

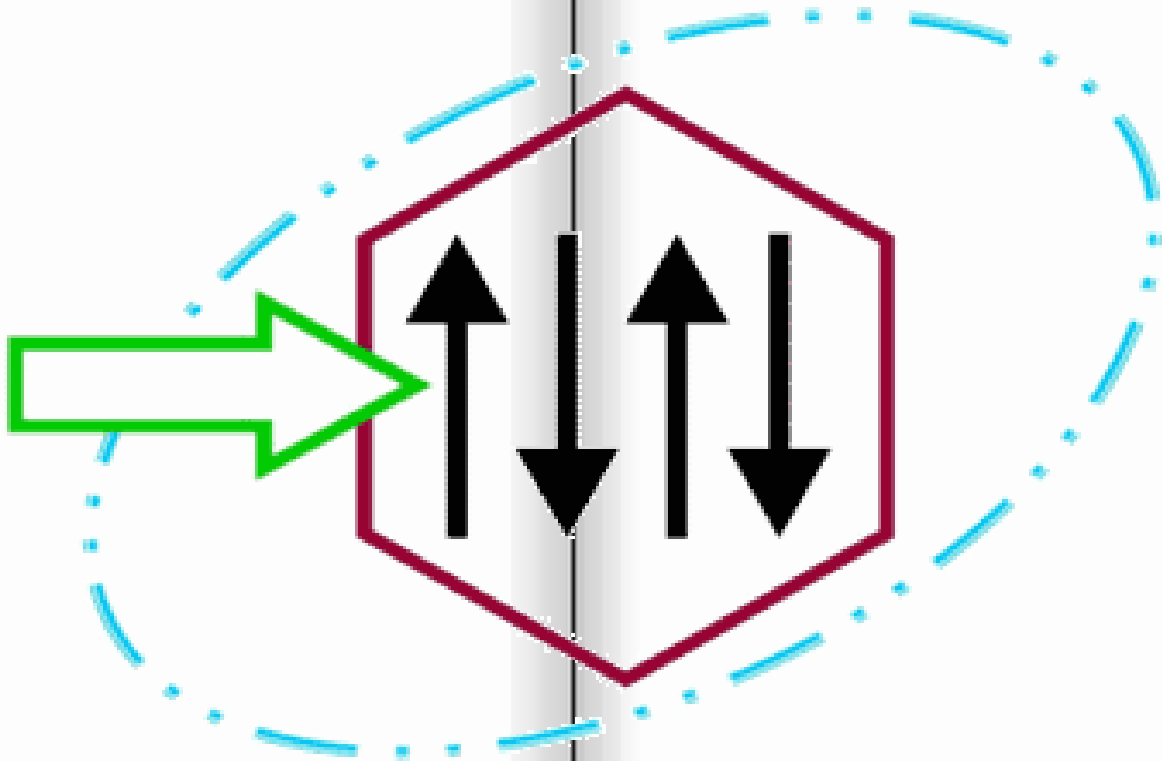
Livelihoods Management Programme

(An e-course by Akshara Network)

March 2015

e-livelihoods
learning course

Capsule No : 1-13



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Capsule 1: Livelihoods – the Concept:

Study the following case of a family living in a village situated in semi-arid area and near a shrub forest.

- There are three adults in the family – an old lady receiving an old age pension; a man engaged as an agricultural labourer and migrating occasionally in search of work and a woman engaged as agricultural labour. The family also has two school going children.
- The family has a kitchen garden that is looked after by the old lady. The children help in the kitchen garden by fetching water and by collecting dung for manure. Occasionally, when the produce of the kitchen garden is being dried, the children take turns in guarding the produce against birds and animals.
- As the family lives close to a shrub forest the woman gathers fire wood from the forest. Every year in summer when none of them is employed, the family members spend 6-7 days to get wild grass from the forest to repair their roof. The man and children occasionally fetch a fowl or rabbit as game from the forest.
- The family reared chicks for most part of the past 10 years. Children also take care of the chicks during evening. The maximum number of hen they had was 4. During some outbreaks of disease, the family lost all their chicks. This happened 2 or 3 times during the past 10 years. After such losses, they waited for some time and again purchased a chick out of their small savings. The family lives on the edge of the village and therefore will have to protect its chicks from predators.
- For daily food consumption the family depended on the kitchen garden produce, some berries and other items available wild in the forest and some items that others gave away as good will or charity. They also consumed eggs and meat when available from the domesticated hens.
- Both husband and wife generally oblige when the two large farmers in the village request them to do some odd jobs. They do not expect to be paid for these. They decided to oblige since these large farmers are their first source of credit. One of these farmers had even helped the family in getting the ration card by recommending their case to a revenue official.
- The family lives in the home situated on the periphery of the village. The homestead land is their only property. Two big trees, tamarind and teak grow on this land. They sell the standing crop of tamarind right at the flowering stage. They use tender tamarind leaves, flowers of tamarind tree, unripe tamarind and some of the tamarind that the purchaser leaves on the tree after harvest. The old lady regularly cleans the dry leaves beneath the tamarind tree, mixes it with dung and lets it decompose naturally for use in the next planting cycle of the kitchen garden. Since a lot of farm land is visible from the tamarind tree, several farmers rest in its shade for a while. Whenever they are free people present in the house give them company. Such people provide information about the labour opportunities coming up. Occasionally, these people give the old lady a fistful of left-over urea for use in her kitchen garden. Sometimes, when people harvest vegetables like bottle-gourds or lady's finger from their boundary plantations they leave a few with the family as a courtesy. Sometimes, labourers eat lunch in the shade of the trees. Since some chillies usually grow in the kitchen garden, the labourers request the family for two or three of them and the family readily obliges the labourers. When the woman came immediately after marriage, she would feel bad when she had to part with the produce from kitchen garden. The old lady had at that time counselled the woman about the advantages of this decision.

