governments. This approach has become very popular in the countries of South Asia, South-East Asia, and Latin America and has received a good deal of support from multi-lateral donors, particularly the World Bank.

xi) **Sustainable Livelihoods (SL)**

The SL approach is a space-based approach which emphasizes the main factors that influence household livelihoods. The SL framework puts a strong emphasis on development of five categories of livelihood assets: human, social, physical, natural and financial capital.

xii) **Space-Based-Development**

The space-based-development approach builds on the previous two approaches. It takes the people-centered focus of CDD, it places an explicit emphasis on locally available assets from the sustainable livelihoods perspective, and it develops a bottom-up participatory process
including a multilevel and multi-actor system of governance. This means that space-based-development is driven by local people like the CDD, grounded in local assets like the livelihood approach and it has a multi-level governance that is to say all public and private sector stakeholders in a given area considered as a common space with definite characteristics and political status.

The space-based-development approach plays an important role in reducing poverty and enhancing social inclusion and cohesion in territories lagging because of their geographic, social and economic characteristics and it is part of the EU focus on spatial planning and cohesion policies.

A parallel approach to devolved administration is the creation of dedicated, complementary structures for implementing space-based development programs such as the Local Action Groups established to administer the LEADER program across the EU, or the Regional Development Agencies being set up in new member states.

xiii) Other Project Types

The list of Project Types is not limited to those quoted earlier in this text. There are project types specific to each IFI and external donor agency that may or may not fall within the mentioned categories or projects that are designed to cope with natural or financial emergencies and that are in general sponsored by a multiplicity of external donors under the leadership of one of the major IFIs...These may include:

- Rural Finance Operations
- Technical Assistance Projects
- Pilot Projects...
- Policy Operations, providing quick-disbursing external financing to support structural reforms....
- “Hybrid” loans
- GEF (Global Environmental Facility) projects...
- Carbon Projects....
- ........................

**CARBON PROJECTS**

Carbon Finance refers to the ensemble of investment and market mechanisms aiming at managing Carbon flows on Earth. It has become a new front in the fight against climate change thanks to the Kyoto Protocol. Carbon Finance is now consolidating as a key instrument to respond to climate change as well as to catalysing sustainable development on a global scale. It is a central component in both the ongoing negotiations around climate change (for the Post-2012 period) and a myriad of development initiatives and practices, local and international. This includes the rapid arise of REDD (Reducing Emissions from Deforestation and Forest Degradation), a proposed mechanism to deal with the second

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12 Source: J.A. Gari, regional advisor for Environmental Finance – UNDP and FAO: A review of carbon sequestration projects
largest source of greenhouse gases emissions and a major environmental problem: deforestation. REDD, which tries to create a financial value for the conservation of forests, receives common interest from development stakeholders as diverse as governments of both poor and rich countries, international NGOs, indigenous peoples' federations, the U.N., the World Bank and scientific institutions.

A Land Use, Land Use Change and Forestry (LULUCF) project can be defined as a planned set of activities within a specific geographic location that is implemented by specific sub-national or, occasionally, national institutions. There are three broad categories of LULUCF projects, each with a variety of subtypes, which were based on the IPCC (2000) report:

- **Emissions reduction through conservation of existing carbon stocks**: for example, avoidance of deforestation or improved forest management including alternative harvest practices such as reduced-impact logging or fire and pest protection.

- **Carbon sequestration by the increase of carbon stocks**: for example, afforestation, reforestation, enhanced natural regeneration, revegetation of degraded lands, reduced soil tillage and other agricultural practices which increase soil carbon, or extend the lifetimes of wood products.

- **Agroforestry, multi-component or community forestry projects** that combine several of the activities listed above.

IPCC (2000) establishes categories or types of projects based on their orientation and the type of funding:

- **Type 1.** Project funding is provided by investors who are committed to offsetting their C emissions, irrespective of the status of the international climate change negotiations. Funds are provided to a central office, which seeks out, designs, and implements projects meeting investor criteria.

- **Type 2.** Entities (e.g., electric utilities) that consider themselves likely to face emissions reduction mandates in the future are implementing their own projects.

- **Type 3.** Project formulators identify and design projects on the basis of expected benefits, then seek funding from donor sources. These projects are developed primarily to mobilize resources for non-climate services (e.g., biodiversity protection by a land management NGO) and to gain experience in project implementation. **Type 4.** Projects developed for scientific research to gain expertise on CS measurements (e.g., in unexplored geographic areas or agro-ecosystems).

### B) MORE FREQUENT TYPES OF PROGRAMMES

#### i) Sector Wide Approaches (SWAs)

SWAs typically involve:

- the coordination of external and government financing under a single policy or programme umbrella,
- establishment of common procedures for managing expenditures,
- the use of Government systems as the basis for planning and monitoring progress, and
• conditionalities attached to disbursement

A sector wide approach is often a process that involves gradual movement towards greater sector coverage and increasing participation and dialogue by government and donors. There is, however, no blueprint for a SWA. It should be understood as an approach that varies according to country and sector context.

ii) Structural Adjustment Programs (SAPs)

Structural Adjustment Programmes (SAPs) are designed essentially to:

• redress serious macro-economic imbalances,
• rationalize the price system,
• fight inflation, curb excess demand for foreign exchange, and bring the budget deficit under control.

Other objectives may be introduced to include radical changes in economic policies, aimed at dismantling the role of the State in the production of goods and services, and in the control of the market mechanisms.

SAPs have been generally successful in bringing about significant reductions in the overall budget deficit, along with the implementation of important policy changes.

iii) Public Expenditure Programs (PEPs)

Public Expenditure (Sector Investment) Programmes (PEPs,) link policy change with improvements in the structure of Government spending in specific sectors of the economy, and increasingly over time, have supported institutional reform in addition to capacity building.

The focus of SAPs and PEPs is essentially on the macro-economic linkages of policy change and production responses.

iv) Sector Investment Programs (SIPs)

Sector Investment Programmes (SIPs) are broad operations, involving the private sector and the institutions of the society as well as Governments. They are generally orientated to specific sectors: see the Agricultural Sector Investment Programs (ASIPs). The objectives of a public expenditure programme such as a SIP can be summarized as follows:

• ensuring financial discipline;
• ensuring the consistency of the budgetary allocations to all individual Government activities with the goals Government wishes to achieve and with the sector strategies and policies adopted to achieve those goals; and
• enhancing technical efficiency in the use of public funds.
**Differences between projects and programme based approach (PBAs)**

a. projects deal with incremental costs; programme based approaches deal with the total public expenditure;
b. projects are costed in line with the concept of components, PBA must be costed in accordance with the framework of the Government budget;
c. project components put together selected activities to be performed by different units in a Government structure, and require "coordinating committees" for their implementation. PBA do not have that requirement: coordination is achieved at the time of the annual Work Plan and Budget preparation; implementation supervision is ensured by the regular management structure of the administration;
d. projects require separate accounting and separate reporting procedures, the latter to aggregate expenditure undertaken by different units. PBA do not have that requirement since they are costed by the Government expenditure centre;
e. projects are conventionally designed with a view to foreseeing all details of multi-annual flows of activities, targets, finance, and procurement, PBA would define specific activity targets and related financial requirements every year at the time of the annual budget formulation and approval.
f. in agriculture and rural development, projects often tend to be multi-sectoral, involving not only different units of a single branch of the administration, but also different branches of the administration, which in turn requires setting up "inter-ministerial coordinating committees". PBA deal by their nature with a single sector, and hopefully with only one Ministry.

**Important aspects for the outcome of all types of projects**

- the general economic policy environment and the incentive framework for the private sector to participate;
- suitability of legal, fiscal and financial aspects for establishing business;
- political support and commitment to the project by government agencies;
- sufficient financial incentives and motivation of beneficiaries to participate;
- participation of all (public/private sector) stakeholders in project preparation design and content;
- institutional arrangements;
- economic and financial justification;
- availability of counterpart financing and appropriate financial procedures; and
- environmental soundness and sustainability.
I Preliminary considerations

The end product of identification, once all necessary follow-up decisions have been made, is a project concept which is agreed by all concerned as the likely best choice on which to base a final design.

The purpose of the preparation stage is to advance from an agreed concept to detailed project design, and then to analyse and present this in the form of a feasibility study.

More data will usually be needed to refine, confirm and justify the concept already identified and to explain, quantify, analyse and present the chosen design in the final documents. This makes project preparation heavy in its demands for skilled manpower. The costs, especially if engineering design work is involved, may be considerable.

Project preparation is an iterative process and does not consist simply of starting at the beginning of a detailed checklist for the contents of a preparation report.

Furthermore there is the need, in practice, for constant interactions with different individuals and institutions both within and outside government, including any specially-constituted preparation groups, steering committees, or interest groups such as those concerned with environmental issues.

These include not only government staff but also the intended beneficiaries, who are eventually to assume much of the responsibility for project implementation and subsequent maintenance, as well as the production risks.

Before entering into the preparation stage project objectives, targets and design criteria will have to be agreed by all stakeholders. This will imply agreement by all concerned stakeholders on:

a. Project targets
Using the technical and socioeconomic investigations that have been referred to at the project identification level, the project team will decide on:

- The size of the target group involved in production activities,
- The technological innovations, and
- Phasing of the technological changes taking into account the likely resistance to changes.
b. Definition of project objectives
Once the target groups and overall project aims are agreed, the definition of project detailed objectives will consist of the indication of direct effects (for example, increased production objectives) and impacts (ex. better quality products) and of indications of the approximate type and magnitude of project’s primary outputs (main crops or livestock, roads, other infrastructure...)

c. Demarcation of the project areas
The final delimitation of project activities in a given area will involve political choices and also economic, social and technical factors such as:
- Land capability
- Agroecological potential
- Comparative advantages
- Communications
- Socioeconomic framework, presence of social capital and incentives to producers
- Markets
- Distribution of the farming population
- Land tenure and farm sizes
- Upstream and downstream stakeholders and services (smallholders, cooperatives, government estates, research stations, extension centres, input supply..)

Superimposing maps with the above information will provide planners with an appropriate tool for decision making in conjunction with the overall broad objectives of the project and the target group.

d. Agreements on Interinstitutional Coordination
Especially for multicomponents-multisectoral projects, institutional coordination is extremely important to ensure that all stakeholders do participate to project implementation as planned.

e. Preparation of participatory work plan
To propose a project for a given target group implies that they will welcome and respond to the development opportunities that the project offers. To do so without a clear appreciation of how the intended clients view the world, their problems and possible means of overcoming them, makes it impossible to know with an acceptable degree of certainty whether or not the opportunities offered by the project will in fact be taken up.

What is needed is a well designed consultative process through which beneficiaries can participate in preparation and work out their own proposals on development strategies and components.

At one extreme, people's participation may refer exclusively to cost recovery: mobilization of free labour and materials for community projects; cost sharing by villagers; establishment of mechanisms for collecting water charges; ensuring that water users' fees cover the full cost of operation, maintenance and repair of irrigation equipment; or introducing payment for veterinary treatment and cattle dipping services.

At the opposite extreme, people's participation may refer to an open-ended process, in which beneficiaries are encouraged to diagnose their own problems and to identify and implement their own solutions.
f. Setting up of the Preparation Team and TORs
It is perhaps the most sensitive part of initial project preparation. Selecting a good team is very demanding. Team member for project preparation need to have the desired technical skills, the capacity to draft concisely and clearly, the capacity to act as a team and interchange ideas, the capacity to listen to people needs and not have preconceived ideas, the capacity of accepting criticism and correct their own opinions as needed by the team leader.

g. Setting of design criteria for detailed project planning.
For detailed project planning (for example for deciding which crops or livestock it would be good to develop in a certain area or region) a final decision would have to be made of the following (taking into account that overall project size and cost and overall strategy should already have been agreed at identification):

- **Financial criteria**
  - How to finance on farm investments: issues of incentives or subsidies,
  - Cost recovery per beneficiary i.e. which costs of the project will be recovered from end users,
  - Cost per beneficiary,
  - ............

