Strategies for Improved Social Protection in Asia:

Micro and Area-based Schemes (Theoretical Background)

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I. Background

A. The Poor of Asia

It has been estimated that close to 900 million of the world's poor who subsist on less than a US $ 1 a day, live in the Asian and the Pacific region. Almost one out of every three Asian is poor.[1] While it has been observed that the proportion of people below the poverty line had been declining, the trends in poverty reduction have recently worsened for a number or reasons. Foremost of which is on account of the last Asian financial crisis. Population growth is also creating pressure and has been responsible to the increase in the absolute number of the poor. South Asia which is one of the poorest subregions in the world, now has more than half a billion poor people, an estimated 450 million of whom are in India. The People's Republic of China accounts for about 225 million poor, and some 55 million more are in Southeast Asia. Many people in the Central Asian republics had been impoverished as a result of the economic disruptions of transition from command to market economy. The smaller island countries in the Pacific, in spite of their relatively higher per capita income, remain vulnerable because they are remote, prone to natural disasters, and have limited capacity to deal with external economic shocks.

B. The Vulnerability of the Poor to Shocks

The poor have high vulnerability to shocks and stresses that may arise from a variety of risks because they have fewer assets, reserves, or other opportunities to fall back to. In many developing countries in Asia, majority of the poor are in the rural areas (Table 1). Many of them may be characterized as follows:

(i) Subsistence or traditional farmers cultivating small farms not much larger than a hectare of land and their scale of operation is marginal;

(ii) Informal farm workers who have to contend with seasonal farm labor;

(iii) Small fisher folks in coastal villages; and

(iv) The unemployed among the rural communities.

Rural communities are exposed to many forms of risks. At times, whole communities have to contend with natural disasters, civil conflicts and national economic downturns. Specific rural households may experience crop failures, unemployment, illness, accident, disability and sometimes

1. "Fighting Poverty in Asia and the Pacific: The Poverty Reduction Strategy of the ADB" (October 1999)

death or old age of the major bread earner. When these things happen, the entire household sinks deeper into poverty.

Table 1. Poverty Indicators in Asian Countries

Country	Population in Poverty (%)		
	Total	Urban	Rural
East Asia			
Cambodia	36.1	29.9	40.1 (1997)
China PRC	6.7		6. 7 (1996)
Indonesia	18.2	15.1	20.2 (1999)
Lao PDR	46.1	24.0	53.0 (1993)
Malaysia	8.0		(1998)
Philippines	36.8	21.5	50.7 (1997)
Thailand	12.9	1.5	17.2 (1998)
Viet Nam	37.0	9.0	45.0 (1998)
South Asia			
Bangladesh	47.5	49.7	47.1 (1995-96)
Bhutan			
India	36.0	32.4	37.3 (1993-94)
Maldives	40.0		(1994)
Pakistan	32.6	25.9	34.8 (1998-99)
Sri Lanka	26.7	13.4	28.7 (1995-96)
Central Asia			
Azerbaijan	68.1		(1995)
Kazakstan	34.6	30.0	39.0 (1996)
Kyrgiz Republic	51.0	28.5	64.5 (1997)
Mongolia	35.6	34.1	32.6 (1998)
Tajikistan			
Turkmenistan			
Uzbekistan	22.0		(1996)
Pacific			
Fiji Islands	25.5	27.6	22.4 (1990-91)
Papua New Guinea	21.7		(1996)
Solomon Islands			
Vanuatu			
W. Samoa	48.0		(1997)

Source: World Bank 2000 World Development Indicators

C. Social Assistance for the Poor

Modern society has gone a long way and has learned to institute a variety of risk reduction mechanisms to mitigate the effects of risks. Many instruments dealing with most of the risks, particularly individual or idiosyncratic risks had been developed over time. Examples are social insurance like old age pension plans, health insurance, unemployment benefits, and other forms of social assistance. Yet, despite this development, many in the rural areas are not being reached by

such social measures because many of them cover only the formal sector of society and therefore have limited coverage.

Other forms of social protection instruments, especially those that are micro and area based, need to be examined to supplement existing social assistance to the rural communities and explore further their adaptability to rural areas. Among these micro and area based schemes are:

(i) agricultural insurance,

(ii) micro-insurance,

(iii) recent approaches to sustainable rural livelihood,

(iv) social funds,

(v) agricultural input subsidies,

(vi) price support programs, and

(vii) other micro and area based schemes.

It goes without saying therefore that for a systematic, orderly and sustainable growth of the rural sector, a comprehensive package of developmental policies, programs and support services have to be put in place in the rural areas side by side with measures to lessen the vulnerabilities of the rural poor.

This paper will attempt to discuss the various issues and the practical aspects of agricultural insurance, micro-insurance, sustainable rural livelihood programmes, social funds and other forms of area based support measures and examine how best they can benefit those who may otherwise be prone to the risks of poverty.

II. Micro and Area Based Instruments of Social Protection

A. Agricultural Insurance

In most DMCs in Asia, agriculture still remains to be the major sector. It represents a larger share of their gross national product and is still the primary source of employment. Moreover, agricultural products either represent a particular country's main staple and therefore vital for food security or an important export item. As has been the experienced of the industrialized countries, productivity gains in agriculture are necessary for industrialization.

It is also in this sector where the incidence of poverty is high. And yet, in spite of the importance of the sector, various initiatives taken to further develop it have often failed to deliver the

full benefits. Low levels of income, low capital-labor ratios, and the overall precariousness of agricultural production in general still characterize this sector. There is often a wide gap between the urban and rural sectors of the economy, not only in terms of technology but, more importantly, in terms of access to various services such as transportation, medical, educational facilities, credit and insurance.

1. Vulnerability to Climatic Risks

Unlike the other sectors of the economy, the agricultural sector is more prone to the vagaries of weather. This vulnerability to climatic risks has often placed it at a tremendous disadvantage and impeded its access to various services such as transportation, credit, insurance, marketing, and a host of other things. The onslaughts of natural disasters are wreaking havoc to rural communities and have reduced many of them to abject poverty. The region still accounts for nearly two-thirds of the chronically undernourished in the World (Unicef, 1997). FAO has estimated that by year 2010, the region will still account for about a half of the World's malnourished population.

2. How Rural Communities Manage Climatic Risks

Since time immemorial the farming communities have devised various ways and means to manage or to limit the adverse effects of natural risks through:

(i) crop rotation and crop diversification,

(ii) Inter-cropping,

(iii) use of low-yield but hardy varieties,

(iv) tillage systems,

(v) share tenancy,

(vi) development of non-farm incomes or other livelihood programmes,

(vii) socio-cultural practices which spread risks to the extended family, and

(viii) informal financial arrangements, and many others.

While these measures continue to be helpful, the problem of residual risks remains. Moreover, the farmers are subject to the common risk of a catastrophe and the aggregate group risk has still to be confronted. The insurance industry can play a major role here, and together with other rural development measures, considerably strengthen the security of rural communities.

3. The Concept of Insurance

Insurance has been defined as a financial mechanism, which aims to reduce the uncertainty of loss by pooling together large number of uncertainties so that the burden of loss can be distributed. Agricultural insurance therefore is merely extending the concept of insurance to the different agricultural undertakings be it production of food crops, fruits, flowers, industrial crops, plantation crops, livestock, and even aqua-culture.

In the highly industrialized economies and in many developing economies too, insurance has proven its worth as an effective instrument of risk management and is being widely used by the commercial and industrial sectors. While it is also being employed in agriculture nowadays, it still has to attain full development. There are a couple of reasons why agricultural insurance has lagged behind in development compared to, for example other forms of non-life insurance such as fire, property, marine, or casualty insurance. Perhaps it is influenced by the perception of many that insuring natural perils is a very risky venture because of the co-variability and catastrophic effects of weather-related risks. The other is that most insurance companies often lack or do not have the necessary skills or the expertise to evaluate and write agricultural risks.

In any event, there is a need to enhance the presence and employment of agricultural insurance as a financial instrument to manage the more severe and uncontrollable risks in agriculture.

4. Benefits of Agricultural Insurance

Agricultural insurance or its common example, crop insurance, is being bruited to bring about the following benefits:

(i) It protects farmers from unexpected losses arising from adverse climatic risks and other forms of natural perils thereby smoothening income fluctuations;

(ii) It enhances access of the insured to formal sources of credit since the crop insurance policy can serve as an alternative security for the loan, and thus free him from the clutches of usurers. Similarly, banks would be more willing to lend to farmers despite the absence of hard collateral;

(iii) It promotes the adoption of modern farming technologies promising better or higher yields as this would normally be required by the insuring entity;

(iv) It would make the farmers more aware of appropriate risk management techniques and practices as the insuring agency will insist on this;

(v) It emboldens the insured to invest the appropriate levels of inputs that bring about higher productions. This stems from the observation that poorer farmers are highly risk averse and are reluctant to engage in the high-risk, high-return activities that could lift them out of poverty. They fear that one slip could sink them deeper into poverty;

(vi) It will help preserve farmers' self respect as they will not appear as mendicants asking for help whenever they suffer losses after a natural disaster since claiming loss reimbursement from the insurance entity will be a matter of right; and

(vii) To a certain degree, it relieves the state from administering ad hoc disaster relief programmes which are definitely more expensive than agricultural insurance inasmuch as only the state is contributing to it unlike the latter wherein much of the payments are financed from premium funds pooled among several insured parties. The savings that government may derive from such a decision may be used to fund other schemes more dedicated to alleviate poverty.

It can be gleaned from the above that agricultural insurance serves to insulate farmers from certain uncontrollable risks and help them cope with the adverse effects of these risks via a formal risk sharing mechanism. It can also be a tool to enhance productivity in the farms, a necessary ingredient for development and uplifting the welfare of the poor, through the promotion of more profitable crops, adoption of modern farming technology, and employment of appropriate risk management practices.

5. Sub-Sectors in Agriculture and Applicability of Agricultural Insurance

In discussing the subject of agricultural insurance or in particular crop insurance, it would be helpful to classify agriculture broadly into different sub-sectors mainly on the basis of organizational patterns, and the extent of commercialization. This categorization may be as follows:

(i) Traditional or subsistence agriculture,

(ii) Semi-commercial and emerging agriculture,

(iii) Commercial agriculture, and

(iv) Specialized production systems.