Now answer the following questions based on the case presented above.

1. What activities does the family take up to live?

2. Do all these activities lead to earning some income?
3. Although some activities do not generate any income, are they still important for the living of the family members?

As the above example shows, people take up several activities to live. All these ways and means by which a person lives and leads a life in dignity are livelihoods activities and constitute the portfolio of livelihoods of the person.

Thus, if a person is living, the family to which the person belongs has livelihood(s). A person may depend on the family due to the life stage, but if the family as a whole does not have livelihood(s), the persons in the house will not be alive. Hence, we generally talk of the livelihood(s) of a family instead of a person.

Livelihoods - Meaning:

As can be seen from the example, the livelihoods are much more than a vocation and certainly more than activities that generate income. This distinction is important for taking the development practice forward. Once we understand this, we would be ready to support the diverse activities of the families like promoting exchange of produce from kitchen gardens, promoting gathering of dry leaves from public places, making rules for protecting the forest resources, etc. All these activities made life possible earlier and would make it easier for the family to live. Further, this distinction enables us to be conscious of the time spent by the families in activities that are not focussed on earning income. Such activities might constitute essential support systems, which may disappear if, focus of the family shifts exclusively towards income generation. As most income generation efforts also involve risk, the reduction in the existing support systems may make the family even more vulnerable. To complicate, several of the activities may not be directly generating income but could be providing items for consumption or feeding the family with the required information.

Every family, by engaging in a set of activities essential to meet the requirements of life, acquires four characteristics. It has to consume, and to do so they either spend some money or time. To get the money, the family has to be employed. Either to be employed or to gather some items by spending time, it incurs some expenditure. And, there is an element of variability in all this. These characteristics can be summarised as: income, expenditure, employment and risk. These are the four characteristics of livelihood(s).

Thus meaning of livelihoods includes all activities and decisions which the family takes that result in the family acquiring these four characteristics and enabling the family to live on. Livelihoods improvement would mean changes in these characteristics in appropriate directions i.e. increase in income, decrease in expenditure, increase in employment and decrease in risk – four arrows. The livelihoods are sustainable when the family is able to continue with at least at the existing level in these characteristics even when things outside its control have changed adversely, i.e., the family is able to learn and adapt to new situation, acquire required capacity to practice new learning to continue at least at the existing level.

Capsule 2: Poverty:

Looking at various dimensions of poverty and the causes of poverty is referred to as poverty analysis. Asking the people about their perceptions of poverty (or why they consider some households as poor and others as non-poor) is referred to as participatory poverty analysis. Asking people to classify various households on poor - non-poor dimension is called well-being ranking. Poverty can be understood in terms of certain inabilities, and lack of certain supports. When a person does not have enough money to purchase the minimum required food (and other necessities) from the market, the person is easily recognised as poor. Such a person is unable to participate in the market. Such inability can exist either during purchases of goods and services (like health services, electricity services, etc.) or while selling their own goods and services (like grain produced or labour services). Another kind of inability relates to participation in various social and political institutions, in the decision making process and in having access to various resources. For example, in some localities the persons belonging to SC communities cannot sit in the front rows of public transport busses or those

in the schools. They cannot take water from the wells/tube-wells used by other communities. Nor can they offer prayers in the temples. In some cases, the women (especially wives of non-earning husbands) are not allowed to participate in the decisions made in joint families. In many cases, women are only silent spectators to the transactions involving fixed assets or chattels. In several cases, the SC and ST communities are barred from entering public places like post-offices and use the telephone facilities. Though they are members of Panchayats, they sit near the entrance and have to make way for others if there is a space constraint. Thus, these people have inability to participate in social and political institutions and processes like State, CBOs, neighbourhood and family. Some people are unable to cope up with the normal risks of life, including the normal competition that exists in the society. A case in the point is the extra-precaution that a person with HIV has to take to protect himself / herself from various external agents causing injuries or infections. The older persons, who are unable to exert to the same extent as their younger colleagues, are eased out of the employment markets – they become unemployed unless they switch to some other jobs that are not so strenuous. A person with disability may not be able to compete equally with others to get into a public transport. An agricultural labourer may not afford to fall sick, as the family may lose income and, thus food for the day. Closely connected with the inability to participate in institutions is the inability to demand rights. Many persons feel intimidated when approaching the government officials. They talk to the government officials in a hesitant tone, and fear every instruction and outcome. Many people feel that their job could be threatened if they start demanding the rights that go with the employment. Another reason for poverty, in addition to the inabilities, is lack of support. People who do not receive the emotional support of family and society feel a great loss are dejected and do not take a long term view. They feel neglected and not wanted in the society – they are on the verge of self-destruction (physically or morally). Examples of such cases include old persons, persons living on platforms, and children who run away from their homes.