- **Economic criteria**
  - Maximize incremental output for domestic consumption,
  - Maximize impacts on foreign exchange earnings and trade balance either with import substitution or export development of specific crops,
  - Maximize employment, income distribution,
  - ............

- **Social criteria**
  - Improve the access of the target group to productive resources or public facilities and services,
  - ............

- **Environmental criteria**
  - Highlight environment management and conservation,
  - Improve land management and soil conservation,
  - ............

- **Complexity of tasks in relation to skills**
  - Expansion/replicability potential,
  - ............
The report which emerges at the end of preparation must inform senior government decision-makers about the national commitments and resources which the project would demand. It must also anticipate, and provide answers to the many and detailed questions which will be directed at the government by the appraisal mission which subsequently evaluates the project on behalf of the potential financing agency.

This may partially explain why project preparation reports often give most attention to the government's role, government institutions, and the implications of the project for the government budget. Technical questions and the implications of participation in the project for farmers and other private decision-makers are dealt with at length in annexes.

II The Role of Feasibility studies

During preparation it will be necessary to conduct a number of detailed studies to assess and design some of the technical social and institutional components of the project. Feasibility studies are needed for infrastructure projects, in case of complex institutional restructuring, for carrying out detailed soil surveys, marketing possibilities for specific crops..........

Feasibility studies must provide:

- Sufficiently accurate estimate of costs and layouts so as to proceed to detailed design for example for irrigation projects;
- Definition of project components, organization and management arrangements and procedures sufficiently detailed to permit the executing agencies the elaboration of an operational manual and implementation plan;
- Detailed assessment of economic and financial benefits; and
- Assessment of sustainability after the end of the disbursement period

Sustainability

The issue of sustainability is closely linked to that of people's participation. Two conceptually distinct sets of problems have cropped up in connection with agricultural investment projects: the first problem is to sustain the benefits of project actions and the second is to sustain the Government services established in support of those actions.

Government initiatives which have been undertaken without the involvement of local communities have been difficult to sustain. Failure to consult rural communities about their own objectives and priorities has led Governments to waste resources on promotion of inappropriate technologies which were not taken up by farmers and on infrastructure and conservation works which were not maintained.

Evidence shows that sustainable resource management is facilitated by community participation and incorporation of indigenous ecological knowledge. Likewise, the benefits of infrastructure and community development works are easier to sustain beyond the end of the project when the end-users are involved in planning project activities and components from the outset, and see them as their own.
III Highlights of the Main Objectives of Preparation Reports

Preparation reports must provide an assessment of:

a. Technical and Social Strategy. Evaluation of technical opportunities and constraints, and the needs and aspirations of the people concerned. On this basis, definition of the technical changes which are relevant to and attainable by, the intended beneficiaries.

Once realistic account has been taken of such limitations, assessment of the key physical parameters (climatic and fertility assumptions, crop input levels and yields, growth rates, conversion ratios, water requirements, livestock production parameters etc.) related to the productive elements in both the with and without project situations.

Particular attention to be given to those technical parameters which determine producer returns and risks, and to examining the environmental implications of applying the strategy.

b. Constraints to Strategy Implementation. It is necessary to categorize the main constraints which would need to be overcome by the project for the target beneficiaries to profit from the proposed technical strategy. These constraints could be internal to the farming systems (e.g. shortage of investment funds, lack of market access) or external (e.g. government price policy, weaknesses in support services....).

c. The justification to go ahead with the proposed strategy which should include:

- Attractiveness to Participants. It will be necessary to show that the proposals of the technical and social strategy are likely to be adopted by farmers and any other participants. This will be done by using representative models.

  Analysis should focus on those aspects most likely to affect rural household behaviour. For some households, the prospects of increased food security may be of over-riding importance, while for others, higher cash incomes, a good return on investment or a better income for their labour may be key criteria. The analysis should also consider factors such as perceived risk, or alternative income-enhancing employment options, and show that these are unlikely to prevent the adoption of the changes proposed.

- Government's Role and Strategy. On the basis of the above, reach a credible consensus on the nature and scale of the actions which the government should take in order to overcome these constraints. Such actions may involve changes in policy, legislation, adjustments in institutions or simply commitments of additional resources.

- Government Resource Needs for Implementation. Agree on the government resources which would need to be committed for the project purposes (money, people, fixed and mobile physical assets

- Detailed Institutional Arrangements for project Organization and Management
• Economic Justification and Sustainability

Before recommending the commitment of additional resources, make sure that existing resources are efficiently utilized, for instance through transfers of functions between people and institutions. Hence derive incremental resource needs.

IV Design of Individual Project Components

The following are examples of typical components:

- Infrastructural investments (irrigation, land improvements, roads, markets and marketing infrastructure, buildings...),
- Productive activities based on improved farming systems (crop diversification, intensification, improved livestock breeds...)
- Production support and services (research, extension, input supply...)
- Social support: infrastructure (schools, potable water, health services)
- Organization and management, Institution strengthening
- Capacity building
- Technical assistance
- Environmental impact mitigation
- Monitoring and Evaluation
- ..............................................................

Component design must provide sufficient information about each proposed project activity to serve as a comprehensive document for project management to execute.

Infrastructure

Roads, communication systems, irrigation systems...all these should be supported by adequate feasibility studies...

Agricultural Production

The design of agricultural production components will have to be based on an assessment of present and future farming systems after the introduction “with project” of improved production technologies. Proposing changes in the farming systems implies:

- An understanding of farmers priorities,
- An appreciation of the existing farming systems as seen by the farmers themselves,
- The identification of the main causes of variations in the farming systems due to exogenous factors like change in rainfall pattern,
- The recognition that farmers will tend to make changes in their farming systems via small successive steps instead of radical departures from what they are doing,
- Selecting the appropriate technological packages from agricultural research results and field observations
- ..............................................................
(To be reminded: the importance of the diagnostic phase… and of an accurate understanding of the physical and technological and socioeconomic conditions of the project area…)

**Capacity Building**

Capacity building is an essential component in almost all development projects: It may include farmers, groups, institutions...

**Technical Capacity and Training** – a relatively unskilled rural population reduces opportunity for ready access and adaptation to new technologies and employment. The lack of capacity affects not only the productivity and competitiveness in the changing marketplace but also the ability to find trained staff for service provision.

**Institutional Capacity** – while there is an abundance of organizations in rural areas, their overall capacity and scope of services are lacking. This includes management and technical capacity, size/economies of scale, competitive viability, economic integration and often risk-bearing capacity. Even when urban based institutions have the capacity to reach into rural areas, there is little incentive to do so. An exception to the capacity constraint is at the micro level where the social fabric is strong and is sufficient for the level of operations undertaken and may also form linkages with intermediaries of higher institutional capacity.

**Project Organization**  (see Annex to Module 5)

Efficient project implementation requires good organization and management.

The project preparation team will have to define the organizational arrangements, management responsibilities and staffing for project implementation, taking account the nature and scale of the components, the proposed phasing and the scope of the management tasks, recognizing any opportunities for redeployment from redundant functions.

This will include the planning, budgeting, administrative, monitoring and reporting arrangements, and arrangements for the evaluation of project impact and for quality control.

In preparing organization and management proposals attention will be given to the following design aspects:

- Institutional responsibilities
- Coordination arrangements
- Executing Agency Staff and Services
- Financing Plan and Flow of Funds
- Disbursement Procedures
- Supervision of Implementation
- Monitoring and Evaluation
Organization is concerned with:

- the allocation of specific responsibilities for specific tasks among the various participating agents,
- the establishment of hierarchical structures for decision making,
- the setting up of arrangements for the collection and exchange of information on project implementation activities among the various agents concerned.......

Management is concerned with planning implementation and control of project activities by each concerned body:

It also includes:

- interagency coordination arrangements,
- organization of project beneficiaries,
- the indications on the flow of project funds and the responsibilities for financial control and disbursement of funds,
- the place and role for training and technical assistance,
- the arrangements to be set in place for monitoring and evaluation. (we will discuss these item in the next slide...)

Monitoring and Evaluation

Monitoring and Evaluation serve distinct and complementary functions:

Monitoring assesses whether project inputs are being delivered, are being used as intended; it is an internal project activity and an essential part of good management practice. The main source of monitoring is properly organised project records and a good baseline survey.

Evaluation is about using monitoring and other information to make judgement about a project; it aims to determine whether the project objectives are being met, or will be met. Evaluation in this context is an ongoing activity, as distinct from ex post evaluation.

Ex post evaluation looks more broadly at the impact of the completed project in relation to original expectations. Project indicators help to determine the extent to which the project is achieving the expected results; they must be measurable and project and/or component-specific.

V Project Cost Estimates and Financing

Project costs are defined as any resource flow or input which is used up by project activities and which would not have been used in these activities if the project did not exist.

There are three steps;

- completing estimation of individual components cost,
- consolidation of components cost and organization and management costs into overall project costs, and
• preparation of a financing plan to explain how it is proposed to meet these costs

Financial and non financial costs:
• Financial costs: those that have to be procured with cash,
• Non financial costs: those that do not involve cash expenditures i.e. farmers' labour.

Incremental and total costs
• Incremental costs are those costs associated with new investment in a given activity.
• Total costs are equal to the aggregate of the individual incremental costs of all project components.

The main categories of project costs have to refer to those additional cash expenditures on goods and services which will be required during the life of the project:
• those incurred during the investment or developmental phase of the project called capital costs (civil works, land development, on farm investments, technical assistance, technical studies),
• those incurred during the operational phase when investments have been made usually referred to as recurrent costs (seeds, fertilizers, insecticides, fuel and lubricants, hired labour, building repair and maintenance, machinery repairs, public utilities, rent, taxes insurance...)

Phasing.
Project implementation occurs in general over a number of years. Project actions have to be phased accordingly. The phasing of project actions should take into account the scale of the tasks involved, their degree of complexity or susceptibility to external factors outside direct project control, sequencing prerequisites, and the time required to complete essential work on each task. Recognise that highly innovative approaches to development will take time to be accepted, proven and then disseminated. Give special attention to the time needed for selection and appointment of key staff and for procurement. If necessary adjust components and staffing to ensure a fit with the proposed schedule.

Financing plan
Preparing a financing plan should include a review of:
• The financing of infrastructural works and other public works, and
• How on farm development would be financed including:
  - on farm investments
  - on farm recurrent costs

And an identification of the sources of finance. These can come from:
• government budget allocations,
• government loans to agencies,
• international loans,
• banks credits and loans,
• equity investments,
• ............

VI   Financial and Economic Justification (see also Module 6)

It is one of the most important aspects of any investment project. It includes the justification of investments at farm level and at economic level.

A. Financial analysis

Assessment of the profitability for the main categories of stakeholders concerned. It includes Cash Flow Analysis and Financial Rate of Return Analysis showing the cash inflows and outflows of the entity concerned (farm household, cooperative, company, bank, government department) at the level of two scenarios – before and after financing. The financial analysis helps the formulation team to:

- assess the impact of the project on the “income” position of the participants in the project;
- assess the degree of financial self-reliance among the project participants and the risk to severe indebtedness due to crop failure or else;
- determine clearly the origin and destination of the monetary inflows and outflows of the various operating entities; and
- estimate the individual financing requirements of the main categories of participants.

The financial analysis is carried out on the basis of models representative of the majority of the stakeholders participating in the project.

B. Economic Analysis

Assessment of the impact of the project on the economy and of its contribution to the growth of national income. Economic analysis is carried out by using opportunity costs and making three kinds of adjustments to the financial accounts used for the financial analysis.