It should be pointed out that these sub-sectoral groupings are not exclusive and that sometimes overlaps may occur. An agricultural unit may share the characteristics of more than one group. Moreover, agriculture in any given country may not necessarily be characterized by this classification; there may be two or three of these different groupings. It is also possible for an agricultural unit to fall into a different group in different countries. Even within each group, diversity arises due to variations in agricultural cycles, crop patterns, climatic conditions, landholding and institutional patterns. Nonetheless, a conceptual classification of agriculture into these four categories will facilitate the discussion of agricultural insurance.

a. Traditional or subsistence agriculture

A sizeable segment of agriculture in many countries of the Asian Region is being conducted by what may be described as subsistence, or tiller-farmer, or communal farmers. The salient features are that the production is mainly for subsistence, the size of the farm is small (averaging less than a hectare), and the extent of commercialization is minimal. The technology is rather backward, productivity low, and marketing of output after consumption is un-remunerative. There are no uniform international criteria for identifying farmers or peasants belonging to this group - definitions differ from country to country. It is common knowledge though that it represents a significant part of those engaged in agriculture in the developing world. Because of their magnitude, their interests could not be ignored, either politically or from the human, social, and economic points of view.

When agricultural insurance is discussed in the context of developing countries, it is usually with reference to this particular grouping. The problem of insurance in this sector is that the farmers are usually below the “threshold of insurability” for the products offered. Consequently, the schemes are not commercially viable and the private sector insurance, solely on their own and without assistance from the public sector, is unable to play a role. The schemes are usually carried out by the government through a state-owned organization or through any private sector organization or farmers’ organization with very heavy subsidization. Risks covered are wide and almost on an “all-risk” basis. This is being justified on the ground that a limited peril cover will not be of sufficient interest to small farmers dependent on a small farm. Premiums are kept as low as possible and

often subsidized. Although some form of actuarial calculation is being made as basis of premium calculations, no margins are kept (or loading factor provided) or, when they are, the margins or loadings are insufficient. It is often argued that since the purpose is to help a deprived section of the community, issues such as reserves, margins for fluctuation and impurities in data, do not fit in. Furthermore, the farmer in this category is perceived as unable to pay the commercially rated premium and often the government, or a bank or some other organization subsidizes a part of it, although the extent and manner of subsidization may differ. The number of farmers involved is large, and they are often widely dispersed and illiterate. It is therefore difficult to pay attention to loss control measures. Agricultural insurance for this group is seen as an instrument of government policy and implemented on welfare rather than as a commercially viable business venture. The end result is that a substantial deficit accumulates and has to be funded by the State.

b. Semi-commercial and Emerging Group

This group is composed of small and medium-scale farmers who are in transition from subsistence farming to producing agricultural produce for the market. These farmers generally have access to better technology, inputs and irrigation facilities, as well as credit. Sometimes they have close links to processing units. Examples of this group are sugar-cane growers supplying their output to sugar mills, tobacco farmers supplying raw materials to a tobacco plant, or individuals keeping a number of livestock or poultry supplying their respective marketing boards or food processors. As in the case of the rapidly growing middle class in developing countries, the semi-commercial farming sector is expanding quickly and has an important role in achieving productivity gains in agriculture. Opportunities exist for extending and gradually expanding insurance services to this sector.

In some countries, a public sector or state-operated and state-subsidized insurance schemes may also extend to the semi-commercial group due to the overlap of boundaries with the subsistence farmer group. However, the schemes that are operated in conjunction with the traditional or subsistence farmers relate only to one or two crops produced by the semi-commercial group. There is still a wide potential to be tapped by extending cover to other crops produced by the semi-commercial group. Moreover, because of the pre-occupation with the needs of administering welfare-oriented schemes for the subsistence sector, the schemes for the commercial or specialist production sector (which could be sustained viably) have not been adequately addressed.

Linkage of the semi-commercial farmers with formal credit sources and with multi-national firms that supply agricultural machinery and inputs could lead to savings in operating costs for the implementing agency of the agricultural insurance. Banks can help in the extension of insurance to their borrowers while the assistance of the multi-nationals can be sought for developing greater awareness in loss prevention and promoting the concept of insurance among farmers.

Since the semi-commercial or emerging group is not fully commercialized, some problems of the subsistence agriculture may still be present here as well. Although trade is commercialized, many semi-commercial farmers still have low-income levels and may still find it difficult to pay the full premium for a comprehensive cover. A start could therefore be made by providing either a restricted peril cover or a cover with high franchise. The premium for such a cover would consequently be low

without entirely discarding insurance cover where it would matter most - which is protecting the insured from higher levels of loss or catastrophic losses.

c. Commercial Farming Group

Farms in this group use modern technology, rely on financing, buy services of various types and utilize marketing channels. The distinguishing feature compared to the first two groupings is that the produce is entirely for the market. The scale of operation is large. Examples are tea, coffee, cocoa, oilseeds, oil palm and rubber plantations, large food grains or cash crop farms, and dairy and poultry farms.

In many developing countries in the Asian region, this particular group has not received much attention from the private insurance industry in an organized way. This could be explained by the fact that the insurance industry in this region often lacks knowledge of the subject and are deficient in skilled and trained manpower. Many of them therefore are rather hesitant to venture into an unknown area. It will take some time to change this outlook but effective steps to correct these shortcomings must be initiated. Given the size of the farms in this group, linkage with banks and various marketing channels, economies of scale can easily be achieved and implementation of a commercial type of agricultural insurance is possible and sustainable. With some efforts, enterprising private insurance companies could create a market niche for themselves.

d. Specialized Production Systems

This group represents a further stage of commercialization. Units in this group use capital-intensive and information-based processes, using advanced technologies. Production consists of non-traditional or specialized items, often for export. Large aquaculture farms, greenhouses, horticulture, hydrophonic vegetable production, and production of fruits and flowers under strict quality control for exports are some examples. In many developing countries, these activities are fast increasing and becoming a source of foreign exchange. Governments and the banking sector are supporting the growth of this group. In many instances, private insurance companies have provided the necessary cover with reinsurance backing. However, considerable untapped opportunity still remains.

Further discussions on agricultural insurance in this paper will delve only on the traditional or subsistence agriculture as well as on the semi-commercial sub-sector inasmuch as they are the main focus of social protection efforts directed at the rural poor.

6. Different Designs and Approaches to Agricultural Insurance

The design for agricultural insurance schemes may depend on the different factors to be considered and approaches to be applied, viz.:

(i) nature and characteristics of the traditional or small farmer groups,

(ii) coverage of crops,

(iii) scope of cover,

(iv) system of indemnifying the insured,

(v) assessment of loss (individual or area approach),

(vi) voluntary or compulsory schemes,

(vii) subsidized or non-subsidized schemes,

(viii) role of government, and

(ix) involvement of other agencies.

Nature and characteristics of the traditional and small farmer groups - As explained earlier, different groups of farmers have varying capacities, outlook and inclinations to insurance. The traditional and subsistence agriculture sub-sector for instance and perhaps the semi-commercial and emerging agriculture sub-sector too, may have difficulty paying market-dictated premiums. Yet, many of them are more inclined to opt for an all-risk type of insurance cover which cost more compared to specific risk or named peril type of insurance coverage.

Generally they tend to be risk averse in their approach to production in that they try to hold back on higher farm investment promising higher returns for fear that they might be worse of when their crop fails. This risk averse characteristic may even affect their decision to buy insurance which is an added cost.

The magnitude of farmers in these two groups is large, often widely dispersed. Also, many of them are not too literate and may encounter difficulties in understanding the complexities of insurance.

A practical design of agricultural insurance should take cognizance of the characteristics of this particular group of farmers. Where certain aspects of the design run counter to some of the observed characteristics of the group, concerted efforts should be made to educate and explain to them the benefits of such a move.

Coverage of crops - Which crop or crops will be covered by an agricultural insurance scheme will depend upon the importance of these crops to a particular country. Most often the choice boils down to the following:

(i) Crops that are farmed by a greater number of the farming population,

(ii) Staple foods or those that are vital to the food security of the country,

(iii) Export crops,

(iv) Crops that are being promoted by the government, and

(v) Other crops wherein the stability of the cultivation system has been established.

Scope of cover - Losses from war, civil commotion, and nuclear-related risks are not included in the insurance contracts. This also applies to agricultural insurance. Financial losses due to price fluctuations are likewise not insurable. Loss of quality is also generally excluded. However, for certain crops where quality is of great importance, insurance may be extended only after the insuring entity is convinced that a methodology for assessing the extent of a loss in quality can be established. Examples are insurance for flowers and oranges.

The most common perils to which crops are exposed to are: fire (including lightning), hail, frost (including snow), windstorms (hurricane, typhoons or tropical cyclones, tornadoes), rainstorms, floods, droughts, damages by birds and wild animals, vandalism, earthquakes, landslides, avalanche, volcanic eruptions, pests, insects and plant diseases. Some of these perils are manageable while others are simply beyond the farmers' control. When damage occurs at an identifiable time and is of short duration such as fire, hail, and earthquakes, the perils are manageable. Frost, windstorms, rainstorms and floods are the intermediary categories of risks where the cause of loss or the proximate cause, is still determinable but the farmer has an influence on the extent of loss. Pest infestation with exception of locust attacks, plant diseases and damage by birds and animals show up gradually and it its difficult to establish whether the farmer took sufficient care to avert the damage. Risk of drought or prolonged dry spell, although important from the point

of view of the farmer, is difficult to insure due to its wide-ranging effect in terms of area and non-independence of random events.

The main issue in this particular criterion is whether the crop insurance to be designed should follow a single-peril (or named-peril) model when one or a few identifiable perils are insured or the multi-peril or all-risk model when compensation is provided whenever the yield falls below a specified point and a large number of perils are insured.

Setting the premium rate. The determination of the appropriate premium rate is of paramount importance in the design of crop insurance. While sufficient revenues have to be generated to meet the payment of claims, the premiums to be charged should be perceived as reasonable and affordable. This has been the rule of thumb followed by many in designing a sustainable crop insurance scheme.