These inabilities arise of several reasons. A person may not be allowed to participate by purposeful use of power by others (as in the case of the peon restricting people's approach to a government official). A person may not come forward to participate under the influence of cultural factors like caste, or gender. In certain cases, the possession of certain assets (or papers relating to the assets) may be a pre-requisite for such participation and the person may lack them. A case in the point is the access by a share cropper to the agricultural loans being disbursed by the banks. If the share cropping is not noted in the revenue records, the share cropper does not get bank loan. In some cases, a person may not participate just because he does not possess the required skills or simply does not know that there is an opportunity to participate. Several government schemes are shrouded in the mystery of procedures and layers of paper work. Unaware of the processes, many people do not take advantage of these schemes. Similarly, a woman may not come forward in a village assembly to raise an issue bothering her as she does not feel confident of her public speaking skills. Some person may be too fearful to participate owing to the risks involved. Loss of employment opportunity cited earlier is a case in point. For some persons, the conditions of life do not permit them to participate in the markets, or social and political institutions. For example, old people may not be able to withstand the stress involved in travel to the block headquarters, and standing in the queues for long time to access some schemes. A point to note is that these inabilities are not absolute. Hence, not many people may be aware that these exist. Due to the way in which they are nurtured, they may consider these restrictions as given and would not even think of going beyond them. Hence, any attempt to go beyond the restrictions would be considered taboo by them. Mired in the culture and tradition, they continue to be in poverty. To conclude, poverty is multi-dimensional and has multiple causes – it is not limited only to the economic dimension. Further, the causes are effects of poverty and the effects are causes of poverty – this is a vicious cycle. Hence, poor require simultaneous, multiple and complementary supports to break out of the vicious cycle and come out of poverty. Not-so-poor require multiple supports to prevent them from sliding back into poverty.

Capsule 3: What is the vulnerability context?

The *Vulnerability Context* frames the external environment in which people exist. People's livelihoods and the wider availability of assets are fundamentally affected by critical **trends** as well as by **shocks** and **seasonality** – over which they

have limited or no control. The box below provides examples (this is not a complete list):

Trends

- Population trends
- Resource trends (including conflict)
- National/international economic trends
- Trends in governance (including politics)
- Technological trends

Shocks

- Human health shocks
- Natural shocks
- Economic shocks
- Conflict
- Crop/livestock health shocks

Seasonality

- Of prices
- Of production
- Of health
- Of employment opportunities

Different types of **conflict** can have profound adverse effects on the livelihoods of the poor.

In areas of civil conflict people suffer from lawlessness and physical damage. Conflicts over access to resources are of increasing importance as populations expand and resource use intensifies.

If unaddressed, such conflicts may further marginalise already poor groups.

Why is it important?

The factors that make up the *Vulnerability Context* are important because they have a direct impact upon people's asset status and the options that are open to them in pursuit of beneficial livelihood outcomes.

- **Shocks** can destroy assets directly (in the case of floods, storms, civil conflict, etc.). They can also force people to abandon their home areas and dispose of assets (such as land) prematurely as part of coping strategies. Recent events have highlighted the impact that international economic shocks, including rapid changes in exchange rates and terms of trade, can have on the very poor.
- **Trends** may (or may not) be more benign, though they are more predictable. They have a particularly important influence on rates of return (economic or otherwise) to chosen livelihood strategies.
- **Seasonal shifts** in prices, employment opportunities and food availability are one of the greatest and most enduring sources of hardship for poor people in developing countries.

Is it always negative?

Not all the trends listed above are negative or cause vulnerability. For example, economic indicators can move in favourable directions, diseases can be eradicated and new technologies may be very valuable to poor people.

However, use of the term *Vulnerability Context* draws attention to the fact that this complex of influences is directly or indirectly responsible for many of the hardships faced by the poorest people in the world. It is common for there to be a vicious circle in action. The inherent fragility of poor people's livelihoods makes them unable to cope with stresses, whether predictable or not. It also makes them less able to manipulate or influence their environment to reduce those stresses; as a result they become increasingly vulnerable. And even when trends move in the right direction, the poorest are often unable to benefit because they lack assets and strong institutions working in their favour.

Different components of the Vulnerability Context affect different people in different ways. Thus, natural shocks may have a more adverse effect on agricultural activity than on urban employment. Likewise, changes in international commodity prices will affect those who grow process or export such commodities but have little direct effect on those who produce for, or trade in, the local market.

Understanding the nature of vulnerability is a key step in sustainable livelihoods analysis

What can be done to alter the vulnerability context?

The *Vulnerability Context* is the part of the framework that lies furthest outside people's control. In the short to medium term and on an individual or small group basis there is little that can be done to alter it directly (though there are exceptions: for example, direct intervention to diffuse conflict).

Most externally-driven change in the *Vulnerability Context* is a product of activity at the level of *Transforming Structures and Processes* (e.g. changes in policy). Another way of managing the *Vulnerability Context* is to help people to become more resilient and better able to capitalise on its positive aspects. This is a core aim of the sustainable livelihoods approach. It can be achieved through supporting poor people to build up their assets. For example, increasing people's access to appropriate financial services – including insurance – is one way of reducing vulnerability. Another approach is to help ensure that critical institutions and organisations are responsive to the needs of the poor.

What type of information is required to analyse the vulnerability context?

Livelihoods analysis does not have to be exhaustive to be effective. Rather than trying to develop a full understanding of all dimensions of the *Vulnerability Context*, the aim is to identify those trends, shocks and aspects of seasonality that are of particular importance to livelihoods. Effort can then be concentrated on understanding the impact of these factors and how negative aspects can be minimised.

This requires a prior understanding of the nature of local livelihoods – what types of livelihood strategies are employed by local people and what factors constrain them from achieving their objectives. Such understanding cannot be gained without social analysis so that particular social groups and their relationship with factors within the *Vulnerability Context* can be identified.