The calculation of the Economic Rate of Return assumes inter alia:

- elimination of transfer payments – payments that do not imply the use of additional resources (credit transactions, interest payments, repayment of loans), and taxes and subsidies.
- corrections for the overvaluation of the currency by using a shadow exchange rate or using a standard conversion factor (SCF) for non traded items (traded items are valued at their import or export parity price).
- revaluation of costs components to reflect their opportunity cost. The most common case is the cost of unskilled labour. In many countries there may be an abundance or excess of unskilled labour which if transferred to the project would not reduce national income. For this reason the opportunity cost of such labour approximates zero.
Specifically adapted software and modelling tools are available for the financial and economic analysis calculations.

The internal rate of return (financial or economic) is the discount rate that generates a zero in the balance of investment costs and the flow of net incremental benefits from project implementation.

VII Final Steps in Project Preparation

The final steps in project preparation involve definition of issues or activities to be carried out before appraisal or implementation and which cannot be solved by the preparation team and may include:

- Policy issues,
- Decisions on Organization and Management,
- Financing,
- Environmental assessment impacts,
- ....................

Most critical issues should have been resolved during the course of project preparation. Any residual issues, upon the resolution of which successful project implementation would depend, should be listed. Recommend solutions and suggest how, by whom, and by when a resolution could be expected.

VIII Appraisal

It involves close analysis of the prepared project to ensure that it meets relevant planning and investment criteria and that adequate arrangements for its implementation have been made.

Project appraisal is the prerogative of the financing institution and involves the critical review of the feasibility study and the formulation of funding recommendations, including conditionalities where applicable. These recommendations are then submitted for the approval of the financing institution's board of directors.

IX Implementation

Implementation is essentially a country responsibility but one which the lending institutions supervise at regular intervals during the project's disbursement period. Although the formal implementation phase only starts after loan negotiations and approval by the financing institution, certain activities, such as the completion of final designs for major civil works and preparation of tender documents, implementation plans and manuals, may be initiated immediately after project appraisal.
X  **Supervision**

Supervision concerns the physical putting into effect of the project plan. During implementation resources committed to the project (financial, physical, human resources) are transferred to the executing bodies for actual investment into the project. Project implementation is a country responsibility. When a project is financed by a foreign lending institution, this institution regularly supervises project implementation during the disbursement period. During implementation, supervision missions may agree with government on significant modifications to projects, for example the reallocation of funds between components or to adjustments in targets and phasing.

XI  **Mid Term Evaluation**

The need for such changes may emerge from the findings of monitoring or management information systems or may be identified during the course of Mid Term Evaluations, foreseen in the original design of the project.

XII  **Implementation Completion Report (ICR)**

Most financing institutions require that a post-evaluation be carried out for each project at the end of the disbursement period. The resultant Implementation Completion Report (ICR) takes stock of achievements, reassess the likely impact of the project and seeks to draw lessons from its performance. Some projects are revisited several years later - when they should have reached full development - in order to make a more definitive impact evaluation.
ANNEX to MODULE 5

GUIDELINES FOR PREPARING INVESTMENTS PROJECTS

Excerpts from the Investment Centre Guidelines

As indicated by the name itself the “Guidelines” are just a compendium of the main topics to be analysed in a preparation report including some suggestions on the order of presentation. It is obvious that the table of contents and the way it is presented may vary and that not all the information outlined below will be necessary for all projects. It will be up to the judgement of the preparation team to decide which topics are important and the order of their presentation - depending on the particular type of project and its main features.

The aim of the “guidelines” prepared by the Investment Center is to help in the design of agricultural and rural development projects. The projects referred to are principally those supported and sponsored by Governments but in which farmers, herders, fishermen or foresters participate and carry out the productive activities. The guidelines address the need for these projects to be:

- conceptually coherent;
- relevant to national needs and capabilities;
- reinforcing country commitments to adjustments in economic and institutional policies;
- technically sound;
- viable in economic and financial terms;
- attractive to the participants;
- socially acceptable; and
- environmentally and fiscally sustainable

It is obvious that the list of chapters and the description of their content should be used just as an indication of how to organize a project preparation report. It will be up to the team preparing the project to decide in final analysis how important will be the different sections and the weight to be given to each one of them in relation to project content and objectives.

While there are many ways of organizing the drafting of a project preparation report, Investment Centre experience suggests that it is best done by a fulltime team, led by a person with a broad understanding of the project and with ready access to the senior staff of the government agencies who will be involved in approving and implementing it.

Unless a project contains a very large number of different components requiring the inputs of specialists, experience suggests that the main team drafting a preparation report should not exceed 4 to 6 persons, and that all of these should work exclusively on the project until documentation is complete. It is of utmost importance that they should function as a team, rather than in isolation, so as to ensure the necessary cohesion in project presentation. If it is necessary to involve more people in the preparation process, this can be done by means of meetings, surveys, steering committees, etc.

The team needs to maintain regular contact with agencies associated with the project and with potential beneficiaries, and has to come to understand very well the overall situation in the project area. This is why it is very important to organize field visits for arriving at sound judgements.

**How to organize a Project Preparation team**

- Drafting Terms of Reference
- Selecting the Team Leader
- Determining the number of specialists
- Estimating the budget
- Preparing the work programme and timetable
- Clearances and Steering Committee
- Interagency Coordination

**Outline of a preparation report**

**Introduction**

**I. Background**

- Key features of the political and economic situation,
- The agricultural sector,
- Income distribution and poverty
- Development policies and social objectives
- Institutions and services

**II. The project area, its people and development potential**

- Natural Resources
- Location
- Climate
- Geology, Soils, Topography and Land Use Potential
- Water Resources
- The Economy and the People
- The Local Economy
- The People (Target group, Gender considerations)

*Agriculture and the Sustainability of Natural Resource Use*
Land Use and Farming Systems
Sustainability of Natural Resource Use
Technologies

Rural Institutions and Infrastructure
Input Supply, Produce Marketing and Processing
Administration, Services and Farmers' Organizations
Projects and Ongoing Development Programmes

III. Project Rationale and Design Considerations

Project Rationale
Design Considerations
choice of technical strategy and technology
the selection of organizational arrangements for the project

IV. The project

A. General Description
B. Detailed Features
Credit
Project Disbursement Period and Phasing
Cost Estimates
Investment costs
Operating Costs
Financing
Procurement
Accounts and Audit

C. Organization and management

General Aspects
Technical Cooperation and Training.
Specific Aspects

D. Agricultural development, production and financial results

Nature of Technical Changes
Impact on Individual Producers
Adoption Assumptions and Perceptions of Risk
Tests for Sensitivity
Overall increase in cash costs. It is not uncommon for farmers to substantially
Impact at Project Level

E. Market prospects and prices

Markets and Marketing
Financial Prices
Economic Prices

F. Benefits, risks and sustainability

Overview
Financial Benefits
Economic benefits
Risk and Sensitivity Analysis
Balance of Payments
Impact on Income Distribution and Poverty Alleviation
Fiscal Implications
Environmental Impact and Technical Sustainability

V. Issues and follow-up actions

Brief Review of Main Subject Matters to be dealt with in the various chapters

Chapter I Background

The main aim of this section is to provide a brief synopsis of the essential elements of the project.

This chapter usually discusses such topics as the following.

a) Key features of the political and economic situation.
b) The agricultural sector. A description of the main characteristics of the agricultural sector (including brief references to main forms of land use, farm size and land tenure, dominant farming systems, production, input availability and utilization, and constraints to overall development) and relevant sub-sectors (e.g. forestry, fisheries, horticulture, animal production), as well as present and future estimates of supply and demand for specific commodities and the country's comparative advantage for their production.
c) Income distribution and poverty. A discussion of income distribution and poverty levels, related indicators (e.g. access to land or services, nutrition, health etc.), and the factors contributing to differentiation; this section should justify the reason for selecting a particular region or line of action for priority attention under the project.
d) Development policies and social objectives. A description of the main elements of the national agricultural development policy and strategies such as those relating to price and interest rate subsidies, social equity, targets for rural income, nutritional goals, respective roles of public and private sectors, land tenure, environmental management etc.
e) Institutions and services. A description of the key institutions and services concerned with development and financing in the sub-sectors covered by the project. Institutions might include the Ministry of Agriculture, the Agricultural Development Bank, the Livestock Development Authority and the like, as well as non-governmental organizations and farmer-managed institutions such as cooperatives or informal savings groups.
f) Ongoing and proposed projects  A summary overview of ongoing projects being implemented in the sub-sector and relevant to the project.

**Chapter II  Project Area**

This chapter is to give the reader a picture of the project area, particularly the socio-economic situation, and of the opportunities for improvement. While the chapter needs to begin with brief descriptive material, the main aim should be to draw out the implications of the current situation for the design of the project.

It should explain the reasons why there are for example uncultivated or underused lands (which might be due to poor accessibility, low population density, prevalence of human or livestock diseases, or perhaps the system of land tenure) and thereby point towards possible solutions.

❖ **Natural Resources**

The physical features of the project area, always in the case of an area based project...making particular reference to those features that are of interest to project components.

For example this chapter will describe:

- **Location**
- **Climate**
  - Geology, Soils, Topography and Land Use Potential
  - Water Resources

❖ **The Economy and the People**

In this section we should pay particular attention to

- **The Local Economy**

A brief overview of the economy of the project area, focusing on the importance of agriculture relative to other sectors should be provided. The emphasis should be on those aspects which would influence the design of the project - for instance urban population and income growth expectations and their impact on demand for foodstuffs; on the demand for labour and the extent to which this affects labour availability and wage rates in rural areas; or the emergence of competing demands for water from urban and industrial uses which could influence the availability for irrigation development.

- **The People**
With a good description of the socio-economic situation giving special attention to those aspects which could affect the rate at which the target population for the project might adopt changes.

The report should provide information on the number of people in the project area, the forms of settlement, their ethnic origin and their occupations.

If the objective of the project is to improve the welfare of the poorest people in the area, then special emphasis must be given to analysing income and wealth distribution and to explaining the causes of differentiation.

It is also important to examine the relative importance of off-farm earnings in the total household income, and to assess access to off-farm employment opportunities.

This is also the place to examine such issues as the respective roles of men and women in the household and in agriculture, and to highlight any areas in which women, in particular, are put at a disadvantage (e.g. in access to land, extension services, credit etc.).

**Agriculture and the Sustainability of Natural Resource Use**

This section would examine in some detail:

**Land Use and Farming Systems including:**

- the major uses of land in the project area,
- the area and output of main products,
- farm size, agricultural practices, crop rotations,
- availability of farm labour, level of technology and yields,
- land tenure,
- farm size and land use,
- cropping patterns, practices, varieties and yields,
- livestock production,
- production technologies,
- farm inputs, sources, availability,
- financing (including credit),
- domestic consumption, markets and marketing, prices at farm gate,
- on-farm and off-farm income
- perceptions of constraints, opportunities and priorities.

**Sustainability of Natural Resource Use**

This section should focus on

- environmental issues, especially on the sustainability of natural resource,
- the causes of any degradation processes.

**Technologies**

- assessment of improved technologies which might be considered suitable,
how each of the promising technologies could fit into the farming systems.

- **Rural Institutions and Infrastructure**

  This section to include description of the public sector organizations active in the project area

  **Input Supply, Produce Marketing and Processing**

  **Infrastructure**

  Roads, railways, telecommunications and other means of communication and services should be reviewed, particularly from the viewpoint of their relevance to the supply of farm inputs and the marketing of output. Particular attention may be given to the adequacy of arrangements and funding for infrastructure maintenance.

- **Administration, Services and Farmers' Organizations**

  This section should briefly describe and evaluate the local activities of extension, research and credit services, the system of local government administration, and special institutions (such as nongovernmental organizations) operating in the project area, to the extent that this is relevant to the project. Special attention should be given to evaluating farmers' organizations, present initiatives towards peoples' participation, informal savings groups and cooperatives, and to assessing the extent to which these benefit the target population;

**Chapter III  Project Rationale and Design Considerations**

It is the part of the preparation report that is most likely to repeat arguments developed first at identification, but these should be modified and deepened to reflect the findings of further thinking and studies.