Premiums are normally computed actuarially based on historical data of losses modified accordingly depending on changes or improvements in farming technologies or climatic changes. This will then be adjusted to incorporate loadings for several factors, which can be broadly grouped into two categories: those that relate to the risk, and the other to provide for administrative expenses and a margin for profit. The first element in the risk category is the actual distribution pattern of losses. It is usually hypothesized that as the size of individual losses increases the probability of their occurrence declines. Thus, a normal distribution pattern around the average yield is presumed. But this may not necessarily be the case, and loading may be necessary to take into account the skewness of distribution. Secondly, loadings may be necessary to meet the problems of moral hazards and adverse selection, which are ever present. These problems can also be countered by providing partial insurance, or by keeping the threshold yield for entitlement of indemnity low or by reimbursing only a part of the input costs. Thirdly, a loading is required to set up reserves to answer for catastrophic losses, and impurities in the statistical data. It should be emphasized that it is important to keep the loadings as modest as possible. The general perception is that overly generous and substantial loadings are being made which result in high premiums, which are unfavorable and disadvantageous to the insured.

The issue in this case is whether such approach should be discarded and simply assign a nominal premium rate if and when a crop insurance program is to be designed for the subsistence or traditional farming sector.

Many experts hold the view that the actuarial approach to premium setting be maintained at all times. Should the resulting rates are way beyond the affordability of traditional or subsistence farmers, they should be so maintained at that realistic levels. However, other arrangements can perhaps be explored (such as the public sector subsidizing part of the premium costs) so that the traditional and subsistence farmers can participate. In this way, poorer farmers will not unnecessarily be excluded from the protective mantle of a social measure such as agricultural insurance. This is vitally important to the future evaluation of the actual performance of the programme where costs can be compared with revenues from actuarially determined premiums and investment income. This type of information might be of interest also to prospective private investors who may decide to take over the operation of such a programme or be in partnership with the public sector.

System of indemnifying losses. There are two principal systems of indemnity under the crop insurance. The first is if the yield falls below a stipulated level due to insured peril (which can be single, multiple or all-risk), the insured farmer is indemnified for the value of the shortfall in the yield. In this case, it becomes necessary to wait until the crop cycle is complete to assess the shortfall in yield. Note that while waiting for the final outcome of the harvest, management of the farm in the meantime is crucial and can influence the result of the yield. The problem of moral hazard therefore assumes key importance. The second approach is to indemnify the farmer on the basis of the amount of investment or costs of production inputs already put into the insured farm at the time of occurrence of the insured peril/s. Hence, it may be necessary to come up with a matrix of costs at different stages of the insured crop to provide the basis for calculating the amount of indemnity. The composition of these costs may differ depending upon the practice in each particular country. A cost-based system of indemnifying the insured provides a lower indemnity and hence the premium is lower and more affordable as compared to the yield- based system.

In agriculture, minor fluctuations in yields occur even in normal years, and quantification is always a problem. It is therefore necessary for crop insurance schemes to exclude small recurring variations in yield or not entertain claims of this nature. The situation is somewhat similar to a stop loss reinsurance contract, wherein the re-insurer does not step in to stop the loss until the insured company has borne the loss up to a specified extent. A cut-off point is therefore stipulated, which has to be reached for claims to become payable. This principle of a cut-off point can be applied to both the input-based and yield-based indemnity systems. The insurance company may also employ

a *deductible* (a part of the loss which must be borne by the insured) or a *franchise* (loss expressed in amount or as a percentage of total loss which must be attained before the insurer becomes liable to pay). These are employed to control moral hazards and avoid small, recurring claims that eventually turn out to be costly to both the insurer and the insured.

Assessment of loss. In all classes of insurance, the efficiency of the system use to quantify the extent of loss is critical. The existence of a proper loss assessment mechanism is of paramount importance. The perception of farmers that the assessment of their losses is fair and just will make the programme popular and acceptable. Otherwise the credibility of the program is diminished. A proper system of loss assessment is also vital to maintaining financial viability of the insurance scheme. No amount of actuarial study can address the financial bleeding caused by an unreliable and dishonest loss assessment set-up. There is always this danger in agriculture inasmuch as the areas are large and widely dispersed and there are many points where leakages can occur, particularly because accounts and record keeping may not be up to desired standards.

There are generally two approaches in assessing losses: (i) the individual approach and (ii) the area approach. In the individual approach, losses are assessed on an individual or per insured farm basis. At a certain point in time, a loss adjuster or a team of loss adjusters visit/s each insured farm individually and determines the extent of loss in each. In the case of the area approach, losses are not determined in respect of each insured farmer, but collectively for all the insured farmers in the "area" taken as a unit. Claims are settled for all farmers in the area irrespective of their own yields, be they be higher or lower than the average yield of the area. There are several pros and cons to each of these two approaches. Suffice it to say that the adoption of each approach will depend much on the social norms and the environmental peculiarities of a specific country.

Voluntary or compulsory scheme. Reaching the traditional sector farmers individually is not only difficult but also impractical to do because the costs of delivery and servicing are likely to be prohibitive. For practical considerations therefore, it may be advisable to make the program obligatory or automatic, either by means of legislation or by mandating all those who get directional credit (often under soft or liberalized credit terms).

There has been considerable debate as to which system is more desirable. Mostly the point of discussion revolves more on the ideological issue of individual rights and freedom. What is sometimes described as compulsory or obligatory is often an arrangement for an automatic

insurance cover for a group of farmers, such as banks requiring insurance whenever credit is given to that group. At any rate, in the context of the traditional farmer sector and perhaps for the semi-commercial or emerging sector too, making insurance obligatory for the purposes of having a wide base to insure the sustainability of the programme may be regarded as being in the larger interest and therefore there should be not much objection to it.

The role of government. Studies show that public sector involvement in multi-peril insurance has failed for several clearly identifiable reasons, which include: very high administrative costs; and, political inability on the part of governments to charge market-rated premiums and enforce impartial loss adjustments. In regard to small farmer insurance schemes however, the options seems to be very limited. Most often the private sector is unable to play a role. Thus, the public sector is usually called upon to implement the programme. Many small farmer crop insurance schemes are being implemented by government through some of its line ministries or by a parastatal institution created for the purpose. Government also provides subsidy in the premium and reinsurance support in cases where the private sector reinsurance market is not able to do so.

It is seen that government's entry should simply be to pioneer and after a while demonstrate to the private sector the prospects of viability of the scheme and its long-term sustainability. It should be ready to privatize its involvement in the programme once the private sector sees some business opportunities in it. In this regard, some form of inducements like offering tax holidays, subsidizing part of the costs of operation as practiced in the U.S.A. crop insurance scheme, providing long-term credits at nominal interest rates, guarantees, etc. may be dangled to draw in private investors.

Involvement of other agencies/entities. The actual implementation of the crop or agricultural insurance can be linked for example with the operation of a bank providing credit to the rural communities, with the agency of government responsible for undertaking extension services, the marketing board that is handling the gathering and marketing of the produce, and/or other agencies or entities that perform some kind of service to the farming communities, e.g. cooperatives, trade unions and other farmers organizations. This kind of an arrangement can be undertaken on a quid pro quo basis as one could do something for the other and vice versa without too much additional effort on the part of either party. The banks for instance can perform some kind of underwriting work in behalf of the agricultural insurance entity, issuing insurance policies to insured and collecting premiums from them. In return, the insuring agency may course indemnity payments to farmers

through the banks upon prior arrangements with the insured that part or the entire amount of the indemnity should first be utilized to settle the insured's loan obligations with the bank before any part of it goes to the insured claimant. Similar arrangements can be established with the other agencies and institutions. Moreover, there is always an advantage if insurance is offered as part of a package of services to the farming community because not only is the issue of cost reduction being drastically reduced via the various linkages with other programmes but marketability of the insurance product is enhanced if the programme (like credit) to which it is attached is badly needed by the prospective client.

Sometimes, agricultural insurance can also be linked with disaster relief programmes, each programme complementing or reinforcing the other without necessarily being at odds with each other. One country in particular came up with a policy guideline providing a higher level of disaster relief assistance to those who have earlier secured a crop insurance coverage compared to those who did not. This is perhaps based on the principle of helping more those who tried to help themselves first. On the other hand, where the two programmes are not closely linked to each other, disaster relief measures tend to undermine the operation of crop insurance and reduces its sale-ability to farmers considering that they would be receiving some form of assistance anyway with or without the insurance.

7. Financing Requirements of Agricultural Insurance

As in any other form of insurance business, the financing requirements for establishing an agricultural insurance scheme may involve the following:

(i) Capital funds large enough to meet a catastrophic loss when it happens; and

(ii) Operating funds to answer for current routine claims and operational expenses when there are time gaps between receipt of premiums and payment of expenditures.

The amount of capital needed to answer for catastrophic losses can be calculated by looking into past loss experiences or loss patterns covering a considerable period of time (preferably not less than 10 years) by doing an exercise as if the insurance scheme has been in operation as at that time. For a nascent scheme, this is a must as usually reinsurance arrangement for such a large loss cannot be arranged in view of the newness of the programme. Also, there should be a provision in

the capital funds to take care of the timing gap between receipts of revenues and payments of claims and operating expenses.

It has been earlier emphasized that agricultural insurance schemes targeted at small, traditional and subsistence farmers may require premiums and administrative expenses to be subsidized, as also funding of the deficits accumulated by the programme. Schemes implemented so far in the developing countries have not been particularly successful and many of them have a weakness. Some of them had to be discontinued or substantially modified.

Peter Hazell of the World Bank (1992) cites the experience with public-sector crop insurance programmes in seven countries as summarized in the following table:

Table 2. Financial Performance of Public Crop Insurance in 7 Countries (Hazell)

Country	Period	I : P	A : P	(I+A) : P
Brazil	1975-81	4.29	0.28	4.57
Costa Rica	1970-89	2.26	0.54	2.80
India	1985-89	5:11	NA	NA
Japan	1947-77	1.48	1.17	2.60
	1985-89	0.99	3.57	4.56
Mexico	1980-89	3.18	0.47	3.65
Philippines	1981-89	3.94	1.80	5.74
USA	1980-89	1.87	0.55	2.42

I: P – Ratio of indemnities to Premiums; A: P – Ratio of administrative costs to premiums; NA – Not available

Note that in all cases, the loss ratio (ratio of indemnities plus administrative cost to total premium) exceeds 2. Two extremes are noteworthy: In Brazil, the ratio of indemnities to premiums is very high at 4.29: 1 while the administrative cost was relatively low at 0.28 : 1. In Japan (1985-89), the ratio of indemnities to premium was barely below 1 while the administrative cost exceeded premiums at 3.57 : 1. Another lesson can be drawn from these examples and that is, one must invest a great deal in expensive administrative and monitoring structure before having a crop

insurance program that will be actuarially sound. In the countries presented above, the farmers are better off with insurance as there is a net transfer in their favor as shown by the fact that indemnities paid to them far exceeded the premiums they paid.