While it is important to narrow down the extent of analysis, it is also important to think broadly about factors within the *Vulnerability Context* that *might* affect local people, so that less-obvious issues are not neglected. For example, when thinking about **seasonality**, it is important to consider both immediate and more distant effects.

In a rural setting, it may be necessary to find answers to the following types of question:

- Which groups produce which crops?
- How important is each crop to the livelihoods of the groups that produce it?
- Is the revenue from a given crop used for a particular purpose – e.g. if it is controlled by women is it particularly important to child health or nutrition?

- What proportion of output is marketed?
- How do prices for different crops vary through the year?
- How predictable is seasonal price fluctuation?
- Are the price cycles of all crops correlated?
- What proportion of household food needs is met by own consumption and what portion is purchased?
- At what time of year is cash income most important (e.g. school fees might be collected one or more times during the year)? Does this coincide with the time at which cash is most available?
- Do people have access to appropriate financial service institutions to enable them to save for the future? Does access to these vary by social group?
- How long and intense is the 'hungry period'?
- What effect do the 'hungry period' and other seasonal natural events (e.g. the advent of the rainy season) have on human health and the ability to labour?
- Has the length of the 'hungry period' been increasing or decreasing?
- How do income-earning opportunities vary throughout the year? Are they agricultural or non-farm?
- How does remittance income vary throughout the year (e.g. falling off at times when it is most needed because of food price rises)?

Four arrows Characteristics:

To understand livelihoods better, we look at the four characteristics of livelihoods in detail.

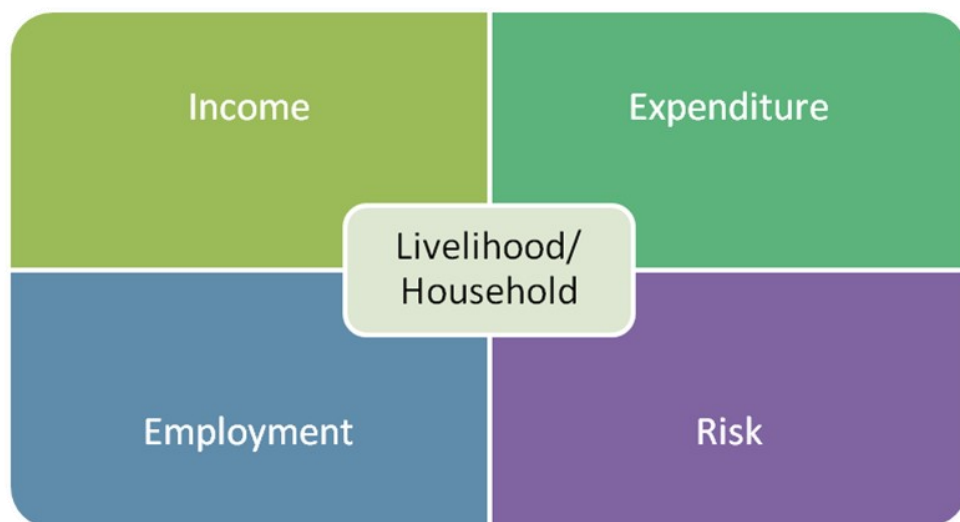


Figure 1: Four Characteristics of Livelihood/Household (Arrows indicate the desired movement in the characteristics)

Capsule 4: Income:

Income comes into a household through various activities ranging from wages for physical labour to migration, gathering non-timber forest produce, farming, rearing livestock, fishing, weaving, pottery, carpentry and other artisan activities to business activities, contracting, teaching, engineering, medical, software and hardware and other skilled jobs. The income of a person depends upon the skill he/she has. Some items, though they are not perceived as income by the household, can be considered as income as they save some amount of money otherwise the households would have to spend on them. For instance, the eggs/meat produced by the hens that are domesticated or the milk

produced by the household's own cows or buffaloes save some money for the household.

To analyze the income of any household, we need to understand the various sources from which the household is getting the income, the time period when it comes and in what forms etc. The various dimensions in which income can be analyzed are as follows:

- Income can either be in the form of money, goods, services or in any other form. In some places, agriculture labour receives grains for their labour instead of cash. Similarly, in tribal areas, the non-timber forest produce gatherers get income in the form of salt or other provisions by bartering the forest produce they gather.
- Some income can flow now and some in the future. For example a farmer may receive money for his produce some months after the time of sale.
- Income could vary with time. This variability in income could depend on the person or circumstances beyond the control of a person.
- Income could come in different streams, within the same vocation (e.g. from the sale of leafy vegetables and paddy-both coming from agriculture) or from different vocations (e.g. through agriculture labour in ones village and through construction labour at the place of migration).
- Some people might receive income in advance, i.e., before putting in efforts. Some receive income by way of transfers (like pensions, grants, charities, and other remittances).
- A person has to invest (money, idea or energy) to realize income.

While planning appropriate intervention to increase the income of a household, a development worker has to analyze all these dimensions of income. The income can be enhanced by increasing the number of sources of income, or by increasing the income from any one source.

Capsule 5: Expenditure:

Besides spending money on basic needs like water, food, clothing and shelter, a household needs to spend on various other needs such as education, health, transport, entertainment. Some expenditure has to be made by the households to invest in the livelihood activity that gives them income. Expenditure on items like going to marriages of relatives and giving them some gifts is also to be considered for analysis though such expenditure is not regular and recurring. While interest paid on loans is expenditure, principal repayment is not expenditure. It is a mere payment/cash outflow. Some expenditure like that on food is common to all households whereas some expenditure is specific to a household and depends on the kind of livelihood activities that the household is engaged in.