Its purpose is to complete the explanation of why an investment project is needed, define its overall objectives, and indicate what kind and scale of project would be best suited to the existing circumstances.

**Chapter IV The Project**

This chapter and its supporting annexes should define and describe in detail the project works and activities, their phasing, their costs and how they would be financed and procured.

*Only incremental funding needs should usually be proposed for financing.*

In describing a project, either in summary form it is convenient to distinguish between project objectives and their related components on the one hand, and expenditure categories on the other.
In the Project chapter there may be a number of sections including:

**Detailed Features**

The aim of this section is to describe the project in more detail so that the reader acquires a fuller understanding of each of its components and the inter-relationships between them. The nature and scope of project actions must be described in sufficient detail for the general reader to appreciate their relevance and technical soundness. Lengthy descriptions, specifications, designs and cost estimates should be placed in supporting annexes or working papers.

**Objectives, Components Costs and Expenditure Categories**

Objectives. A project normally has a specific objective which can be expressed in relatively simple. For example increasing the production of sunflower and wheat and the income of so many smallholders.

Components and expenditure categories. Some more details on definition of these items will follow with the practical case studies.

The means by which the project objectives would be achieved are called the **components of the project**.

Components, for instance, could include:

- establishment of plantations;
- rehabilitation of irrigation;
- strengthening the management and operations of the oil mill
- land clearing of forest land;
- construction of housing and provision of community facilities
- construction of roads;
- provision of technical advisory services to farmers

**Besides the above the Project Costs should include project components, such as:**

- Project management
- Training,
- Engineering costs and architects' fees that would be incurred during the disbursement period.

- Studies and trials: particularly those concerned with project evaluation and aimed at providing a stronger technical basis for later projects.

- Working capital: to cover the projected incremental working capital required to bring a project-funded enterprise to the point at which it reaches steady-state operation.

And exclude:

- Sunk costs: costs which have been incurred prior to the commencement of a project

- Taxes and duties: duties and other taxes on imported goods are usually excluded from project cost estimates, especially if the government has agreed to waive these. Should they be included, rates and amounts should be indicated so that appropriate adjustments can be made in the economic evaluation.

- Land: the value of land (e.g., farm land) required for the project is normally excluded from project costs except in cases where important amounts have to be purchased by government for project implementation purposes (e.g., for construction of main canals in an irrigation system or for siting of a wholesale market).

The section on Project Costs should include a thorough and short assessment of which costs are included and their:

- Description
- Scheduling
- Local and Foreign Exchange Component
- Financing

**Organization and Management**

This is one of the key sections of the report as the establishment of efficient arrangements for management is likely to be the key to project success.

The O+M chapter should concentrate only on the particular institutional arrangements which would be adopted in the future, for project implementation. It should particularly emphasise any differences from past arrangements which would be introduced.

**General Aspects**

The entity or entities which will be responsible for the various aspects of project execution and operation should be identified. How they would carry out their responsibilities should be explained. The aim should be to show that:

- they are the most appropriate bodies to assume the particular assignments,
- that they have the powers, structure, staffing, equipment, finance and motivation to undertake their respective functions;
- that they are capable of carrying them out effectively;
• that there are satisfactory arrangements for coordination between (or within) entities responsible for each of the various project activities.

Should any new institution have to be created for the management of the project, it is necessary to give, details:

• of its legal status, functions and powers, internal organization, operating procedures, staffing and budget.
• If the entity is not a government department, particulars should be given of its legal charter (basic law) and direction (Board of Directors; how appointed; extent to which subject to political directives, etc.)

A distinction should be made between **policy, advisory or coordinating bodies**, and those with executive powers.

It is intended that the project should be implemented in such a way that beneficiaries would participate fully in the identification and selection of activities

Participation of beneficiaries could be obtained through the establishment of locally-organized Community Development Groups (CDGs) which would be responsible for the identification and execution of most sub-projects. These groups would also ensure the continuation of development activities beyond the life of the project.

Having thus described and justified the overall institutional framework, it is usually then convenient to proceed to a description of the procedures which would be followed by the project organization in carrying out its main functions This is likely to cover:

• the generation (usually starting at field level and involving beneficiaries) of **physical plans and targets**, their consolidation and approval;

• the preparation, consolidation and approval of **budgets** on the basis of these plans and how these fit in with national budget processes;

• procedures and responsibilities for release, transmittal and expenditure of project funds - **procedures for tendering**, design, award of contracts and **supervision** of the construction of civil works and for procurement of goods and equipment;

• arrangements for **monitoring** by project management of the physical and financial progress of implementation and for responding to management information, as well as for the monitoring, **control and auditing of expenditures**;

• the format, frequency of generation, consolidation, onward transmittal and ultimate approval of **project reports and accounts**;

• arrangements for periodic external assessments of project performance - for example, **mid-term evaluations**, evaluation of the socio-economic impact on the intended beneficiaries, or external review of the quality and relevance of research programmes.
A most important aspect in the preparation of a project's organizational arrangements is defining the responsibility for maintenance of project funded works and equipment, the means by which maintenance will be assured, and how the costs will be covered.

Technical Cooperation and Training

The implementation of a project, especially if it is intended to introduce innovations, often creates demands for skills which are either in short supply in the concerned country as a whole or inaccessible to the involved institutions. It is common, therefore, for investment projects either to fund the temporary hiring of outsiders who have the skills needed to fill these gaps.

### INSTITUTIONAL ANALYSIS

Matching project actions with institutional capacities is a crucial element in project preparation.

Institutional analysis may be carried out at different depths but must usually cover the following themes.

**Purpose:** what are the goals and objectives of the institution? Are they still valid or is there a need for redefinition (e.g. through new legislation) or reorientation, taking account of the requirements of the project? Is there undue overlap with other institutions?

**Capacity:** what are the resources of the concerned institution, in terms of staff, physical facilities and budget? Are there areas of weakness, imbalances and inconsistencies?

The state of the institution's infrastructure might indicate the importance given to it by government. Are buildings in good repair? Are vehicles available? What proportion is on the road or in the workshop? It is important to determine the sources of funding, looking in particular at the balance between capital and operating budgets, the proportion of the total that is made up of salaries and wages, and whether there are marked seasonal or other variations in the flow of funds.

**Organizational structure:** organization charts can be useful in indicating the degree of complexity of the organizational structures and might also give a clue to problems of management, especially span of control and the critical responsibilities for decision-making. Features to look for might include: whether financial and administrative lines of responsibility are divided; whether lines of authority conflict with lines of consultation.

Questions of centralized versus decentralized structure often emerge and it is important to understand the relationship between national and provincial organizational structures. One might need to know for example, whether the flow of funds supports the degree of decentralization required, or actually impedes it. The position of the institution within the organizational structure of the sector can also be crucial - for example, with respect to other related ministries, the central planning agency, or parastatals.

**Performance:** is the institution able to fulfil its objectives in a timely and efficient manner? Are there any significant operational problems - for example delays in decision-making, late release of funds, problems over procurement of goods, and so on? What is the source of these problems and what options exist for overcoming them?

One the basis of such an analysis, judgments can be made on the institution's capability to assume the additional work load implied by the project. This assessment can lead to proposals for institutional strengthening which should be reflected in the proposed project components and organizational arrangements.
Chapter V  Market Prospects and Prices

This chapter summarizes all the basic features that will relate to the marketing of the project output and price expectations. This section will be of paramount importance for the setting up of the financial and economic justification of the project.

Therefore this chapter should review the market prospects for the products on which the viability of the project is most dependent and justify the price assumptions used in the financial and economic analyses of the project.

The financial attractiveness to farmers of the proposed developments normally depends very much on the relationship between the prices for inputs and for the commodities which they intend to produce.

In turn, the behaviour of prices, especially for farm outputs, may respond to changes in the supply and demand situation for the products, provided that this is not distorted by the presence of price controls or subsidies. In order to allow the reader to compare assumptions made in calculating financial (i.e. market) and economic (i.e. accounting) prices, it is convenient also to set out the derivation of economic prices in this chapter.

Markets and Marketing

The report should demonstrate that market openings exist or can be opened up (at the financial prices assumed) for the incremental output expected to result from the project.

However, where the viability of a project depends on access to export markets or on sales of perishable commodities or of items of particularly high unit value, a careful review of market prospects and of possible means of improving these (e.g. lengthening of production season), is an essential element in project preparation.

The adequacy of back-up services (e.g. availability of transport, packaging materials) and infrastructure (e.g. roads) also needs to be examined.

Chapter VI  Agricultural Development, Production and Financial Results

This section will describe the results of the farm model analysis and the financial profitability for farmers’ beneficiaries including incremental production with the project, financial rates of return and expected cash flows.

Chapter VII  Benefits, Risks and Sustainability

This section is intended to provide decision-makers with an appreciation of the advantages, disadvantages and risks of embarking on the proposed project, from a national point of view.

Convention requires that considerable weight be given to demonstrating the economic viability of the proposed actions, but economic soundness alone, as measured by the rate of return on capital employed, is seldom a sufficient justification for going ahead with a project. This chapter should seek to show that, apart from being economically viable in their own
right the proposed investments are also justifiable in the broader context of national resource availability, are consistent with the economic and fiscal policies of the government concerned. Therefore besides the discussion of the Economic Benefits and Economic Rate of Return of the project the following topics should be dealt with:

**Balance of Payments**

Where this is relevant to the justification of the project, an estimate should be made of the net impact of the project on the country's balance of payments. This implies estimating the foreign exchange component of both investment and operating costs and the extent of foreign exchange saved or generated through the use of the incremental output attributable to the project for import substitution or export purposes.

**Impact on Income Distribution and Poverty Alleviation**

The expected impact of the project on the distribution of incomes and poverty alleviation in the project area should be demonstrated.

**Risk and Sensitivity Analysis**

Risks should be explicitly identified and their possible impact on the economic viability of the project and on its sustainability examined. Possible sources of risk include also:

- the danger of cost over-runs stemming from the inaccurate estimation of quantities in civil works construction or from delays in implementation due perhaps to staffing or procurement problems.
- a slower build up of production attributable to the project and hence to reduced benefit streams. Reductions in benefits could also result from lower than expected yields, slower adoption of innovations or the effects of poor weather conditions.
- Risks may also be derived from exogenous factors such as unexpectedly large rises in input prices or falls in commodity prices.

**Environmental Impact and Technical Sustainability**

The expected environmental impacts - both positive and negative - should be weighed up.

Possible issues for discussion would, therefore, include the following.

- Beneficial and adverse environmental impacts: these should be described, where possible in quantitative terms (e.g. reduced area of natural forest). Given the difficulty of predicting environmental effects, the basis for the predictions should be explained and an indication given of their likely accuracy. Specific reference should be made to the expressed views of the different affected parties consulted during the course of the environmental assessment.

- Measures included in the project to mitigate adverse impacts (e.g. resettlement of communities affected by major works, effluent treatment from agro-industries) or to enhance environmental benefits (e.g. training of staff in improved environmental management techniques, establishment of protected areas, etc.).
Chapter VIII  **Issues and Follow up Actions**

In this last section the preparation report would discuss:

- the issues that cannot be solved by the preparation team and require political or other attention and
- the actions that need to be carried out before appraisal including legal, administrative, institutional arrangements or commitments to be taken by Government or other parties.
1 - SOCIOECONOMIC SURVEYS AND RAPID RURAL APPRAISAL (RRA)

All rural households operate within a larger historical, socio-cultural, economic and institutional policy environment. It is precisely the linkage between households and this larger environment which is important for project design. RRA is a bridge between formal surveys and unstructured research methods such as depth interviews, focus groups and observation studies.

RRA is more commonly described as a systematic but semi-structured activity out in the field by a multidisciplinary team and is designed to obtain new information and to formulate new hypotheses about rural life.

A central characteristic of RRA is that its research teams are multidisciplinary.