Since agricultural insurance especially for traditional and subsistence farmers is usually not commercially viable and the private sector insurance industry is not able to play a role, it now appears that official intervention by government is inescapable. Perhaps this can be looked at as extension by the state of support measures under the social protection programme for the poor.

These are the usual justifications why most agricultural insurance schemes for small, traditional and subsistence farmers in the world, including those being implemented by a few DMCs in the Asian region, are being funded and subsidized by the public sector. In some schemes however, they are able to distribute the premium burden, which is supposed to be paid by the insured farmers, with the banks lending to these farmers, or marketing associations, and government bearing portions of it. In instances where budgetary appropriations are not enough, some governments impose taxes or levies on users or buyers of the product/s.

8. Reinsurance Support for Agricultural Insurance

By means of reinsurance, primary carriers of insurance business can have access to the underwriting capacity and capital of the world market. However, such facility can be made available only to fully developed and technically viable insurance businesses. At the present time, majority of the reinsurance business involves property, casualty and marine insurance lines. The agricultural insurance business has not developed as fast and has lagged behind compared to the other lines.

Through reinsurance, the risk of loss can be spread globally. It is an ideal financial mechanism to address the problem of catastrophic losses which because of their co-variability an entire country can be adversely affected. A reinsurance facility can spread this burden of loss across national boundaries and at times can be a major source of precious foreign exchange for a country reeling from a national disaster.

In agricultural insurance, this exposure to co-variant catastrophic risks is more pronounced. Therefore, its need for reinsurance support to address the problem cannot be overemphasized. The problem, however, is that when it involves reinsuring agricultural insurance business, many developing countries facing high risks of natural catastrophic exposure have not had the market

access nor the industry collaboration required to tap into the world reinsurance market. Access is only possible if the reinsurance market has trust and confidence in a country's agricultural insurance programme. This can be achieve only if re-insurers believe in the objectivity of loss estimations and payment process, absence of moral hazards or adverse selection, independence from political influences, and the spread, size and sustainability of the country's programme.

Of the countries now implementing an insurance programme, only a few are known to have a tie-up with the international reinsurance market. Most of the reinsurance facilities being provided are of the "excess of loss" type of reinsurance. Other countries have to be content with some form of reinsurance arrangement being provided by their respective governments.

B. Micro Insurance

1. Concept and characteristics

The use of the term micro refers to the ability to handle small-scale cash flows (by way both of revenue and expenditure) and not really to the size of a scheme. Thus, the subject micro-insurance is a mechanism to pool both risks and resources of whole groups, to provide protection to all members against financial consequences of mutually determined risks. Because of the small-scale nature of their operation, micro-insurance's' primary aim is usually to help their members in meeting the unpredictable burden of out-of-pocket expenses. They do not aspire to provide comprehensive insurance cover, still less to pay income-replacement benefits as are usual in ordinary commercial insurance business. Perhaps a more apt description of the concept is voluntary group self-help schemes for social insurance. The underpinning of micro-insurance is that excluded populations have not been covered under existing social insurance schemes. Such level of exclusions is high among rural communities in view of their informal situations. For example in the case of exclusions from health services (1990-1995), it is estimated that 20 per cent of total population in all developing countries and 51 per cent in the least developed countries are excluded[2]. Insurers, in general, have done little to include these particular segments of society because of the unattractiveness of this market and high administrative costs. Another factor is that most rural residents have foregone claiming access because of their lack of empowerment within the society they revolve. In theory, micro-insurance can hurdle these factors by effectively adapting its

2. Micro insurance: Extending health insurance to the excluded, by David Dror and Christian Jacquier.

operation to the living and working conditions of the people, which are usually area- or trade-specific, in order to be attractive to the excluded population. Effective adaptation can materialize if the population can express their needs and priorities; and acting as a group, if they can forge a receptive public opinion towards insurance. The process requires trust-building measures to mitigate the public's criticism to up-front payments in return for a future benefit.

Usually affiliation to the scheme is voluntary. It is therefore important to have a thorough understanding of what motivates most individuals to join. The underlying motivation for joining a micro-insurance unit is assumed to be economic, that is driven by the desire to seek reciprocity in sustaining risk sharing arrangements among individuals equally interested. A second motive is perhaps people's desire to improve their status by controlling the conditions in which they live and work. In general, people are not isolationists. They have a deep-rooted need to seek voluntary and repeated interactions with others. Persons who are formally employed transfer part of their attachments from the family and the immediate wider community to the workplace in return for the rewards gained through employment. The informal sector can not do so because of lack of access to a work place or social protection that is available through it. The alternative source of support is the community. Community members rely on each other in many ways, and refer to each other in a context of roles, values, habits and customs, to satisfy moral and material needs. These links can help to improve the conditions of life, provided that individuals adhere to collective objectives[3]. There is also the perception that outside pressures enhance group cohesion. Thus, members may also join micro-insurance in response to group cohesion pressures.

The ultimate test of affiliation is payment of premiums. Micro-insurance can be relevant if it is able to smoothen income fluctuations due to large temporal variations in the flow of income, which is characteristically typical for the rural and poor populations.

The next characteristic of micro-insurance is the choice of risks that are covered. There is no standard model for the design of the package of benefits that micro-insurance would provide. The choice of the risks to be covered and the benefit package to be provided actually depends on the amount of reserves accumulated and the specific perception of the community as regards priority risks and benefits. Micro-insurance is structured to harness group dynamics through a process of autonomous decision-making. Hence, the process of defining the risks is not only consultative but

3. Ibid.

also consensus-seeking. Also, this decision-making process supports acceptance by individual members of the priorities of the group and sustains self-interest by enabling individuals to influence the group's choice, something that is not present in formal insurance schemes.

2. Where the scheme is best suited

Speaking of risks, micro-insurance units may thrive well in idiosyncratic risks in view of their limited scope of operation area-wise and community-based nature. Co-variant risks may be detrimental to such schemes unless micro-insurance units having similar operations are replicated in several areas extending beyond regional boundaries and federated at a higher level so that reinsurance or co-sharing of risks can be effected.

The use of micro insurance as a hedge against certain agricultural risks is not widely known. There is a dearth of literatures concerning micro insurance in regard to agriculture.

Mr. J. Y. Nouy, in his 1985 paper entitled *The Function of Insurance in Agricultural Development Programs,* provided an example of the concept. He said that in the French provinces at the beginning of the twentieth century, a small community of livestock farmers (local mutual) would agree to compensate anyone of them who suffered loss of his livestock. The mutual is headed by a chairman, who presides in a general meeting held quarterly. In these meetings, those who had suffered a loss made this known to the other members. The chairman would then collect the necessary funds from among the members and compensate the victims on the spot. Any leftover cash is redistributed to the members. The operation was thus extremely simple and transparent because it was witnessed by all the farmers, who then discovered in insurance a new form of solidarity. Operating costs were very low, and the good faith of all concerned could be attested to by the members who were aware of the reality of the loss. The farmers were thus made responsible for their own insurance, individually and collectively.

In another vein, this writer is witness to a more or less similar case in the Philippines wherein certain farmers cooperatives, because of their disillusionment with the government's national crop insurance programme, experimented on insuring their members against the usual risks covered by the national programme. Thus with the aid of the bank providing them credit, the cooperative would then collect from the proceeds of their member-farmers' loan an amount which will constitute the insurance fund and deposit the same in the bank for safekeeping. Any of their members who will

suffer a loss will be compensated from out of the insurance fund. For a short while it was going smoothly but after barely two years, they realized that many of the risks they were covering are co-variant such that when there is a loss almost everyone in the area is affected. As the funds are not enough to cover all the payouts, the scheme died a natural death.

The last example demonstrates the danger of operating a micro insurance scheme that covers only a very limited area as you are not able to effect the spreading of the risks spatially, more so when co-variant risks are involved. The need to federate at the national level is therefore imperative so that risks can be spread across regions and over a wider area. The previous example provides some hint of utility for micro insurance when it comes to idiosyncratic risks that are independent of the others as in the loss of a livestock except during times of epidemic.

On the other hand, several countryside micro-insurance schemes covering certain types of health care, death and disability benefits to their members have withstood the test of time and have grown through the years. One such example of the scheme[4] is presented in

Box 1. The SEWA Integrated Social Security Scheme, India

The Self-Employed Women's Association (SEWA) is a registered trade union working mainly with women in the unorganized sector. Since 1972, its struggle has been to ensure that the minimum wage is obtained, to provide legal recourse where necessary, to target overall work-security; and to ensure democratic representation at every level of the organization. Membership in the trade union is almost a quarter of a million. They are mostly often hawkers and vendors, home-based workers and laborers.

SEWA's Integrated Social Security Programme is the largest comprehensive social security scheme in India today for informal workers, and presently ensures 32,000 women workers. The scheme covers health insurance (including a small maternity benefit component), life insurance (death and disability) and asset insurance (loss of damage to housing unit or work equipment).

SEWA members can choose whether to become members of the scheme (at present, approximately 14% of all SEWA members are insured). The asset and health components come as a package and life insurance is an option. The total premium is approximately Rs. 60 (or US$1.5) per annum for the combined asset and health insurance package and an additional Rs. 15 provides life insurance as well.

Premiums and benefits are presently being restructured. Membership and claims processing is done through the SEWA Bank, along with considerable field presence and grassroots organizing from SEWA Bank staff and SEWA Union staff. Mobile services are also available for premium collection (which are normally associated with microfinance deposits and loan repayment collections

The scheme components have been developed on a purely demand-driven basis over 25 years of close involvement with members. Bureaucratic hurdles through claims handling with the partner insurance committee (composed of members) hears petitions for claim rejections and suggestions for future improvements.

…continued.

4. Learning from experience: A gendered approach to social protection for workers in the informal economy, by Francis Lund and Smita Srinivas.

Box 1. Continued.