Like income, expenditure of any household also has various dimensions:

- Expenditure is to be looked in terms of money, time and energy. However, most people recognize only monetary expenditure and not that of time and energy. Unable to recognize their expenditures, people tend to waste these resources.
- Most expenditure is ultimately to earn income, survive or reduce risk.
- Most expenditure may not appear to be directly related to earning income. Some of it could be to maintain the network that would assist in earning income or reducing risk.
- Some expenditure is incurred to enhance the comfort level, i.e., to make the body productive after rest (or to rest while working). In some rare cases, the expenditure may not add value.
- Expenditure can also be analyzed in terms of perception. Some items of expenditure are perceived not to be of any use (e.g. education of a girl child), while others like consumption of liquor may be considered useful.

- Another dimension of analysis is the manner in which the alternatives to reduce the expenditure are explored and used. For medical treatment we have alternatives like homeopathic treatment, home remedies etc.

The other dimensions for analysis of expenditure include the methods adopted by the households to: smoothen consumption across time, match the income and expenditure cycles and decide between the options of investing a lump sum amount at one time versus spending a low amount each time over a long period. These differences result in different livelihood strategies among people. A development worker needs to understand all these dimensions of expenditure so that he/she can plan for interventions that reduce the household expenditure. Examples of these interventions could be organizing collective purchasing of food grains, bringing awareness about the unnecessary expenditure like expenditure on liquor etc.

Capsule 6: Employment:

Employment here means spending time for generating income or obtaining goods. It includes time spent in growing or procuring items, like fruits and firewood from forest, for self-consumption.

The number of days of employment varies from household to household. It depends on the skill of the persons seeking employment, resources available in that particular area and the environment/ecological conditions etc. Some people find employment all through the year and some others suffer from irregular employment. Some receive higher wages for shorter durations of work whereas some others receive low wages even for long hours of work. The wages also depend on skill and nature of work. Employment can be increased by increasing the number of days of work within an existing livelihood or by adding new sources of income. However, adding new sources of income involves developing the skills required to take up those livelihoods.

The majority of poor people in India depend on their physical labour for employment. However, these people do not find employment all through the year. In some rural areas, there are no means of employment available to manual labourers except during the rainy season. During lean seasons of work, many poor people tend to migrate to other places in search of work, where they live in abysmal conditions. Lack of proper shelter, low wages, insecurity, ill health and under employment are the major problems that these migrant people suffer from. Some people remain in their own villages without employment causing them to go hungry and remain malnourished. As the skill level of the most of the labour in India is considered unskilled or semi-skilled by the market, they are not able to get employed and/or receive good incomes.

To increase the number of days of employment, we need to understand their current employment situation in its variety of dimensions. In some cases, differences in several characteristics of employment can lead to households adopting different livelihood strategies. The analysis of employment can include various dimensions such as the timing and season of employment, match between the person's skill and employment, regularity of employment and the process of search, payments to be made to search for employment, organized versus unorganized nature of employment, opportunities to learn newer technologies etc. Apart from these things, we also need to understand employment in some other dimensions such as:

- Social status associated with employment. Some livelihoods are considered indecent by the society. The people who are engaged in those livelihoods have lower level of social status and are ill treated by the society.
- There are possibilities, uncertainties and risks related to availability of and continuation in employment, being exposed to disease carrying vectors, availability of shelter, water and security in the case of migrants etc.
- Some vocations would require use of tools (weavers, carpenters etc). In such cases, important aspects requiring analysis relate to the ability to invest in, own or access these tools.

Capsule 7: Risk:

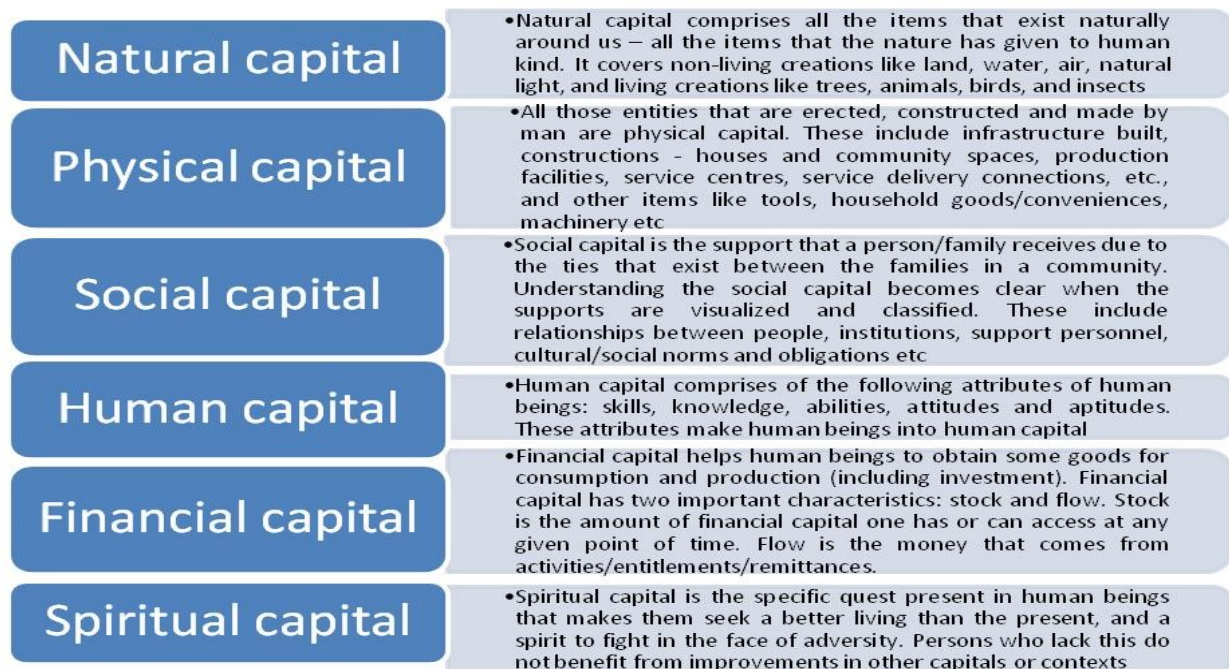
Risk exists in any livelihood but the degree of risk may vary. Even small illness is a great risk to many poor households who depend on physical labour for work. They do not have any livelihood and life security. Due to malnutrition and unhealthy living conditions, poor tend to suffer from illnesses very frequently because of which they cannot go to work. This results in their inability to earn much and forces them to take less nutritious food which further worsens their health situation which in turn causes a vicious cycle. Death of an earning member in the family will have a huge impact on poor families as they do not have any insurance, savings etc. Similarly old age and accidental disability also makes poor vulnerable and throw them into deep poverty. Risk also can come in the form of natural disasters like cyclones, earthquakes, drought and floods etc as these disasters take away all the assets people own and makes them vulnerable. Apart from these natural risks, some risks also come in the form of spurious seeds, lack of storage facility and market fluctuations in price etc. All these kinds of risks need to be assessed in order to plan for any intervention. Addressing the risks involves identifying, assessing, reducing, mitigating and/or coping.