*Rapid rural appraisal is a set of techniques that can be applied as a preliminary stage when embarking on surveys of farmers. The technique essentially involves an informal, rapid, exploratory study of a specified geographical area designed to establish an 'understanding' of local agricultural conditions, problems and characteristics.*

*They can provide basic information on the feasibility of beginning a survey project in an area, particularly when one is intending to survey an area about which little is known.*

**The techniques of RRA include:**

- Interview and question design techniques for individual, household and key informant interviews,
- Methods of cross-checking information from different sources,
- Sampling techniques,
- Methods of obtaining quantitative data in a short time frame,
- Group interview techniques, including focus-group interviewing, and
use of secondary data sources.

Thus the term rapid appraisal does not refer to a single technique but to a range of investigation procedures.

Their chief characteristics are that they take only a short time to complete, tend to be relatively cheap to carry out and make use of more 'informal' data collection procedures.

The techniques rely primarily on expert observation coupled with semi-structured interviewing of farmers, local leaders and officials.

To date RRA has mainly been used in the field of rural development as a short cut method to be employed at the feasibility stage of project planning.

**RRA is useful for supporting decisions on:**

- Analysis of feasibility and social acceptability of agricultural and social improvements,
- Extension techniques assessment for training and technical assistance,
- Design of participatory schemes,
- Rural organizations assessment,
- Evaluation of proposed changes in agricultural systems, farming system characteristics,
- Understanding of the technical, social, and economic constraints of traditional farming systems to define research that will lead to changes of benefit to the farmer,
- Analysis of farmers' perception of farm household risk and uncertainty over practices of production, storage, and distribution, response to price incentives
- Issues of concern to farmers (e.g. their major farming problems)...

Rural Rapid Appraisal can produce, at a minimum cost, a rich description of life in the farming community and an understanding of local agricultural characteristics that will be invaluable in ensuring that the right areas and people are surveyed and that appropriate questions are asked. RRA can provide answers to:

Main crops grown (by season)
- Land use intensity
- Extent of inter-cropping
- Soil types and soil conditions (degree of salinity, water-logging)
- Farm sizes areas owned and areas cultivated
Ground topography: upland/lowland; land slope, field characteristics (average size, obstacles for efficient use of machinery)

Irrigation supply canal, rainfed, tubewell, time, day and duration of water received

Crop yields

Agricultural practices

Inventory/ownership of equipment (tractors, implements, tools)

Labour utilisation type (family, hired), labour cost and availability

Machine requirement priorities

Land tenure systems: tenants, owners, owners-cum-tenants

Decision making processes

Farm incomes: sources and amount

Availability of resources: sources of funds if required (personal, friends, relatives, agricultural banks, money lenders)

2 - SWOT ANALYSIS

The Strengths, Weaknesses, Opportunities and Threats Analysis involves brainstorming sessions with concerned project participants and it can be applied at any stage of the project cycle. It uses a simple methodology of displaying on boards participants’ ideas about what is being discussed and reaching a consensus on which ideas are important for project design.
### SWOT Analysis Template

#### Strengths
- Advantages of project proposal?
- Capabilities?
- Competitive advantages?
- Resources, Assets, People?
- Experience, knowledge, data?
- Likely returns?
- Availability of markets, marketing
- Innovative aspects?
- Location and geographical?
- Price, value, quality?
- Institutional capacity?
- Processes, communications?
- Cultural, attitudinal, behavioural?
- Sustainability?

#### Weaknesses
- Disadvantages of project proposal?
- Gaps in capabilities?
- Lack of competitive strength?
- Motivation, incentives?
- Lack of positive experiences?
- Risks?
- Quality and timely production?
- Cashflow, start-up cash-drain?
- Distances, Infrastructure
- Continuity, supply chain robustness?
- Effects on implementation of core activities?
- Monitoring and evaluation?
- Morale, commitment, leadership?
- Likely management changes?

#### Opportunities
- New markets developments?
- Competitors' vulnerabilities?
- Industry trends?
- Technology development and innovation?
- World markets influences?
- Niche target markets?
- Business and product development?
- Information and research?
- Partnerships, distribution?
- Volumes, production, economies?
- Seasonal, weather, fashion influences?

#### Threats
- Political effects?
- Legislative effects?
- Environmental effects?
- IT developments?
- Competitor intentions - various?
- Market demand?
- New technologies, services, ideas?
- Sustaining internal capabilities?
- Obstacles faced?
- Insurmountable weaknesses?
- Loss of key staff?
- Sustainable financial backing?
- Economy - home, abroad?
- Seasonality, weather effects?

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### 4 - DEMAND AND PRICE PROJECTIONS
To assess economic parameters in the “with” and “without” project situation. Generally data generated by macroeconomic studies at country or international level are used, when available.

5 – FARM SAMPLE SURVEYS

Farm Sample Surveys are designed to provide data and information for particular aspects of the project area or subsector (see also Rapid Rural Appraisal). Steps involved are drawing the sample, developing a questionnaire or interview record, organising and controlling field work and processing and reporting results.

6 – COMMODITY CHAIN ANALYSIS

Commodity Chain Analysis is used to collect the analytical information on specific commodities linked by a chain of intermediaries from production to processing, marketing, sale. It presents a graphic vision of the costs price structure of given commodity permitting the assessment of comparative advantages over exports/imports.

7 – HERD PROJECTION MODELS

Herd projection models are used to simulate the building up of a herd as a consequence of technical improvements with impact on technical coefficients (calving rate, death rates) and changes in the cattle selling policies (age, weight).

8 – NETWORK ANALYSIS TECHNIQUES

Network Analysis Techniques: (Programme Evaluation and Review Technique – PERT and Critical Path Method – CPM. These techniques involve mainly creating a logic diagram, a time analysis and resource analysis and scheduling.

MODULES 6c and 6d
FINANCIAL AND ECONOMIC ANALYSIS

1 FARM DEVELOPMENT MODELS AND CASH FLOW ANALYSIS

The basic purpose is to determine the scale and type of technological changes which can be introduced into a farming system with maximum benefit to the farmer (or household) and which represents the “optimum” use of resources available with the project. Farm development models and farm cash flow analysis are used to calculate the financial returns to on-farm investments. In most cases the aggregate of farm models representing the total number of project beneficiaries is also used to calculate the economic rate of return of the project.

2 COMPARATIVE AND COMPETITIVE ANALYSIS

Comparative and Competitive Analysis is used as a tool to justify the economic worthiness of a project and it provides the necessary information for the calculation of shadow prices for Economic Rate of Return calculations. Comparative and Competitive analysis (Domestic Resource Cost - DRC, Nominal Protection Coefficient -NPC and Effective Protection Coefficient –EPC) focuses on the efficiency with which the activity concerned converts domestic currency into foreign currency. It does this by comparing how many euros for example, of input are needed to create one dollar’s worth of net output and then comparing this rate of conversion with the currency exchange rate in financial markets.

The DRC is a measure, in terms of real resources, of the opportunity cost of producing or saving foreign exchange.

*Opportunity cost is the cost of something in terms of opportunity foregone. The opportunity cost to a country of producing a unit more of a good, such as for export or to replace an import, is the quantity of some other good that could have been produced instead.*

3 FINANCIAL AND ECONOMIC ANALYSIS

A Financial and Economic Analysis has to be carried out for all Investment Projects that aim at increasing agricultural production with measurable result. It is based on the use of standard benefit/cost methodologies and simulation models to approximate expected financial and economic costs and benefits of projected investments at individual investor level and at the level of the economy as a whole. The theoretical background and practitioner guidelines can be found in a number of publications by the Economic Development Institute of the World Bank and can be consulted on line. Relevant references are the following:

http://books.google.com/books?id=7FnQ8ml2Cr0C&printsec=frontcover&hl=it&source=gbs_v2_summary_r&cad=0
http://books.google.com/books?id=b3 8Tapt2MYC&printsec=frontcover&hl=it&source=gbs_similarbooks_r&cad=2

The economics of project analysis: A practitioners’ Guide by W.A. Ward, B.J. Deren and E.H. DeSilva
http://books.google.com/books?id=QxretNCgto0C&printsec=frontcover&hl=it&source=gbs_similarbooks_r&cad=2

Additional reference material (not available on line):


*Economic Analysis of Projects* (Lyn Squire, Herman van der Tak, World Bank - Johns Hopkins University Press, 1975)


*Project Appraisal and Planning for the Developing Countries* (I.M.D. Little, J.A. Mirrlees, Basic Books, 1974)

**ANNEXES**
Shadow Prices

In economic analysis of investment projects it is acceptable, and indeed desirable for the
analyst to use market prices as reflecting actual flows in the economy. However the analyst
might also want to explore issues of efficiency in an economic context. Here the use of
market prices is not appropriate as actual market prices do not reflect the true economic value
of the goods and services to which they are attached. There are numerous reasons for this
distortion between market prices and economic value. The most important are:

- the absence of pure and perfect competition (due to the existence of monopolies or
  oligopolies and to imperfect information among economic agents);
- the intervention of the state, and other factors beyond the strictly economic sphere,
  disturbing the economic process (by taxes, regulations, quotas, and all types of
  economic policy measures).

For these and other reasons, real life economies do not correspond to the model economy
developed in neo-classical theory, and therefore distortions result. Prices no longer play their
role of information and market regulation.

The objective of using shadow prices is to correct these distortions, by estimating a
hypothetical set of accounting or efficiency prices, and then to show the discrepancies
between the accounts as re-estimated in this way and the actual financial accounts of the
agents.

**Shadow prices are the values which replace market prices in theoretical calculations when it
is felt that market prices do not represent the true economic value of the good or service.
These are also referred to as economic prices, accounting prices, "real" prices or reference
prices.**

Efficiency prices

The prices of goods and services are valued at their parity prices (import or export parity
depending on whether they are inputs or outputs) either directly or built up from the parity
values of their components, as shown in the production-trading accounts;

Border prices

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14 Source: excerpts from FAO: EasyPol (an on-line, interactive multilingual repository of downloadable
resource materials for capacity development in policy making for food, agriculture and rural development. The
EASYPol home page is available at: [www.fao.org/te/easypol](http://www.fao.org/te/easypol)
The border price of a good or service is the price of this good at the point of entry (for imports) or exit (for exports) from the country. This is the FOB price for exports and the CIF price for imports, whether intermediate inputs or import substitute products.

**Parity prices for goods and services**

The import parity price of a product is equal to its border price plus transport costs (including any processing and transformation costs) and all expenses (other than taxes and subsidies) intervening between the point of entry and the place of consumption.

The export parity price of a product is equal to its border price minus transport costs (including any processing and transformation costs) and all expenses (other than taxes and subsidies) intervening between the place of production and the point of exit.

It is commonly accepted that, for the majority of goods and services, international prices are the best reflection of the efficiency price, because overseas trade generally offers the best possible alternative use of inputs and outputs. This is the basis for using parity prices in efficiency analysis.

It is possible to distinguish four cases:

- goods and services which are internationally traded or which could be traded internationally: they are valued at international market prices at their point of entry into or exit from the country. These prices are then adjusted by the necessary transport and processing costs (valued at shadow prices) between the border point and the point of production or utilization;

- goods and services which are indirectly traded internationally: their value is subdivided using the production-trading account into tradable (imported inputs or import substitutes) and non-tradable items (see below);

- non-tradable goods and services: goods and services which cannot be traded internationally (such as land) are valued, in the case of factors of production according to their marginal productivity, and for final goods and services, according to consumers’ willingness to pay;

- goods and services which could be traded internationally: these goods and services which are not traded because of existing regulations are similar to non-tradable goods and services and are valued on the basis of their marginal productivity or according to consumers’ willingness to pay.

**Parity prices for factors of production**

When it comes to measuring the cost of factors of production, in practice it is very difficult to estimate the marginal productivity of factors of production. It is hard to identify their alternative employment and it is not possible to estimate their marginal contribution to production, without using detailed models.