One-third of the premium is financed through interest paid on a grant provided by the German Technical Development Agency (GTZ); one-third through the direct contribution by women workers; and one-third through a subsidized package scheme provided by the Life Insurance Corporation of India and the United India Insurance Company. The Indian Ministry of Labor has been actively involved in the negotiations with SEWA and provides a subsidy through the Life Insurance Corporation of India.

SEWA has also designed the payment of the premiums to suit different income groups among the very poor. A fixed deposit scheme of Rs. 500 and Rs. 700 is available to those who can make a one-time payment for life membership of the insurance scheme. The interest on their deposit goes towards paying the premium. Annual payments are also available, as are monthly payments, although the latter require higher transaction costs and greater monitoring to prevent members from leaving once benefits are used.

During the more than two decades that the SEWA has been in operation, many women members have been achieving rising incomes. SEWA hopes that the social security programme will further protect and boost women's income and assets.

The SEWA example is showing that not only can social security provision exist for informal economy workers, but also that workers are willing to pay increasing amounts, as long as the service is appropriately designed and sensitive to their needs. Most importantly, it demonstrates a first big step towards significant government and NGO participation in a scheme for informal economy workers that is comparable to government involvement in statutory social security provision for the formal economy[5].

It is estimated that in localities where they exist, micro-insurance schemes usually attract about 25% of the targeted population. The only schemes that manage to achieve higher penetration rate (between 50 to 100%) are those in particularly closely-knit communities or groups such as trade unions or professional associations. The percentage, though far from satisfactory, is much higher than that achieved by social insurance schemes open on a voluntary basis to all self-employed. This is perhaps due to the fact that micro insurance contributions are very much lower and the scheme's focus on providing only those benefits which are perceived by people as most urgently necessary.

In as much as most of the micro-insurance schemes remain fairly small, it is vital to determine in what mechanisms and under what form of partnership their coverage can be expanded. One option is that similar micro insurance units form organizations among themselves to achieve various objectives, such as stronger negotiating power in relation to government as well as various providers (like health cares), sharing of knowledge and greater financial stability through re-insurance. Another option is to devote more efforts to the marketing of micro insurance, since a large

5. Ibid.

percentage of the target population is still not well informed of the benefits that insurance can provide. Linked to this is the need to strengthen the credibility of micro insurance. Subsidizing the programme will no doubt expand its coverage, but this is entirely dependent on the capacity of the state to redistribute income through the tax system from the rich to the poor. Other forms of partnership may also be necessary. As in the SEWA example, such schemes may team up with, or receive support from, larger organizations in civil societies like cooperatives and trade unions. They may also seek to involve other private companies and social security agencies that have already a well-functioning administrative machinery. Experiences with scaling-up efforts[6] show that two kinds of changes are needed: the culture and organization of participating institutions as well as in the linkages and forms of collaborations between institutions. The role of government is also critical for the successful upscaling of these schemes.

At the local level, there is need for experimenting area-based social insurance schemes, which aim at full coverage within an area and are mainly run by local government in collaboration with a wide array of possible partnerships. Compared to occupation-based schemes, the area-based schemes have the advantage of low administration cost, and that local participation and control can be included in the design of the project. This is most suitable for social health care financing, since it can take into account the provision of not only curative but also preventive and promotional activities. Besides, coverage could readily be extended to other areas more quickly because it would be easy for government to replicate the schemes under similar conditions.

At the national level, governments are in the best position to ensure that particular experiences can be replicated to cover as well other occupations, sectors and places. It can also create enabling environment with which micro insurance schemes can develop.

C. Farm Subsidies and Price Support Schemes

Farm input subsidies. The subsidy may vary depending on the kind of input being subsidized. Oftentimes they take the form of price subsidies extended by government for the cost of seeds, fertilizers or farm chemicals, which are provided during emergencies (state of calamities) or during times of extreme volatility of prices of these inputs. Or they may take the form of indirect subsidy in the form of public support for research and technology development producing vastly

6. Wouter van Ginneken, ILO (November 2000).

improved seed varieties that are high yielding, resistant to pests and diseases and adaptable to local conditions, and making these improved seed varieties available to farmers at affordable prices. Another example is the widespread immunization of livestock undertaken by state agencies either for free or at very nominal prices to prevent the incidence of epidemics.

Price support, price intervention or price stabilization measures. The idea behind these measures is to prevent prices of farmers' produce from falling below a certain price level in times of highly fluctuating prices due to internal or external factors which can drastically result to negative income of farmers. This may take the form of government buying the produce directly from farmers through any of its instrumentalities, or providing subsidies to big traders to procure or buy agricultural produce at government-dictated prices.

D. Sustainable Livelihood Programs

1. The new framework

Until recently, poverty has been mostly measured against income and consumption criteria. The sustainable livelihood concept of poverty includes as well people's insecurity or vulnerability; lack of a sense of voice *vis-a-vis* other members of their household, community, or government; and levels of health, education, and access to assets.

It is on this new understanding of poverty that a new framework has been developed for sustainable livelihood among several options to combat poverty. It considers livelihood as comprising of the capabilities, assets (both material and social resources) and activities required for a means of living. A livelihood is sustainable if it is able to withstand the stresses and shocks of the environment in which it operates and still maintains or enhances existing capabilities and assets both now and in the future, while not undermining the resource base.

The framework identifies five types of capital (human, natural, financial, social and physical) upon which people may draw upon to pursue a variety of activities. These activities are driven in part by their own preferences and priorities. However, they are also influenced by the types of vulnerability, shocks, overall trends or seasonal variations. The choices are also affected by the structures (roles of government and the private sector) and processes (institutional, policy and cultural factors), which people face. On the whole, these conditions determine their access to assets and livelihood opportunities, and the way in which these can be converted into desired objectives.

The objectives or outcomes may come in the form of increased income, increased wellbeing, reduced vulnerability, improved food security, or more sustainable use of natural resource base.

In a broader perspective, sustainability may not just refer to natural resources or to stocks of physical capital. For certain specific livelihoods to be maintained, the institutions underpinning them (whether traditional, government or commercial) need to be sustained. This would imply, for example, that state subsidies or any other intervention in response to market failure should be sustainable.

2. Approach to sustainable livelihood implementation

The implementation of a sustainable livelihood approach[7] suggest that it helps to bring together various viewpoints on poverty and integrates the strategies to eliminating that poverty; makes more explicit the choices and possible trade-offs in planning and examining different development activities; helps on the identification of constraints and problems and the means of overcoming them; helps to link a better understanding of poverty into policy and institutional change processes. The approach also identifies some practical difficulties in:

(i) Understanding how conflict over access to resources impinges on livelihood choices, and what can be done to address it;

(ii) Developing cost effective modes of livelihood analysis which ensure that the needs of the poorest are prioritized;

(iii) Identifying appropriate in-country partners, and developing collaborative approaches to understanding the complexity of poverty and integrating that understanding into a common livelihoods frame;

(iv) Understanding how, in practice, to handle trade-offs, for instance between local measures (e.g. for increased short-term income or better infrastructure) and wider concerns about resource sustainability and national-level policy considerations.

To put flesh to these discussions, the paper[8] on *Aquatic Resources and Sustainable Rural Livelihoods* is cited as working tool. The role of aquatic resources in sustainable rural is characterized by diversity in the resource base, habitat/environment, the resource-users and the ways in which they exploit these resources and incorporate them into their individual strategies. The

7. DFID
8. Authored by Philip Townsley.

variations in these aquatic resources as well as their habitats require different approaches and paraphernalia in exploiting these resources.

Culture technologies of a wide range of relative sophistication can either make use of existing aquatic environment or create new or artificial ones. The levels of investment, and so the user groups may shift considerably as a result.

The fishery business may be categorized into: capture fisheries; aquaculture; enhancement fishery; and post-harvest fishery.

Fisher-communities exploiting open-water fisheries have distinctive social and cultural features, marked by stratification between the owners of productive assets and labor, and dependent relations between producers and trader/financiers who link them to markets. They live in clearly demarcated and physically separate communities and have culturally defined links with the surrounding communities. This group is oftentimes identified as being the “poorest of the poor” and fishing communities are characterized by over-crowded living conditions and inadequate services, low levels of education and lack of the skills and assets which would permit diversification of their livelihoods.

Aquaculture has more in common with agriculture production. The entire mode of production is akin to livestock husbandry than the hunting of wild fish. Different types of aquaculture have different resource demands. Some requires access to land for ponds and to water supply, both of which may not readily available to some sections of the rural poor. But aquaculture integrated with other agricultural activities can also improve the productivity of small and marginal farms or areas of land, which cannot be used for traditional agricultural activities.

Stock enhancement in freshwater areas is a relatively new option, which involves increasing and/or diversifying the biomass in existing water areas. Some traditional means of aggregating aquatic resources can also improve habitats for naturally occurring fish. In marine areas, artificial reefs can be used to improve aquatic habitat for reef fishes and discourage destructive fisheries such as trawl fishing.

The highly perishable nature of aquatic products means that relatively well-developed and efficient marketing systems are critical. Fish marketing and support systems can fulfill numerous other important functions, notably credit provision and communications in rural areas. Where aquatic resources can not be sold fresh, they generally require rapid processing - by drying, salting, smoking

or fermentation. This generates further opportunities for employment and income generation in resource-adjacent communities. Opportunities for women in the processing and marketing are important in parts of Asia and, particularly in West Africa, where the entire post-harvest sector is dominated by women.

Open-access fisheries and other forms of aquatic resource-use are fallback options for the rural poor when loss of land or failures in access to other rural activities threatens their livelihoods. They can therefore constitute an important stabilizing element in rural livelihoods for those households most vulnerable to changes in land-based activities.

Most aquatic resources are common pool resources. Growing population and the attraction of the cash income potentiality generated by fisheries constitute a threat to unsustainable levels of exploitation unless some forms of control are introduced.

Lack of regulation of access can have particularly negative impacts on those with more exclusive dependence on aquatic resources. Groups of fishers often have limited alternative livelihood options and this makes them particularly vulnerable to changes in the condition of, and access to the aquatic resources on which they depend. From their point of view greater control is advantageous as long as they themselves are included among those with access rights. However, such controls can often result in the exclusion of a larger group of rural people in favor of a limited community of more intensive resource users.