It is important for any development worker to plan for certain interventions that can reduce the risk in the livelihoods of the poor or plan for certain mechanisms that help the poor to cope with the risks associated with their livelihoods. There are various dimensions that need to be analyzed to understand the risks in the livelihoods of the poor. Risks could be peculiar to an individual/a household like ill health or the death of a family member which are called idiosyncratic risks. Some risks can affect the entire community, village or region like floods, fire etc. These are called covariant risks. Both idiosyncratic and covariant risks require analysis. Other dimensions of risk for analysis are:

- The preparedness of the community and household to face the risk, to reduce the chances of the risk happening, to improve risk bearing capacity.
- The options of relief in the case of risk happening and
- The flexibility to re-evolve after the risk happening (Rehabilitation)

Analyzing all the above four characteristics in various dimensions can help in understanding livelihoods of a household comprehensively. This understanding can be the basis for planning proper intervention to help the household towards four arrows i.e. in increasing their incomes, reducing expenditures, increasing the number of days of employment and decreasing the risk.

Six capitals:



Capsule 8: NATURAL CAPITAL:

Introduction: We have discussed in the previous unit the concept of resource and its characteristics at length. Resources in livelihoods parlance are also referred to as capitals. In Block 1, we presented an overview of the six capitals – natural, physical, social, financial, human and spiritual, and how they influence the livelihood of a household or a community. In the current and the subsequent units of this block, we will present a more in-depth analysis of each of these capitals. This unit deals with two capitals namely, Natural Capital and Physical Capital.

Objectives: After going through this unit, you would be able to:

1. Appreciate what constitutes natural capital and physical capital.
2. Understand the issues impacting the natural and physical capitals and their impact on the livelihoods and livelihoods outcomes.

Natural Capital:

Natural capital encompasses all the things that naturally occur and such capital becomes a resource when it can be put to use. Categorized based on the natural capitals existing therein, geographical regions include forest regions, coastal regions, hilly regions, mountain regions, snow capped regions, river beds, wetlands, drylands, windy areas, rainy areas, hot regions, cold regions etc. The availability of the quantity and the quality of natural capital differs from place to place with significant bearing on the lives and livelihoods of the people.

Classification of Natural Capital

When looked from the perspective of its origin, natural capital can be classified into biotic and a biotic.

Biotic - Biotic resources are all those things that are and were alive. These resources are obtained from the biosphere, such as forests and their products, animals, birds and their products, fish and other marine organisms. Mineral fuels such as coal and petroleum are also included in this category because they formed from decayed organic matter.

A biotic - A biotic resources comprise of non-living chemical and physical factors in the environment. Examples include land, water, air and ores such as gold, iron, copper, silver etc. Another classification of natural capital can be done based on its availability - renewable and non-renewable.

Renewable – These are the resources that can be replenished or reproduced immediately or over time. Some of them, like sunlight, air, wind, etc., are continuously available and their quantity is not affected by human consumption. Others can get depleted by human use, but may also be replenished, thus maintaining a flow. Some of these, like agricultural crops, take a short time for renewal; others, like water, take a comparatively longer time, while still others, like forests, take even longer.

Non-renewable - These resources cannot be produced again. Non renewable resources are formed over very long geological periods. Minerals and fossils are included in this category.

Since their rate of formation is extremely slow, they cannot be replenished once they get depleted. Of these, the metallic minerals can be re-used by recycling them. But coal and petroleum cannot be recycled.

Considering their stage of development, natural resources may be referred to in the following ways:

Potential Resources - Potential resources are those that exist in a region and may be used in the future. For example, petroleum may exist in many parts of India, having sedimentary rocks but until the time it is actually drilled out and put into use, it remains a potential resource.

Actual Resources – Actual resources are those that have been surveyed, their quantity and quality determined and are being used in present times. The development of an actual resource, such as wood processing depends upon the

technology available and the cost involved. That part of the actual resource that can be developed profitably with available technology is called a reserve.