Lacking an alternative, it is generally assumed that the marginal productivity of a factor is equal to its market price, except in the case of unskilled labour, which, in certain types of employment, may receive higher payment than their alternative marginal productivity would indicate.
Unskilled labour, particularly agricultural labour, is generally considered to have, as an alternative occupation, either traditional agricultural production or casual labour (either in rural or peri-urban areas). If there are no obvious particular characteristics, it is standard practice to adopt unit marginal productivities for other factors of production.

Therefore, except for exceptional cases where it is possible to identify the nature of the production foregone, a conversion coefficient in international prices is applied which measures the value of a “basket of marginal products” in international and domestic prices. On the assumption that an additional unit of production results in additional exports, or avoids additional imports, the average structure of external trade will be used to quantify this conversion coefficient.

**Opportunity cost**

This is the value of a good or service when used in its next best alternative use (compared to its current use in the chain). The opportunity cost of a factor of production is equal to its marginal productivity in its best use in the production of another good or service.

Transfers are financial flows made without a corresponding flow of goods or real consumption of economic value. Basically they include:

- redistribution activities by the government (taxes, duties, subsidies);
- financial charges (interest payments);
- certain types of rents.

**Shadow exchange rate**

Economic calculations can be carried out in two ways: either by using the standard conversion factor (see below) to translate all market prices of non-tradable goods and services into border price equivalents, or by applying a shadow exchange rate for the domestic currency to internationally traded goods and services. Both methods should give similar results if carried out rigorously.

**Standard Conversion Factor**

The standard conversion factor translates values measured in domestic prices to their border price equivalents, making allowance for the effects of external trade distortions on domestic prices. The calculation is effectively carried out in international price units.

The procedures are equivalent to the result of the following mathematical identity:

\[
\text{Shadow exchange rate} = \text{Official exchange rate} \times \text{Standard conversion factor}
\]

Conversion factors enable the analyst to calculate the shadow price of a good or service by multiplying its market price by a simple coefficient:

\[
\text{Conversion factor} = \text{Market price} \times \text{Shadow price}
\]
Cost items in the production account and in the components of value added (except profits) to which shadow rates and/or standard conversion factors would be applied.

<table>
<thead>
<tr>
<th>PRODUCTION CHAIN FOR THE DOMESTIC MARKET: IMPORT PARITY PRICE</th>
<th>PRODUCTION CHAIN FOR THE INTERNATIONAL MARKET: EXPORT PARITY PRICE</th>
</tr>
</thead>
<tbody>
<tr>
<td>World price at foreign port (fob)</td>
<td>World price at foreign port (cif)</td>
</tr>
<tr>
<td>+ Brokerage, freight, insurance (at cif)</td>
<td>- Brokerage, insurance, freight (at cif)</td>
</tr>
<tr>
<td>= BORDER PRICE (cif)</td>
<td>= BORDER PRICE (fob)</td>
</tr>
<tr>
<td>at port of entry</td>
<td>at port of exit</td>
</tr>
<tr>
<td>+ Customs, transit, storage</td>
<td>- Customs, transit, storage</td>
</tr>
<tr>
<td>+ Transport</td>
<td>- Transport</td>
</tr>
<tr>
<td>+ Packaging, final processing</td>
<td>- Packaging, final processing</td>
</tr>
<tr>
<td>+ Transport</td>
<td>- Transport</td>
</tr>
<tr>
<td>+ Possible additional processing, transport</td>
<td>Possible additional processing, transport</td>
</tr>
<tr>
<td>+ Marketing costs</td>
<td>- Marketing costs</td>
</tr>
<tr>
<td>+ Assembly costs</td>
<td>- Assembly costs</td>
</tr>
<tr>
<td>= FARMGATE PRICE</td>
<td>= FARMGATE PRICE</td>
</tr>
<tr>
<td>- Production costs</td>
<td>- Production costs</td>
</tr>
<tr>
<td>= PRODUCER MARGIN (gross output)</td>
<td>= PRODUCER MARGIN (gross output)</td>
</tr>
</tbody>
</table>
ANNEX II

DERIVATION OF IMPORT AND EXPORT PARITY PRICES

EXAMPLES

Import Parity Price Calculation

<table>
<thead>
<tr>
<th>Description</th>
<th>Calculation</th>
<th>Price per ton</th>
</tr>
</thead>
<tbody>
<tr>
<td>FOB at port of export</td>
<td>USD100.00</td>
<td>USD100.00</td>
</tr>
<tr>
<td>Add freight, insurance, and</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ancillary in port of import</td>
<td>USD5.00</td>
<td>USD5.00</td>
</tr>
<tr>
<td>CIF (at port of import)</td>
<td>USD105.00</td>
<td>USD105.00</td>
</tr>
<tr>
<td>Current foreign currency exchange rate of</td>
<td></td>
<td></td>
</tr>
<tr>
<td>USD/aud in Nigeria</td>
<td>N120.00</td>
<td>N120.00</td>
</tr>
<tr>
<td>Add local port charges</td>
<td>USD2.00</td>
<td>USD2.00</td>
</tr>
<tr>
<td>Add local transport and marketing costs to</td>
<td>USD10.00</td>
<td>USD10.00</td>
</tr>
<tr>
<td>relevant market</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Export price at market</td>
<td>USD120.00</td>
<td>USD120.00</td>
</tr>
<tr>
<td>Export Parity Price Calculation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Transport and handling costs (if not part of</td>
<td>USD2.00</td>
<td>USD2.00</td>
</tr>
<tr>
<td>project)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Export local charges, transport, and</td>
<td>USD10.00</td>
<td>USD10.00</td>
</tr>
<tr>
<td>marketing costs (if not part of project)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Export parity price at tonnage</td>
<td>USD140.00</td>
<td>USD140.00</td>
</tr>
</tbody>
</table>

Source: United Nations, 1985, p. 27

Export Parity Price Calculation

<table>
<thead>
<tr>
<th>Description</th>
<th>Calculation</th>
<th>Price per ton</th>
</tr>
</thead>
<tbody>
<tr>
<td>CIF at port of export</td>
<td>USD100.00</td>
<td>USD100.00</td>
</tr>
<tr>
<td>Add freight, insurance, and</td>
<td>USD5.00</td>
<td>USD5.00</td>
</tr>
<tr>
<td>ancillary in port of export</td>
<td>USD105.00</td>
<td>USD105.00</td>
</tr>
<tr>
<td>Current foreign currency exchange rate of</td>
<td>USD/aud in Nigeria</td>
<td>N120.00</td>
</tr>
<tr>
<td>USD/aud in Nigeria</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Export price at market</td>
<td>USD120.00</td>
<td>USD120.00</td>
</tr>
<tr>
<td>Export Parity Price Calculation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Export local charges, transport, and</td>
<td>USD2.00</td>
<td>USD2.00</td>
</tr>
<tr>
<td>marketing costs (if not part of project)</td>
<td>USD10.00</td>
<td>USD10.00</td>
</tr>
<tr>
<td>Export parity price at tonnage</td>
<td>USD140.00</td>
<td>USD140.00</td>
</tr>
</tbody>
</table>

Source: United Nations, 1985, p. 27
### Example: Crop budget per Ha.

<table>
<thead>
<tr>
<th>Flats</th>
<th>Basmati</th>
<th>Length (Km)</th>
<th>Type</th>
<th>Species</th>
<th>Yield (kg/ha)</th>
<th>Project Without</th>
<th>Project With</th>
<th>Project Without</th>
<th>Project With</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rice</td>
<td>6.00</td>
<td>0.50</td>
<td></td>
<td></td>
<td>5.00</td>
<td>750.00</td>
<td>1000.00</td>
<td>900.00</td>
<td>1200.00</td>
</tr>
<tr>
<td>Beans</td>
<td>4.00</td>
<td>0.50</td>
<td></td>
<td></td>
<td>2.00</td>
<td>500.00</td>
<td>700.00</td>
<td>600.00</td>
<td>800.00</td>
</tr>
</tbody>
</table>

### Example: Cropping Pattern and Gross Revenues for 5 Ha Farm

<table>
<thead>
<tr>
<th>Yrs.</th>
<th>Project</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5–20</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rice</td>
<td>1.00</td>
<td>1.50</td>
<td>3.00</td>
<td>3.00</td>
<td>3.00</td>
<td>3.00</td>
</tr>
<tr>
<td>Beans</td>
<td>0.00</td>
<td>1.50</td>
<td>2.00</td>
<td>2.00</td>
<td>2.00</td>
<td>2.00</td>
</tr>
<tr>
<td>Fallow</td>
<td>4.00</td>
<td>2.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Total cultivated area</td>
<td>5.00</td>
<td>5.00</td>
<td>5.00</td>
<td>5.00</td>
<td>5.00</td>
<td>5.00</td>
</tr>
</tbody>
</table>

### Gross Revenues (20)

<table>
<thead>
<tr>
<th>Yrs.</th>
<th>Project</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5–20</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rice</td>
<td>168.00</td>
<td>594.00</td>
<td>1188.00</td>
<td>1188.00</td>
<td>1188.00</td>
<td>1188.00</td>
</tr>
<tr>
<td>Beans</td>
<td>0.00</td>
<td>502.50</td>
<td>750.00</td>
<td>750.00</td>
<td>750.00</td>
<td>750.00</td>
</tr>
<tr>
<td>Total gross revenues</td>
<td>168.00</td>
<td>1156.50</td>
<td>1938.00</td>
<td>1938.00</td>
<td>1938.00</td>
<td>1938.00</td>
</tr>
</tbody>
</table>
ANNEX III (2)

FARM MODELS

Example: Investment and Operating Costs for 5 Ha Farm

<table>
<thead>
<tr>
<th>Units</th>
<th>Units</th>
<th>Unit</th>
<th>Yr 1</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Investment Costs (25)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Supplementary Irrig. equip.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Agricultural implements</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Unassigned seed</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Contingency 10%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total Inc. Costs</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year</th>
<th>Project</th>
<th>Without</th>
<th>With Project</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yr 1</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td><strong>Operating Costs (26)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rice seeds</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Decca seeds</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Sub-total seeds</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Miscellaneous and Trimmers</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Transportation (20% of total labor)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maintenance, etc.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total Operating Costs</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Net Revenues</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Example: Internal Rate of Return for 5Ha Farm

<table>
<thead>
<tr>
<th>Tr</th>
<th>Nominal Interest</th>
<th>Investment</th>
<th>Operating</th>
<th>Land Equip.</th>
<th>Balance</th>
<th>Incremental</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(%)</td>
<td>(€)</td>
<td>(€)</td>
<td>(€)</td>
<td>(€)</td>
<td>(€)</td>
</tr>
<tr>
<td>0%</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>1%</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>2%</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>3%</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>4%</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>5%</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>6%</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>7%</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>8%</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>9%</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>10%</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>11%</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>12%</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>13%</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>14%</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>15%</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>16%</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>17%</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>18%</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>19%</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>20%</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
</tbody>
</table>

**INN** ${\frac{\%}{\text{Yr}}}$

10% $\leq 500.00$ at 0%
### Example: Cash Flow Projection for 5 Ha Farm

<table>
<thead>
<tr>
<th></th>
<th>Without Project</th>
<th>With Project</th>
<th>5-9Y</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Years</strong></td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td><strong>Cash Inflow</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gross Revenues</td>
<td>106.00</td>
<td>110.00</td>
<td>113.00</td>
</tr>
<tr>
<td>Long Term Loan (60% Inc. Costs)</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Farmers' Equity (30% Inc. Costs)</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td><strong>Total Cash Inflow</strong></td>
<td>106.00</td>
<td>110.00</td>
<td>113.00</td>
</tr>
<tr>
<td><strong>Cash Outflow</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Investment Cost</td>
<td>0.00</td>
<td>420.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Farmers' Equity (30% Inc. Costs)</td>
<td>86.40</td>
<td>88.96</td>
<td>91.06</td>
</tr>
<tr>
<td><strong>Total Cash Outflow</strong></td>
<td>90.40</td>
<td>469.96</td>
<td>0.00</td>
</tr>
<tr>
<td><strong>Cash Balance Before Debt Service</strong></td>
<td>85.02</td>
<td>460.04</td>
<td>113.00</td>
</tr>
<tr>
<td><strong>Debt Service</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Amount of All L., Loan (7% Per Yr.)</td>
<td>767.44</td>
<td>767.44</td>
<td>767.44</td>
</tr>
<tr>
<td>Interest on Working Capital (6% per Yr.)</td>
<td>6.30</td>
<td>6.30</td>
<td>6.30</td>
</tr>
<tr>
<td><strong>Total Debt Service</strong></td>
<td>773.74</td>
<td>773.74</td>
<td>773.74</td>
</tr>
<tr>
<td><strong>Cash Balance After Debt Service</strong></td>
<td>81.40</td>
<td>453.30</td>
<td>106.70</td>
</tr>
</tbody>
</table>
LOGICAL FRAMEWORK ANALYSIS

In a few words...