The state generally continues to play an important role as steward of aquatic resources, deciding how resources should be allocated and when they should be preserved. At times, the institutions governing aquatic resources rarely represent the complete range of users involved in the use of those resources. This has been the case in ‘participatory’ models of resource management. Rights to participate in decision-making are often granted according to one’s level of investment in resource use. This can lead to the domination of the process by a relatively small number of gears and craft owners to the exclusion of the far larger group of fishing laborers whose relative dependence on the fishery for their livelihood may well be greater.

Many aquatic resources (fish in particular) are commodities which are widely in demand and not easily substituted. Hence, they enjoy very buoyant market conditions. However, relations between traders and resource users are often marked by dependence and exploitation, although it should be noted that marketing links often channel credits and goods which would otherwise not be

available into rural households see Box 2. The need for constant replacement of fishing equipment often makes the dual function of fish trader and credit provider especially important.

Box 2. Fishers and Fish Dealers

The widespread perception that fish dealers generally exploit fishers has had an important influence on fisheries development. In particular, it had encouraged efforts to establish fisheries cooperatives which have met with mixed success. Cases where individual dealers or cartels of fish traders actively limit fishers' choices of where to sell and at what prices are not uncommon – marketing channels for some high-priced resources such as shrimps in remote areas of South-East Asia are an example. But fish dealers are generally as dependent on fishers as vice versa and cases of monopolistic control are probably less common than is thought (Stride, 1993). Fishers often enter into dependent relations with dealers by choice in order to access flexible credit and services which are not otherwise available. Many dealers are themselves fishers who may move from one occupation to the other according to season and catches. In Bangladesh, many traditional fishers have themselves turned to fish trading as an alternative when competition on the fishing grounds with more traditional fishers has become too fierce.

The culture of aquatic organisms introduces new problems, including uncertainties about the impact on local aquatic ecology and biodiversity in the event of escape. Of even greater concern is the potential impact of the spread of disease from cultured species to the wild.

Aquatic resources may also be affected by trends in economic liberalization, restructuring and retrenchment, decentralization, and urbanization.

Developing the sampled aquatic resources under the sustainable rural livelihood approach would require three areas of intervention:

(i) actions to ensure the sustainability of the existing contribution of aquatic resources to livelihoods;

(ii) actions to increase the contribution of aquatic resources through appropriate forms of culture and resource enhancement, and

(iii) actions to promote an enabling environment for the above (see Table 1.)

Table 3. Options for intervention in aquatic resources

Types of action	Interventions	Impacts on SRLs and related issues
Actions to ensure aquatic resource sustainability	Support to community-led approaches to resource management	+ for local communities possibly - impacts on other user groups
	Innovative forms of management	Varies
	Strengthening of institutions governing aquatic resources: Institutional skills in consultation and conflict resolution.	+ if attention paid to integration of poor into consultative processes
	Reduction of exclusive dependence on aquatic resources	+ but possibly short-run - if alternatives not provided
	Integrated management	+
Actions to enhance aquatic resource contributions	Identification of niches available to poor for practice of aquaculture	+ if possible conflicts with other users are resolved
	Appropriate support mechanisms and skills for pro poor aquaculture integrated into agricultural extension	+ if resources for effective extension are available.
	Appropriate post harvest technologies to reduce losses and increase values	+
Actions to improve policy environment	Promote vertical and horizontal linkages in policy-making	+
	Support to decentralized institutions controlling natural resources	+ if poor participate in new institutions
	Legislative reforms to enhance community-level rights and responsibilities	+ but possible opposition from institutions and government
	Legislative review to clarify tenure of and access to aquatic resources	+ if attention paid to integration of needs of poor

Support to forums for management of international resources	+ if needs of poor are taken into account
Support to application of Code of Conduct for responsible fisheries	+, - for users of destructive small-scale gears

In the rural scene where the prevalence of poverty is high, diversification of agricultural activities and operation of sustainable rural livelihood projects that reduce dependency on the farm and promote off-farm or non-farm activities would make farmers less vulnerable to stresses and shocks posed by a variety of risks.

Examples of livelihood programmes are small backyard livestock projects (piggery, poultry, goat raising, cattle raising, small dairy farms, etc.), backyard fishery projects, handicrafts, furniture shops, woodcarvings, small and micro enterprises, processing units, and food processing ventures to name a few of them.

To enhance growth of livelihood programmes, there is need for the public sector to implement policy reforms that would create level playing fields for everybody and remove the barriers that constrain development.

It will necessitate some key actions that include:

(i) creating the appropriate environment for enterprise growth,

(ii) expanding rural credit in support of rural livelihood programmes,

(iii) promoting private sector partnership in the development of off-farm employment,

(iv) strengthening vocational schools and skills development in rural areas, and

(v) reviewing and improving incentives and regulatory framework as well as institutional frameworks for industrial development.

E. Social Funds

Social funds are usually informal funding agencies that are maintained at the level of the Office of the President or of the Prime Minister in a country that finance small-scale projects based on demand from poor communities and other local groups. Usually, social funds appraise, finance, and supervise selected projects but do not implement them. It is the private sector or the communities themselves that carry out the work.

1. Historical Background of Social Funds

The first known social fund was established in Bolivia in 1987, and now there are more than 50 countries with agencies that are called social funds or share many similar characteristics of such fund. Their objectives include building social capital, providing services and infrastructure, and supporting decentralization and income generation. They were conceived in the first instance to provide low-wage employment on small-scale social infrastructure and economic infrastructure projects (e.g. schools and clinics, or roads and irrigation canals) under conditions of structural adjustment. The original focus of the social fund approach was thus essentially that of public works program, but one in which the participants – the "community" – get to choose which works they would do, on the basis of the local priorities.[9]

Subsequently, social funds have also been used to support investments in productive undertakings (e.g. community-owned tractors or fully stocked agricultural input stores), and more recently, micro finance operations.

2. Characteristics of social fund operation

The employment of social funds are seen as "demand-driven", making grants to communities to implement small-scale projects chosen by the community members themselves from a menu of options. The fund agency is typically outside the established administrative structures of line ministries, and is given freedom from normal governmental regulations and control (on salaries, decision to hire or fire, and procurement) all of which are seen to give them the power to attract resourceful individuals from the private sector, and to disburse funds more rapidly. The nature of the projects undertaken are decentralized and partially privatized, in that project design and implementation are delegated to local actors (community organizations, private firms, NGO's and local governments, or combinations of these). Moreover, the projects undertaken are supposed to be owned by the local community, wherein the community members will be making a contribution (of labor, materials or cash) to implementation and a commitment to subsequent operations and maintenance. Hopefully, this will help ensure sustainability of the project.

9. Andy Norton et al, Social Protection Concepts and Approaches: Implications for Policy and Practice in International Development (July 2000)

3. Disaster Prevention/Preparedness

Disaster prevention programs may refer to infrastructure investments tha hve an important bearing on the development of the economy and on what opportunities are available to the poor. Examples are construction of roads between isolated villages and market towns which reduces vulnerability of villagers by making it easier for people to trade goods, migrate, and access services of financial institutions. Another could be irrigation projects that reduce risks in agriculture when rainfall is unpredictable, or dams that prevent flooding in agricultural and residential areas.

Disaster preparedness may take the form of coordinating and integrating various activities and emegency measures that will have to be undertaken upon the onset and happening of natural disasters. These activities and emegency measures may cover disaster forecasting, information dissemination or early warning signals, conduct of training and disaster drills and exercises, evacuation activities, provision of relief services, and many others.

It might go a long way towards keeping the rural poor less vulnerable to natural disasters if government will able to organize some sort of a disaster prevention or preparedness center at the national level and down to the various local government units in towns and communities. The center can be made responsible for systematizing and integrating the activities of agencies and organizations or firms involved in disaster forecasting, dissemination of early warning signals, conducting disaster drills or training in first aids, and provision of post-disaster reliefs from the national level down to the provincial and village levels.

The personnel and facilities of the military or the police force, the forecasting capabilities of the weather bureaus, the broadcast network of the radio and television companies, the services of the local officials of the province and villages, and the local chapter of the red cross can all be harnessed in a way that the delivery of services to the affected can be done in the most efficient manner with minimum overlapping.

4. Other Measures

Other measures that prevent, mitigate or cope with the various agricultural risks like infrastructure projects, measures that enhance access by the poor to formal credit, zoning and land use programmes and improved agricultural extension services are all equally important.

Infrastructure development projects. Public investments in rural infrastructure projects such as farm to market roads, flood controls, irrigations, drying and storage facilities had played a positive role in reducing the impact of adverse effects of climatic risks to farm incomes. They also resulted in positive gains in many cases. Infrastructure development programmes therefore ought to be given a high priority in any national rural development plan.

Measures that enhance access to credit. Access to formal credit by the rural communities is a perennial problem because of low-income levels, lack of collateral, and the high-risk nature of farming that to the perception of formal lenders make some farmers non-bankable. To address these issues, some countries in the region have resorted to putting up agricultural loan guarantee schemes to encourage formal lenders to lend to targeted small-scale farmers. The guarantee at times goes up to 80-85% of the loan which means that the lender is assured of getting back 80-85% of the unpaid loan from the guarantee fund in the event the farmer is unable to pay due to certain specified reasons covered by guarantee. The guarantee serves as a variant to the crop insurance programme, which can also serve as an acceptable collateral or security to a loan. The latter, however, is far superior from the standpoint of the farmer-borrower because under the guarantee program, he still has to make good in some future time the fund paid in his behalf by the guaranteeing institution. This is not the case in the crop insurance programme. By simply buying a crop insurance policy and paying the corresponding premium, the insured farmer, in the event of an insured loss, can have his bank loan paid by the insuring agency from out of the proceeds of the insurance claim. If the amount of the claim is substantial and can cover the outstanding obligation, the farmer's liability is fully extinguished.

The operation of micro-finance at the grass-root level may also serve in enhancing access of poor rural household to formal credit institutions as this can provide later on credit records normally required by banks.

Improved agricultural extension services. Much can be gained through a committed, highly professional and efficient agricultural extension service. The agricultural extension workers can pass on new developments in agricultural research and technology to farmers and these can mean higher yield and better product quality and therefore higher farm income. They can also provide advice in the areas of product storage, processing and market information, which translate also to higher monetary returns.