Land, Forests, Water and Climate

All the natural capital that is available on earth can be broadly looked at from three dimensions – Land, Water and Climate. There is no argument that this trinity significantly determines the life and livelihoods of the human beings. Forests, though a part of land, are distinct and supporting multitudes of livelihoods and therefore will be discussed as a separate head. This unit we will focus on these elements of natural capital and aim at understanding how they influence and are influenced by livelihoods of the people.

Land

Land is among the most important natural resources. Land covers only about thirty per cent of the total area of the earth's surface and of this thirty per cent only a small area is inhabited.

Nearly seventy per cent of the land is either sparsely populated or completely uninhabited. Land, as will be discussed here, includes the geographical area and all the life and non-life forms that exist on land and influence the livelihoods of the rural communities.

India occupies 2.4 per cent of the world's geographical area that supports 16.2 per cent of world human population. With only 0.5% of world's grazing area, the country supports 18 per cent of world's cattle population. Of the total cultivated area of 142 mha, nearly 68 per cent is rain-fed agriculture. India has a wide range of soils including alluvial and black cotton soils, red soil, laterite and lateritic soils and desert soils. Of these the first three types are suitable for agriculture. Agriculture provides livelihoods to nearly 69 per cent of the population in the country. In the sphere of livestock, the livestock population of India is one of the highest in the world and is an important source of supplementary income for rural households. The largest livestock population is sheep and goats and cattle followed by buffaloes. Livestock production in India is characterized by widely distributed small stock holdings. One of the challenges of Indian livestock sector is very low productivity.

Livestock in India is majorly dependent on crop residues and crop by-products. About a third of the total feed intake of the ruminants in India, both large and small, is by grazing on common property resources (CPRs). Overgrazing by herds far larger than what the land can sustain, has progressively rendered them marginal or waste lands. Minerals are yet another component of land. India has three broad belts of mineral concentration and distribution.

These include the north-eastern plateau region rich in iron and coal, manganese, bauxite etc, the south-western plateau region rich in iron, manganese, limestone etc, and the north-western region rich in copper and zinc, stones and petroleum.

Quality of land

The use of land as a natural capital is determined by physical factors such as topography, soil, climate, minerals and availability of water, in other words it should be conducive to carry on livelihood. This also determines the land use pattern. Land holding patterns, ownership of land, fertility of land, ability of farmer to sell the produce grown in the land, availability of technology to understand what would be best grown in the land, knowledge of how to cultivate it the best, availability of services like fertilizer vendor, person who can give timely loan and others are factors that determine quality of livelihood land can offer and is offering.

For example in rain-fed agriculture, rain fall pattern, amount of rain fall and timeliness of rain fall determines where this land resource could provide livelihood. Similarly fertility of land is lost with repeated use of chemical fertilizers and pesticides. Having ownership of such land is of no use as it cannot be converted into profitable income. On the other

hand owning a piece of land in highly commercial area, increases the value of land, because it can fetch good returns if it can be let out for commercial use.

Converting land into livelihood outcomes

Land is used for different purposes such as agriculture, forestry, livestock, mining, building houses, roads and setting up of industries, schools, hospitals etc. Large percentage of the population in India is dependent on cultivation of land and processing the produce that is cultivated. Village common lands are used to grow trees, graze livestock etc. Even infrastructure like storage houses, processing units, office space for cooperatives etc are set up in common lands that will help enhance livelihood opportunities. Trees on land like the tamarind trees, palm trees are taken for lease by a household or a community and the fruit is used for generating income.

How land hinders or enhances livelihood

Proper utilization of land enhances livelihood whereas over exploiting the same can threaten it. For example mining of iron has contributed significantly to the development. Its use is seen in almost all essential things around us starting from a cooking stove, plough of a farmer, construction of houses, buildings and others. On the other side mining means getting rid of green cover, soil erosion and displacement of communities dependent on it.

Ownership and access to land

Access to and ownership of land is determined by factors like caste, family inheritance, knowledge of other skills, and gender of a person and status of a person in the family. For example right to collect tamarind from trees grown in village common land is determined by how influential you are in getting the contract. Similarly, sons have right to cultivate land belonging to ancestors and even though women have knowledge and skill to cultivate land they cannot use the resource as they have no ownership rights. Caste is another important factor in India, that can limit access to resources to the entire community. Access to ponds and wells are restricted because of the caste dimension.

How to protect/improve land

Growing population and their ever growing demand has led to a large scale destruction of forest cover and arable land and has created a fear of losing this natural resource. Therefore, the present rate of degradation of land resources must be checked.

- Afforestation, land reclamation, regulated use of chemical pesticide and fertilisers and checks on overgrazing are some of the common methods used to conserve land.
- Ensuring right mix of minerals and organic matter can make the soil fertile.
- Wasteland and barren lands could be better utilized. They can be used as common property resources, or can be used for social forestry projects or as grazing land.
- Training and know-how should be given to people to enable them to manage barren and un-utilised lands better and put such land to more productive use.

Forests

Forest is an ecosystem which consists of hundreds of species of plants like trees, bushes, shrubs, climbers, grasses and animals. It also contains water bodies like streams, rivers, ponds and others making it suitable for living. Indian forests present great variation and range depending on the rainfall, soil type and climate. The country is home to tropical rain forests, dry thorn forests and mountain-temperate forests. More than half of the forest area in India is tropical-moist and dry-deciduous types. Forest is the second largest land use in India next to agriculture. The forest cover of India is assessed as 67.83 million hectares which constitute 20.64 per cent of the country's geographical area. The National Forest Policy stipulates that one-third of area should be under forest or tree cover. Indian forests play vital role in

harbouring more than 45,000 floral and 81,000 faunal species of which 5150 floral and 1837 faunal species are endemic. The nation has established 597 Protected Areas comprising 95 National Parks, 500 Wildlife Sanctuaries 2 conservation reserves covering 1.56 million ha area or 4.75 per cent geographical area of the country.