The LOGFRAME is a managerial tool for defining realistic objectives and the means for accomplishing them. LOGFRAMES view any development project as a set of causally linked elements (hypotheses) identified as the project goal, purpose, outputs and activities.

- The logframe consists of a matrix in which the rows represent the different hierarchical levels of objectives (inputs, outputs, purposes and goals in ascending order, and the vertical logic a set of means and ends interrelated by the if-then condition.
- An important element of the vertical logic is the set of assumptions, risks and conditions to reach objectives.

LOGFRAME analysis can be used to build consensus amongst all parties, from policy makers to beneficiaries, who are interested in a development programme. The technique is usually applied at a workshop or series of workshops, commencing with the identification of the focal problem to be addressed by the project and its substantive and direct causes. The desirable situation which must be reached in order to overcome an identified problem is then specified in the form of a project objective, which in turn leads to the definition of desired outputs and of the activities required to generate them.

Underlying assumptions and factors external to the project that could affect or constrain its success are identified as the exercise proceeds, and finally verifiable indicators of achievement, agreed as appropriate by all participants, are established.

The Logical Framework has the following advantages:

- It brings together in one place a statement of all the key components of a project (this is particularly helpful when there is a change of staff),
- It presents them in a systematic, concise and coherent way, thus clarifying and exposing the logic of how the project is expected to work,
- It separates out the various levels in the hierarchy of objectives, helping to ensure that inputs and outputs are not confused with each other or with objectives and that wider ranging objectives are not overlooked,
- It clarifies the relationships which underlie judgments about likely efficiency and effectiveness of projects,
- It identifies the main factors related to the success of the project,
- It provides a basis for monitoring and evaluation by identifying indicators of success, and means of quantification or assessment,
- It encourages a multidisciplinary approach to project preparation and supervision.
Basic Principles

1. The Logical Framework should be concise. It should not normally take up more than two sides of paper.
2. The Logical Framework should be treated as a free-standing document and should be comprehensible to those coming to it for the first time. Acronyms should therefore be avoided.
3. If beneficiaries are included in the project, they should also take part in the design of the Logical Framework.
4. The Logical Framework will provide a basis for subsequent monitoring and evaluation. It must therefore be kept under regular review and amended whenever the project changes course.

Main Matrix of the Logical Framework (a summarized, sample format)

Narrative Summary (Column 1):

The narrative summary defines the project structure. Care should be taken to distinguish between Project Activities, Outputs, Purpose and Goal.

Verifiable Indicators (Column 2):

The emphasis is on the value, not just the type, of indicators of achievement. Any indicators used should be susceptible to measurement, or qualitative judgement, or both. An example of a quantitative indicator is the volume of output of the new crop; an example of a qualitative judgement is the assessment that the majority of farmers have understood audio-visual materials.

Means of Verification (Column 3):

This column should set out how, and from what sources of information, each of the indicators in the previous column will be quantified or assessed.

Important Assumptions (Column 4):

This column should record the important assumptions on which the success of the project depends, and the risks that have been considered.
### Summary Content of a logical framework

<table>
<thead>
<tr>
<th>Narrative Summary</th>
<th>Verifiable Indicators</th>
<th>Means of Verification</th>
<th>Important Assumptions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Goal:</strong></td>
<td>What are the quantitative ways of measuring, or qualitative ways of judging, whether these broad objectives are being achieved? (estimated time)</td>
<td>What sources of information exists, or can be provided cost-effectively?</td>
<td>(Goal to Supergoal): What external factors are necessary for sustaining objectives in the long run?</td>
</tr>
<tr>
<td><strong>Purpose:</strong></td>
<td>What are the quantitative measures or qualitative evidence by which achievement and distribution of impacts and benefits can be judged (estimated time)</td>
<td>What sources of information exists or can be provided cost-effectively? Does provision for collection need to be made under inputs-outputs?</td>
<td>(Purpose to Goal): What conditions external to the project are necessary if achievements of the project’s purpose is to contribute to reaching the project goal?</td>
</tr>
<tr>
<td><strong>Outputs:</strong></td>
<td>Each of the outputs that are to be produced by the project in order to achieve project purpose</td>
<td>What kind and quantity of outputs, and by when will they be produced? (quantity, quality, time)</td>
<td>What sources of information?</td>
</tr>
<tr>
<td><strong>Activities:</strong></td>
<td>Each of the activities that must be undertaken in order to accomplish the outputs.</td>
<td>VI’s should be included against all activities. This is essential for projects reporting and monitoring against the Logical Framework.</td>
<td>What are sources of information?</td>
</tr>
</tbody>
</table>

**MODULE 6f**
RISK ANALYSIS

The incidence of risk in agriculture is important to policy makers at national and international levels. In brief, main types of risks are:

Risks related to so called vulnerability constraints

Systemic Risk – rural incomes, especially among agriculturalists, are highly susceptible to similar risks at the same time. Of these highly inter-related risks, weather is the most uncontrollable and often devastating risk but disease and plagues are similarly important production risks.

Market Risk – in all countries and especially in developing countries, there both cyclical and seasonal price fluctuations of agricultural products, not only due to local production variation but also affected by “outside forces.” These forces include prices fixed for political reasons, import or export restrictions, exchange controls, subsidies and globalization.

Credit Risk – collateral, especially mortgage, is a missing element in most rural finance hence increasing the risk of the lender. The lack of usable collateral due to often ill-defined property and land-use rights, costly or lengthy registration procedures, and social constraints to foreclosure are costly.

Risks related to operational constraints

Low Investment and Assets – the relative poverty in rural areas causes common crises to become major crises due to the lack of asset “cushion.” Any loss of expected income through sickness or production losses cause significant impact. The small asset base also reduces savings and borrowing capacity, thus constraining economies of scale in the use or provision of services.

Investment Returns and Capital Flows – rural capital revolves slowly, with often one or less frequently two crops per year. For investment capital the returns are even slower and in spite of that are often faced with very low profit margins.

Hence risks are higher than for example in commerce. Equally problematic for lenders is the seasonality of agricultural production (crop production in particular) which leads to significant cash flow challenges and a lag between investment needs and expected revenues which can cause liquidity management difficulties.

Geographical Dispersion – rural areas are characterized by low density of population and high dispersion with often small size of individual transactions which leads to high costs of operation for both production and marketing. The remoteness and heterogeneity among communities and farms similarly creates high information/transaction costs for financial service providers who serve rural clients.

The challenge of delivery of services and the difficult communications infrastructure also create the potential moral hazard risks all of which limit access to finance and investment.
**Infrastructure** – poor communication, bad roads, unequipped schools and missing social and health services decrease efficiency of operations, discourage new services and increase the outflow of the most talented and resourceful persons and a reluctance of educated families to live in rural communities.

**Risks related to capacity constraints**

**Technical Capacity and Training** – a relatively unskilled rural population reduces opportunity for ready access and adaptation to new technologies and employment. The lack of capacity affects not only the productivity and competitiveness in the changing marketplace but also the ability to find trained staff for service provision.

**Social Exclusion** – cultural, linguistic, gender, racial, religious and educational constraints affect market and financial integration. Such barriers reduce production and marketing efficiencies. These are required in order to compete effectively in the marketplace and thereby generate income and levels of assets needed to reduce poverty and vulnerability.

**Institutional Capacity** – while there is an abundance of organizations in rural areas, the relative capacity is lacking. This includes management and technical capacity, size/economies of scale competitive viability, economic integration and often risk-bearing capacity.

**Risks related to political and regulatory constraints**

**Political and Social Interference** – loans can be forgiven, savings can be withheld, interest rates can be capped, mortgages can be rendered useless and payments can be suspended when Governments so decide.

**Regulatory Issues** – regulations and/or a lack of enforcement of them hinder rural as well as urban environments. Land tenure regulations, banking laws, exchange rate manipulation and tax rates are examples of such constraints that destabilize and/or hinder viability of business and financial operations in rural areas.

*Addressing problems of risk and vulnerability within an agricultural production and marketing system requires an understanding of the cross-cutting issues and of the multiple approaches to managing risk. These latter include market development and access, crop diversification, irrigation and intensification of farming, and development of financial and social capital.*

**Risk management tools**

Selecting the **right marketing tool** to use at the right time will not only reduce risk, it could increase profit. More commonly used tools are:

**Storage**

Storage is a way of avoiding seasonally low prices even though it has no price risk safety. *When prices are below the level anticipated in the marketing plan, storage may be*
justified, assuming that you have adequate financial resources. Storage may be warranted when there is a realistic expectation of a market price increase.

**Fixed price contract for deferred delivery**

This contract allows producers to establish a price for later delivery. A fixed price contract, also known as a cash forward contract, may allow to schedule deliveries at times of the year that better fit with labour, grain quality, and logistics.

**Basis contract**

A basis contract allows to fix the basis, but allows the final cash selling price to be determined at a later date by subtracting the fixed basis from the future price.

**Deferred or delayed price contract**

A deferred or delayed price contract transfers title of a crop to the buyer at delivery, but allows the seller to set the price later.

**Minimum price contract**

A minimum price contract establishes a floor price for the duration of the contract.

**Short futures hedge**

Selling futures contracts to protect the value of grain or livestock in inventory or the value of expected production is a short futures hedge. A short futures hedge reduces downside price risk.

**Crop insurance**

Crop insurance provides two important benefits. It ensures a reliable level of cash flow and allows more flexibility in marketing plans; if it is possible to insure some part of the expected production, that level of production can be forward-priced with greater certainty, creating a more predictable level of revenue.

**Contract farming**

Through production contracts, the agribusiness firm commits the producer to deliver a specific quality and quantity of final product. The producer must comply with the firm’s quality specifications and must manage yield risk with insurance and sound management practices.

**Risk mitigation approaches through investment in public goods**

Public investments that address risk reduction in farming have been considerable, but they are seldom designed explicitly to target this risk. Irrigation investments are one such case: the explicit intention has been to boost the productivity of land and water resources and increase rural employment and food self-sufficiency.

Examples of risk mitigation approaches are:

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• Investment in information systems that provide timely and accurate data to management,
• Training for staff, management, and board members,
• Strengthening rural financial services,
• One-off grants to support innovations (for example, introducing new technology or a new loan product) or expansion into more marginalized rural areas,
• Building on existing infrastructure (such as post offices, state banks, retail stores, and traders) to provide a range of financial services at low cost and at scale,
• Testing new approaches to agricultural insurance,
• Promoting market-based price risk management,
• Targeting use of cash transfers and safety net programs,
• Emphasizing disaster planning rather than relief,
• .....................

The incidence of risk in agriculture is important to policy makers at national and international levels. Fluctuations in producer incomes, and particularly the threat of catastrophic loss, may present difficult welfare problems for these same producers, their governments, and the international community. Trading losses at the level of market intermediaries, such as traders and processors, negatively impact the development of sustainable trading and finance activities in the commodity sectors. In more extreme cases, international humanitarian assistance may be necessary, but that assistance may destabilize markets, create dependencies, or bias management via expectations of future disaster relief.