III. Key Issues: Discussion of Advantages and Disadvantages

Key Issue No. 1 - Is agricultural insurance, especially for small-scale farmers and usually operated by the state, an effective instrument for a risk transferring mechanism and as one of the strategies for rural development? As explained earlier in this paper, agricultural insurance offers several benefits to several parties:

(i) To the insured farmers – smoothens income fluctuation by insulating them from losses arising from insured risks; reap the benefit of higher yields brought about by the adoption of modern technology, employment of the appropriate investment-mix in the farm, and proper risk management techniques;

(ii) To the banks lending to farmers – strengthens the security for bank loans and increased the chances of loan recoveries;

(iii) To the Government – provides an option for funding expensive disaster relief programs for the farming communities in favor of a more systematic and orderly delivery of financial assistance in the form of insurance where the contributions come mainly from the participants to the programme; and

(iv) To the consumers and general public – steady supply and availability of vital agricultural commodities and stability in the prices of these commodities.

While agricultural/crop insurance promises these many advantages that are vital to the growth and development of the agricultural sector, FAO's Experts' Consultation on Crop Insurance held in Rome in 1991 had a contrary scenario - in particular, those that concern state-run multi-peril programmes. The Consultation had noted that there was a growing number of literatures demonstrating that public sector multi-peril schemes, "had been an expensive failure."

In marked contrast to these state-run multi-peril schemes is the developing volume of named-peril commercial schemes being operated by the private sector. Examples are the hail insurance policies being operated in the western world, which for many years now had been there perhaps because the private sector finds it profitable over a considerable period of time and therefore sustainable. This just goes to show that veering away from multi-peril coverage in favor of specified or named peril may work to the advantage of the traditional or subsistence farmer. Firstly, a named peril coverage focusing on a risk to which the traditional or subsistence farmers face the

greatest danger is relatively cheaper in terms of premium cost and therefore to the farmers' favor. Secondly, relying mainly on the multi-risk type of coverage creates some moral hazard issue in that the insured farmers may not anymore pay attention to certain risk mitigating activities that are well within their control. In the first place, if such risks can be controlled by practicing good husbandry, their inclusion in the insurance coverage is superfluous and an unnecessary expense.

Public sector involvement in multi-risk crop insurance has failed mainly because of very high administrative costs, and the political inability to charge market-rated premiums and enforce impartial loss adjustments. This situation holds true to both developed and developing economies. Although the more developed economies are able to afford expensive programmes that produce no measurable positive results, the current situation that plagues many DMC's in the region and severely straining their national budgets makes these programmes doubly questionable.

Many literatures now hold the view that while natural risk in agriculture is an entirely different problem, it is still manageable when approached on a limited peril basis by an insurer structured differently from that of a typical government programme.

Additionally, several studies have shown that comprehensive or multi-peril programmes are usually not suited to the specific circumstances of many small-scale, traditional and subsistence farmers as evidenced by the fact that few of them would voluntarily buy it as a means for managing natural risks. The fact that comprehensive covers would also answer for losses that are usually due to normal yield variations have encourage poor husbandry and provide farmers an easy way out.

Although highly subsidized and designed to be compulsory for certain classes of farmers, the public sector multi-peril scheme in actual practice (as noted in the 1992 UNCTAD paper on Agricultural Insurance for Developing Countries) covers only a small part of the total farming population, and in fact had been manipulated by a few but very vocal elements in the farming community. There is little, if any, evidence to demonstrate welfare gains, which are assumed or claimed to accrue. Furthermore, it has been far established that adoption of better technology or an attempt to manage risks more effectively has been facilitated by insurance.

Key Issue No. 2 - Support for Market-oriented Agricultural Insurance Schemes for Commercial and Plantation Farms. As earlier mentioned in this report, there is a big potential crop insurance business for the commercial and specialized farming group and enterprising commercial insurance companies may find a niche for themselves in this area. However in many DMCs in the

region, commercial insurance for crops and other agricultural products has not developed in the same phase as other commercial insurance lines and the reason given to this is that private sector insurance still does not possess the knowledge and skills in the area of agriculture. Therefore they are rather hesitant to venture into areas that are yet unknown to them. It should be emphasized that the development of the commercial and specialized farming is vital to the overall growth of the entire rural communities. Its development has many trickle down effects. More jobs will be created alongside with the development of allied services in the rural communities. It is for this reasons that both the public and private sector should collaborate closely to promote awareness among the various players (insurance industry, the banking sector, and the commercial crop growers) to the concept of insurance. In addition, assistance to enhance technical skills of the insurance communities to evaluate, rate, and write commercial insurance coverage for agricultural crops could be provided with full support from government and from the organization of private insurance companies.

Key Issue No. 3 - Should coverage of crops be limited only to those crops that constitute the bulk of agricultural activity of a country and those that are important to its economy? Limiting the number of crops to be covered will minimize the amount of capital needed to run the program and specialization will be made easy. On the other hand, such a decision will affect the issue of targeting other farmers who may need insurance protection. There is also a disadvantage of not being able to spread the risk among several crops (i.e. some crops may be drought resistant as against others). Others hold the view that the occurrence of natural calamities affects all crops and if there are variations in the degree, they are not so significant as to result to cross-subsidization among the various crops.

Key Issue No. 4 - What risk or risks should be covered? Multi-peril or limited or named peril? There is no question that a multi-peril or comprehensive crop insurance will sit well with farmers and would no doubt be met with easy acceptance. As demonstrated by many earlier studies and country papers, such a scheme is very popular especially among small-scale and traditional farmers and easy to sell. Getting many farmers to participate in the program provides another advantage of a wider base with which to spread risks.

On the other hand, it was also observed that multi-peril schemes are very expensive to operate. Many have failed because of this. These programmes usually would require very high

premium to cover all the various risks of loss. Many farmers can ill afford to purchase it unless subsidized by the State. Thus, the argument that they are popular and can easily achieve a wider base is being defeated by costs consideration. Multi-peril programmes destroy farmers' initiatives to better manage those risks that he can control and therefore are counter-productive. The traditional and subsistence farmers are better off with named perils coverage that focus on the major risks which are beyond their control and cause great hardship. Such schemes as earlier noted, are much cheaper than the multi-risks or all-risks coverage, both from the standpoint of the farmers and of the public sector, which provides support for such programme.

Another area of concern in regard to this issue is its relation to loss. The multi-peril advocates argue that in crop insurance it is difficult to attribute the loss of the crop to a particular risk. Or the degree of loss to be attributed in the case of a combination of two or more risks happening during the growing period of the insured crop. They are saying that the limited peril programme may end up paying a loss that it has not covered. The multi-peril scheme is not faced with this problem of loss attribution. To a certain extent, this claim is true. But trained loss adjusters who are agricultural experts would be able to segregate the effects on the yield when two or more risks combine to adversely affect the crop.

Key Issue No. 5 - Should agricultural insurance, especially for small-scale and traditional farmers, be subsidized? Compared to the commercial and the specialized farming group, the traditional and subsistence farmers occupy the bottom rung of the income scale. Thus, they are also the most vulnerable group when disaster strikes as their level of savings, if any, is very thin. Equity dictates therefore that they should deserve first priority in accessing available risk management measures in the countryside. Ironically, such measures like crop insurance are far too costly in comparison to their income. Obviously, a social security aspect is involved in this case. It is to be emphasized that the public sector has the moral obligation to guarantee a minimum standard of social protection for the poorest section of society. Therefore it should adopt policies and implement measures to insure that that minimum standard of protection is met. In the case of poor farmers wanting to avail of the protection offered by agricultural insurance, the State is justified in providing subsidies in their favor. However, the subsidies may be given only after carefully examining all avenues to reduce costs and avoid extraneous charges. It should also be pointed out that in the absence of programs like insurance in the countryside, the State usually runs a disaster relief

programme targeted at the poor. In both situations, the public sector will be spending money, although perhaps less when it comes to structured agricultural insurance.

Key Issue No. 6 - Area approach in compensating losses Vs. Individual approach. In general terms, under the area approach, the crop yield for a given district is insured and all insured farmers in that district pay the same premium and receive the same indemnity. Indemnities are paid whenever the average yield falls below a defined level irrespective of the actual yields obtained by individual farmers. In contrast, the individual approach would focus on the average yield guaranteed for each farm or category of farms (i.e. irrigated, rainfed or upland) and a loss would be recognized if the actual yield falls below that level.

There has been much debate as to which of the two approaches is best. After examining more closely the reasons why certain programmes fail, it is now appearing that the area approach or some innovations derived from it like the Area Index Insurance, is now getting the upper hand. A number of very valid arguments had been advanced in support of such scheme, e.g.:

(i) It eliminates the danger of moral hazards - moral hazards arise when the insured can alter the way he cares for his crop to increase the probability of obtaining indemnity from his crop insurance policy. This is not possible in the area approach because the payment of indemnity is not based on individual farm production;

(ii) Low administrative costs - unlike the individual approach, there are no individual contracts to write, no costly on-farm inspections or loss adjustments to undertake and therefore much less costly;

(iii) Transparent and standardized structure - the policy contracts could be sold as simple certificates like travelers' checks or lottery tickets, and mere presentation of the certificate would suffice to effect claim payment when it is due;

(iv) Availability and negotiability - the insurance can be sold to anyone. The buyers need not be farmers nor even to live or work in the region; and

(v) Private insurer involvement - it would be easy for the private sector to run and might even provide opportunity for the private insurers to tack on insurance riders or wrap individual coverage around such a policy to cover other individual risks unique to the holder.

Those that support the individual approach argue that inasmuch as the level of per unit indemnity is the same for everybody, puts certain claimants at a disadvantage whenever they suffer losses much higher than the district average. Of course, the counter argument is that they may also be paid more in other occasions when their loss is much lower than the average or despite of having no loss at times.

Key Issue No. 7 - Voluntary or Compulsory? The underlying consideration for the choice of these two approaches is the insurance principle of 'spreading the risk'. Definitely, making crop insurance scheme obligatory will guarantee a wide participation and therefore effect a wider spread. From the perspective of the insuring entity, this approach saves a lot of administrative costs for the delivery and servicing of the insurance product. It also reduces anti-selection inasmuch as the participants are compelled to enrol in the programme in contrast to the voluntary scheme where there is greater danger of only the high risks farms being applied for coverage.