Mechanisms to deal with catastrophic, spatially covariate risks for large populations must be created in ways that do not undermine the coping mechanisms that individual households use to deal with chronic day-to-day and year-to-year independent risks. Since the types and severity of the risks confronting farmers vary greatly with farming systems and physical, socioeconomic, and political environments, generic guidance for good and relevant investment activity in risk management interventions is scarce. Past failures by governments and donors illustrate both the many pitfalls to avoid and some opportunities to explore in efforts to help resource-poor farmers deal better with risk and become less vulnerable to shocks.

Six challenges to commercial weather index insurance in low income countries 16

Basis risk.
Index insurance policyholders could experience a loss and yet not receive an indemnity. Likewise, they could receive an indemnity when they have not experienced a loss. The frequency of these occurrences depends on the extent to which the insured’s losses are positively correlated with the index. Without sufficient correlation, basis risk becomes too severe, and index insurance is not an effective risk management tool. Careful design of the policy parameters (coverage period, trigger, measurement sites) can help reduce basis risk.

Security and dissemination of measurements.
The viability of index insurance depends critically on the underlying index being objectively and accurately measured. The index measurements must then be made widely available in a timely manner. Whether provided by governments or third-party sources, index measurements must be widely disseminated and secure from tampering.

Precise actuarial modeling.
Insurers will not sell index insurance products unless they can understand the statistical properties of the underlying index. This requires sufficient historical data on the index and actuarial models that use these data to predict the likelihood of various index measures.

Education.
Index insurance policies are typically much simpler than traditional farm-level insurance policies. But since the policies differ significantly from traditional insurance policies, some education is generally required to help potential users assess whether the policies can help them manage risk.

Marketing.
A marketing plan must be developed that addresses how, when, and where index insurance policies are to be sold. The government and other involved institutions must consider whether to allow secondary markets in index insurance instruments and, if so, how to facilitate and regulate those markets.

Reinsurance
In most developing country economies, insurance companies do not have the financial resources to offer index insurance without adequate and affordable reinsurance. Effective arrangements must therefore be forged between local insurers, international reinsurers, local governments, and possibly international development organizations.

Mongolia: Index-based livestock insurance


17 Source: See note 16
Mongolia has piloted index-based livestock insurance to share risks among herders, insurance companies, and the government since 2005. The project combines self-insurance, market-based insurance and social insurance. Herders retain small losses that do not affect the viability of their business (self-insurance), while larger losses are transferred to the private insurance industry (market insurance through a base insurance product, or BIP). Only the final layer of catastrophic losses is borne by the government (social insurance through a disaster response product).

Herders pay a market premium rate for the BIP, which pays out to individual herders whenever the livestock mortality rate in a local region exceeds a threshold. Since excess mortality reflects a combination of dry, windy summers and cold, high snowfall winters, the insurance index is linked not to a weather event but to historical livestock mortality data. Insurance payments are thus not directly linked to individual herders’ livestock losses, and payments are instead based on local mortality. This should avoid or reduce moral hazard and adverse selection—and reduce costs.

A key to the approach is good data to develop the livestock mortality index. Mongolia has a 33-year time series on adult animal mortality for all regions and for the four major species of animals (cattle and yak, horse, sheep, and goat). The mortality index provides the basis for determining the specific mortality rates that would trigger indemnity payments.
ENVIROMENTAL IMPACT ASSESSMENT

The Environmental Impact Assessment (EIA) aims at predicting the environmental impacts which may arise during the implementation of a project. EIA is in general part of project preparation and of the formal appraisal of a project. In practical terms it is an iterative process which influences all stages of the project cycle.

Environmental Assessment is a process which was designed to ensure that decision-makers are made aware of the potential environmental consequences of their actions, with the intention of improving the “quality” of development decisions.

The EA process and the associated technical procedures were originally developed to deal with decisions about individual investment projects. Subsequently, the process has been extended to cover a broader range of activities which are less well defined (e.g. rural development projects) and about which it is more difficult to make accurate and meaningful quantitative assessments.

- An early recognition of the likely environmental impact of a project is an important element ....
- The assessment process should start at the time of project identification ....

Some of the more important features related to the assessment of environmental impacts are:

- **Improved Decision-making.** The basic goal of EA is to improve the decision-making process primarily through the identification and inclusion of environmental considerations into project planning, design and implementation.

- **Early Application and Analysis of Alternatives.** EA is a planning tool and is most effective when applied at the early stages of the project formulation process when there is still sufficient flexibility to consider relevant alternatives and changes in project design. EA should be an integral part of the project design process rather than a separate exercise. As a basic principle, EAs should include an analysis of alternatives as an input to identifying the preferred project option.

- **Inter-disciplinary Approach.** The range and nature of potential impacts associated with project implementation require an interdisciplinary treatment in the analysis of data.

- **Comprehensiveness.** EA procedures are applied to all projects, albeit at differing levels of treatment, dependent on the specific nature of the activity and the potential significance of the environmental effects.

- **Resource Effective.** The EA process is sequential or iterative in nature, proceeding from the general to the specific, the objective of which is to allocate scarce resources as efficiently as possible to the assessment of significant issues and avoid unnecessary information gathering and analysis.
• **Flexibility.** EA is a flexible process in which the scope, depth and analytical techniques to be applied will vary by project and by the nature and magnitude of the expected impacts. The key is to maximize the influence of EA on improving project design consistent with the significance of potential environmental impacts.

• **Public Participation and Public Access.** For many types of development supported by IFIs in rural areas (e.g. agricultural and area development projects), the most practical way of engaging the public is through participatory processes that are increasingly being undertaken as routine parts of broader project identification and design. An important feature of public participation is access by concerned parties to environmental assessment report(s).

The World Bank seeks to classify all projects into three categories:

**Category A:** Projects which have significant potential adverse impacts that may be sensitive, irreversible and diverse, particularly if they are sector-wide or precedent-setting, for which a full EA is required. In the agricultural sector such projects are likely to be for dams and reservoirs, forestry production, large-scale irrigation and drainage, land reclamation, resettlement, river basin development and large agroindustries.

**Category B:** Projects likely to have less adverse and less irreversible adverse impacts than those in Category A, for which a plan for mitigating the adverse environmental effects is expected to be necessary, but for which a full EA is not required. Projects falling in this category typically include rural electrification and roads, small-scale irrigation, aquaculture and watershed management projects.

**Category C:** Projects not expected to have negative impacts, for which no EA is normally required.

For projects in Category A, an EA should be prepared at least in draft or interim form well before final preparation so that the findings can be integrated in the project's design. For large projects having significant impacts, such as major dams or large-scale resettlement projects, independent specialists not connected with the project should be used to carry out the EA. In order to avoid undue delays in project processing, and provided that the financing agency involved agrees, preliminary, conservative estimates of project impacts may be used for preparation, pending the completion of detailed assessments before appraisal.

*Each financing agency and government has its own EA procedures and requirements but a project-specific EA should normally cover baseline environmental conditions; potential environmental impacts and enhancement opportunities; environmental impacts of design alternatives; preventive, mitigatory and compensatory measures; their costs and plans for their implementation; environmental management and training, and monitoring.*

**Useful definitions**

**Due diligence**
A generic legal concept that demonstrates all reasonable steps have been taken to prevent an unexpected occurrence of an adverse event (e.g. environmental hazard).

**Environmental Assessment (EA)**
The general process of assessing environmental impacts associated with human development activities which may include studies ranging from comprehensive (EIA) to more limited reviews.

**Environmental Audit**
A tool used to identify environmental concerns that may represent a potential future liability; audits are associated particularly with transfers of property.

**Environmental Impact Assessment (EIA)**
A tool used to identify and assess the potential impacts of a proposed project (or activity), evaluate alternatives, and formulate appropriate mitigation, management and monitoring measures (generally in the form of an environmental management plan).

**Environmental (performance) monitoring**
Planned activities required and implemented by the borrowing country to measure and evaluate environmental changes caused by a project, including health and socio-economic effects. Monitoring of complex projects may be facilitated by providing support documents such as handbooks on how the on-site mitigation and monitoring is to be done.

**Environmental scoping**
The preliminary phase of environmental assessment which identifies significant issues, frequently involving public participation in the process.

**Environmental screening**
The first phase of the assessment process where an initial ranking is assigned to a project indicating an estimated level of anticipated impact and a corresponding level of required EA “treatment”.

**Regional EA (REA)**
A tool that examines issues and impacts associated with a particular strategy, policy, plan, programme, or a series of projects for a particular region.

**Sectoral EA (cEA)**
A tool used to assess environmental issues and impacts associated with a sector-specific strategy, policy, programme, or series of projects, providing a basis to identify the necessary measures to strengthen environmental management in the sector.

**Strategic EA (SEA)**
A tool that promotes the incorporation of environmental considerations “upstream” from a project-specific EA into policy and programme formulation (e.g. structural adjustment and policy based lending).

**MODULE 6h**
PARTICIPATORY PROJECT PREPARATION

RURALINVEST

RuralInvest is a software tool that facilitates participatory analysis of small scale investment projects. RuralInvest was originally developed by staff of the Investment Centre of FAO in response to requests for a readily usable approach to the identification and preparation of investments much smaller than those traditionally considered in published guidelines.

The Purpose of RuralInvest is to provide a simple tool that can be used to formulate and approve small-scale projects (US$ 5000 to 100,000 projects) using local technicians and resources. In general, three possible procedures can be used to select and approve projects prepared at local level.

These are:
1. Applying standard procedures to all projects,
2. Using predefined investment models for each expected type of project,
3. Local-level project identification, design and analysis

The design and evaluation of projects at local level offers significant advantages, including:

RuralInvest may help to:

(a) the design of projects that arise from, and respond to, local needs, priorities and circumstances;
(b) the development of a local capacity not only to formulate and evaluate investment projects, but also to manage their own development process in a wider sense; and
(c) the creation of a real commitment to, and ownership of, the proposals on the part of the applicants, as a result of their participation in the formulation process.

RuralInvest provides the tools to achieve the objectives using a number of separate but interlinked modules which simplify the tasks of priority setting, project identification, detailed project design and analysis, and finally monitoring and evaluation of the implementation process.

RuralInvest distinguishes between two broad types of investment projects:
- those designed to generate income, that is, for profit, and
- projects whose principal purpose is not profit related.

The category of income-generating projects covers a wide range of possible activities: agricultural production, aquaculture, rural shops, irrigation, agroindustry, handicrafts, tourism, transport, the fabrication of simple machinery and spare parts, and marketing services. The category of non-income generating projects also includes a broad range of activities and can be divided into three distinct sub-groups:
- Production support: Including access roads and bridges, electrification and communications, as well as primary irrigation infrastructure;
- Social projects: Health and education services, provision of drinking water and sewage disposal, and support for community organization;
Environmental projects:

**The RuralInvest Modules**

RuralInvest covers a series of phases or modules.

**Module 1 – Participatory Identification of Local Investment Priorities**
The first module of RuralInvest is primarily community focused, particularly through its support for the creation of a local development plan from which the specific investment projects will derive.

**Module 2 – Creating and Using Project Profiles**
The core of Module 2 is the preparation of a project profile for each priority investment proposal. These profiles provide enough information about the investment to allow both the applicant(s) and the eventual financing source to see which ideas have potential, and are thus worth the further effort and resources required to develop them in detail.

**Module 3 – Detailed Project Formulation and Analysis**
The third phase of RuralInvest consists of preparing a more detailed project proposal, using the Module 2 profile as the starting point.

**Module 4 – Monitoring and Evaluation of RuralInvest Proposals and Projects**
Module 4 allows management staff to rapidly identify activity by a range of criteria. While the search and reporting function can be utilised at local office level, its principal usefulness is for the entire project or financing institution, permitting the monitoring and evaluation staff to receive, store and analyse details of all projects prepared under RuralInvest.