From the perspective of the insured, the use of compulsion is being abhorred, more especially in democratic settings. Insuring entities running a compulsory scheme are not challenged to offer better services and often are lulled into a false sense of security by virtue of the 'captive' nature of the market. In contrast, the implementor of the voluntary scheme has to be on its toes at all times to be able to respond to the nuances of the market if it wants to preserve its patronage.

For the traditional farming group, it might be advisable to pursue a compulsory scheme mainly on cost consideration because it is simply very costly and uneconomical to service each and every one of them (characterized by widely dispersed farms and far apart) and the smallness of the farm units. However, if there is a survey showing a representative cross-section of them responding positively to a voluntary choice, this course of action should be preferred. Or, some form of approach making their participation less compulsory like making enrolment 'automatic' when taking out loans.

Key Issue No. 8 - Role of Government The role of governments in the implementation of agricultural insurance should be clearly defined and accepted. The guiding principle is that where the private sector is willing and able to play a role in it, government should stand aside. In areas however where agricultural insurance programmes are perceive to be not viable and the private sector is unwilling to venture and bear the responsibility, intervention by government is inescapable. It is the responsibility of the State to provide assistance to the most vulnerable segment of society,

Given the above premises, existing crop insurance schemes targeted at small-scale and traditional farming groups are usually run by government either thru its existing instrumentalities or thru a parastatal body. The scheme for Sri Lanka, Bangladesh, India, the Philippines, China, Iran, and Nigeria to name a few are examples. In other schemes where the state itself is not operating the programme, government serves as a reinsurer of last resort as in the case of the Japanese scheme.

Key Issue No. 9 – The importance of reinsurance in addressing the problem of catastrophic losses in agriculture. It is obvious that the only way to solve the problem of co-variant risks, such as natural catastrophes which are of countrywide proportion, is by developing some form of financial instruments which would transfer part of those risks across national borders. Reinsurance treaty is one such financial instrument. Access to this, however, is not easily provided as reinsurers have first to gain familiarity and confidence to a country's specific programmme. Concerns about objectivity in loss estimations and payments, adverse selection or moral hazards, viability and sustainability of the programme, and independence from political interference are at issue.

Also, multi-lateral institutions could perhaps help support the development of broader risk pooling schemes with supporting credit enhancements to provide actuarially cost-effective arrangements to manage catastrophic risks while promoting efficient markets.

The solution to the catastrophic risk problem can not be accomplished without leveraging sufficient capital and assuring stable long-term capacity.

Key Issue No. 10 – Is it worthwhile to explore further the practical effectiveness of micro insurance in the light of the absence of empirical experiences on the subject? Micro insurance offers some very practical way of managing many forms of idiosyncratic risks in an informal setting. It provides opportunity for many rural communities to share and finance the risks among themselves where formal insurance providers are hesitant or unable to play a role.

The dynamism involved in the decision-making process of micro insurance schemes enables a group of people to act as a cohesive social unit that can fulfill a role no one else can do better in the matter of relating needs and priorities to their prevalent activities, location-specific conditions, the level of resources, etc.

Because of the profile of the informal economy sector, micro insurance which is designed primarily to service this particular segment of society, can be sensitive to there specific

requirements: the need for simplicity, affordability, and convenience, that is, it must be located close to the members.

Micro insurance is the enterprise of the community. The democratic process of the group jointly defining the risks to be covered and the benefits to be provided is in itself unique only to micro insurance. It reinforces self-management, which is not only cost saving but also a right-sizing measure. Self-management also promotes transparency (thus, reduces the risk of corruption) and cohesion around social objectives (hence, create a climate that discourages abuse of the system). Reducing anonymity raises self-control. Also, closeness between the members creates intangible but real links that augment acceptance of redistribution of benefits according to the need rather than to individual utility[10].

By all means the development of micro insurance schemes where ever they may be, should be fully supported by the public sector. It might be worthwhile for governments and multi-lateral institutions to encourage the growth of micro insurance via the provision of certain incentives for its rapid development. These may take various forms such as by legislating enabling environments upon which micro finance may grow unimpeded, promoting linkages with existing benefit providers, provision of subsidies or guarantees, promotional advocacy's, replication of successful micro insurance units in other communal areas, and provision of reinsurance support.

Key Issue No. 11 – Are rural livelihood projects equally important to address rural risks? If so, what level of support is necessary to promote its growth? Livelihood projects involving off-farm activities generate extra income for the farm household and lessen dependence on the farm. Thus, when natural calamities occur, farm households become less vulnerable and are able to ride the adverse effects of reduced income from the farm. Besides, livelihood projects are wealth-creating ventures and do not lead to inflationary situation unlike other relief programmes. With these arguments alone, these projects therefore deserve the utmost support by the State in terms of providing the proper environment for growth, providing avenues for skills development, disseminating marketing trends, market information and opportunities, and show-casing and replicating success stories. It should be stressed, however, that the promotion and development of livelihood programmes should be premised on sustainability.

10. David Dror and Christian Jacquier. Micro Insurance: Extending health insurance to the excluded.

Key Issue No. 12. Are social funds effective in terms of providing those most in need of social protection and of providing the kind of protection to the needy? Are they affordable or otherwise sustainable? In general, social funds should do well in terms of targeting, cost efficiency, speedy response to shocks, reaching previously unserved areas and groups, and in the participation of community organizations and residents. Although they started out in funding public works programs that are risk-coping in nature, they now have moved towards more community-managed projects with emphasis on investments that lead to risk reduction such as preventive health care, water supply, and basic education.

On the other hand, empirical data show that targeting in social funds is often less effective. Poorer communities are poorly placed to receive and absorb information required to make an informed choice of projects.[11] Compared to better-off communities, they are often less organized. As such, they are less likely to be able to submit project proposals, and less likely also to exert pressures that may be required in order for their proposals to be accepted. When the poor or isolated communities do submit proposals, these are often the handy-work of initiated by an outsider (who may be a private firm, a local politician, or a government agency) on the basis of what they can provide, what they see to be most feasible, or what they generally believe is right for the community. The problem however is that most often, politicians would submit proposals that tend to increase their own political stock at the expense of the real needs of the community. Another reason why remote or isolated communities are not benefiting from social fund projects is precisely because of the key role being played by project design companies in initiating and developing project proposals. Understandably, these companies would rather concentrate their efforts in areas (provinces or towns) that are near their offices to minimize costs.

In terms of job creation and increasing incomes for the poor, social funds have had mixed successes.[12] The original rationale for the fund was to finance community-driven and community-led public works and projects to generate employment opportunities for community members. Reviews of donor evaluation reports have estimated that only 30% of total expenditure is accounted for by labor costs, and conclude that social funds have “created relatively few jobs”. Moreover, jobs provided by social fund projects were temporary, of low quality, and provided no training. As such,

11. Andy Norton et al, Ibid.
12. Ibid.

social funds emerge as little more effective, and sometimes less effective, compared to traditional ”supply-driven” employment creation schemes.

In terms of sustainability, the extent to which social funds are now funded by national governments varies, but is lower than it might have been hoped. A review of social funds noted that most Latin governments have financed less than 20% of their social fund costs and that ten years after they were started, most social fund-supported projects are still dependent on donor funding. At the micro level, it seems that a high proportion of social fund-supported projects is not particularly sustainable. The assumption that community choice of project guaranteed ownership (and along with it, a commitment to meet recurrent costs) should have first been tested and validated, or additional measures taken to reinforce this. Perhaps part of the problem is that the “choice” available to communities has in some cases been severely circumscribed.

Key Issue No. 13 – How should expensive farm input subsidies and price support measures be treated? Subsidies for critical farms inputs, price support or price intervention mechanisms, often does not attain their objectives, as many DMCs are now finding out. In Thailand, some people say that these programmes are not very meaningful. There is just not enough money to make its “price influencing” objective and its social objectives work to the satisfaction of many. The same is being said in Vietnam. In Indonesia, they are saying that a certain degree of stability in prices had been achieved through the operation of these subsidy programs. In terms however of the welfare gains that accrue to farmers, not many in the farming sector had benefited much because the government had to at times resort to importation to flood the market instead of using the money in buying from farmers. The general observation is that this kind of programs requires huge budgetary outlays and yet there are never enough funds to significantly influence prices. In most cases, they lead to market distortions, which in the long run is also harmful. This programme is also open to all sorts of corruption which further increase costs. Hence, this type of programme should deserve low priority.

FAO also thinks that programmes of this type are ill-advised. Instead, it is suggesting giving farmers more freedom to respond to market signals including options to shift from one farming activity to another depending on where the money is. In this regard, support for farmers in terms of providing timely information on current market prices and past trends is being advocated. This way the farmers would be able to evaluate their risks better and take the necessary precautions.

Lastly, providing farmers the necessary facilities for savings that offer remunerative interest rates way above inflation rate, would give farmers the opportunity to preserve their income and plan better their expenditure pattern, thus addressing also the problem of fluctuating income stream.

However, there are certain types of farm input subsidies that do not seem to distort the market and are successful examples of such measures. A case in point is the utility value of mass inoculation of poultry or livestock to prevent the occurrence of epidemic. Another case is the subsidy for the production and wide distribution of improved seed varieties that can bring about increased yields in farms.

Key Issue No. 14 - Utility value of disaster prevention/preparedness programs and other rural development programmes as social protection measures. Being caught unaware and unprepared in the face of a natural disaster could be the worst thing that could happen to anybody. Many lives and property had been lost on account of this. Thus, it is vital and extremely important that both the public and the private sector should strive to formalize an organization that will handle the various functions of disaster prevention and disaster preparedness programs. The involvement of government is critical because it has the military and the police units that can readily be mobilized to help in the evacuation of people to safer areas. They can also provide the human resource to extend relief operations to the affected people. The assistance of the community members at the village level is equally important because they are more familiar with their own place and therefore can readily pinpoint problem or disaster prone areas.

Investments in programs for infrastructure developments have helped rural households deal with many risks in the countryside. For example, the expansion of irrigation project that covers wider areas of hitherto un-irrigated lands have resulted in increased yields and income for many farmers as well as helped them minimize their losses occasioned by drought. The construction of farm to market roads has facilitated farmers' access to trading centers in which they get better prices for their produce, not counting the savings derived from lower spoilage losses and storage costs. It is said that welfare gains for this type of programs are positive. Therefore such programs should rank high in the priorities of social protection.