The rising demand for forest based products and resultant deforestation and encroachment has led to a severe loss of natural resources and destruction of habitat.

Quality of forests

Quality of forest is measured by richness of its biosphere i.e. number of trees per hectare of land and variety of species one can find. Quality of the forest is also measured by the uniqueness of products available in the forest. For example Vedaranyam, a forest towards the tip of Tamil Nadu is declared as protected biosphere, because of the distinct medicinal plants found in these forests which are not found elsewhere. A concern cited often regarding quality of forest is the degradation and depletion of forests. Rapidly increasing human and livestock population, shrinking common property resources, poverty, over exploitation of forests for timber, climate change etc have contributed to diminishing the quality of Indian forests.

Degradation and depletion of forests is robbing the tribals, the indigenous forest dwellers, of their livelihoods.

Converting forests into livelihood outcomes

Forest offers varied kinds of opportunity to pursue livelihoods. Forest is harvested for both major forest produce which include timber and bamboo and also for minor forest produces like roots, stems, leaves, flowers, bark, fruits, and seeds. These forest produce are collected for personal consumption as food, fuel, fodder, medicines etc and also collected to be sold to earn an income. Animals are hunted for food and their waste is used as fertilizers for crops.

They are also hunted for fur and hides that have great market value. It is also an abode of minerals that are extracted through mining. It is estimated that in India alone, for over 100 million people living in and around forests and another 275 million, forests constitute an important source of livelihood. Collection and processing of Non-Timber Forest Produce (NTFP), collecting medicinal plants, shifting cultivation, livestock rearing, logging, handicraft making and recently evolved eco tourism provide employments for people dependent on forest. Forest also provides wage employment as forest dwellers are employed in logging, planting new trees, maintenance of forest and in mining. It has been observed that the poorer the household the greater is its dependency on forest for livelihood. In India large percentage of this forest dependent poor belong to tribal communities.

How forests hinder or enhance livelihood

Over-exploitation of natural resources by human beings can result in various severe problems. While too much logging may serve the growing timber needs of the urban and rural population in the short run, it results in widespread destruction of forests. Similarly unscientific methods of collecting NTFP may yield returns in the short term, but will drastically reduce the life of the tree in the long term. Destruction of forest cover has resulted in land degradation, denudation, soil erosion, landslides, floods, drought and unbalanced ecosystems. A balanced ecosystem is an urgent need.

Ownership and access to forests

Forests are a controlled natural resource. This control is in place to protect forests but when this control hampers the traditional rights of the forest dwellers, it becomes a matter of serious concern. Forest control impacts significantly the lives of people who depend on forests. For communities and households dependent on forests and for others for whom the forests sustain and supplement their livelihoods, accessing forest resources means contact with the Forest Department, the regulatory arm of the state. The unvarying threat of a powerful institution, with legal and physical

resources to control this interface makes people, especially tribal communities, feel vulnerable and uncomfortable. On the other hand, in forests where there are no controls, the resources are increasingly being exploited by the mainstream population, thus depriving the forest dwellers of their livelihoods.

How to protect/conserve/improve forests

Forests are among the few renewable resources in nature which, if properly managed, could go on yielding at undiminished rate and for an indefinite period. Initiatives have been taken up by state governments and non-government players to protect forests. Efforts are also made to provide training and tools to forest dwellers for sustainable NTFP collection and realizing a better price for the NTFP collected and sold. Initiatives like planting prominent fuel wood and fodder species on bunds of agricultural fields, pasture lands, fallow land and community owned land, freeing encroached land and using it for fuel wood plantation and as grazing land, planting trees in forests, to replace those that have been cut down for fuel wood, so as to maintain the sustainability of forests, ensuring people's participation and control in the management of forests need to be scaled up to maintain the sustainability of forests and to enhance sustainable livelihood opportunities for forest dependent villages and communities.

Water

Water is a vital renewable natural resource. Three fourth's of the earth's surface is covered with water. The oceans cover two-thirds of the earth's surface and support a rich variety of plant and animal life. Fresh water accounts for only about 2.7 percent of which only 1 percent of freshwater is available and fit for human use which is found as ground water, as surface water in rivers and lakes and as water vapour in the atmosphere. Humans use huge amounts of water not only for drinking and washing but also in the process of production. Water for agriculture, industries, generating electricity through reservoirs of dams is the other usages. Water is used in large quantities by the animal population also.

Quality of water

Both the quality and quantity of water are in threat. Over harvesting of water for agriculture and industrial uses coupled with climate change is posing a major threat to the quantity of water. Ground water is under major threat in India. In addition to this, the existing water resources are highly polluted from chemicals and other human and industrial waste affecting the life both inside and outside of water. Ganges the lifeline of India is one of the most polluted rivers. Pollution of lakes from industrial waste has made the water unfit for domestic use. It also affected fishing and it is not be suitable for animals to drink the water and further even useless for cultivation.

Converting water into livelihood outcomes

There is no livelihood on earth that is either directly and/or indirectly not dependent on water. Occupations dependent on water include agriculture, livestock rearing, fisheries and other sea food, salt farming, water sports and tourism, water transport, rural non-farm livelihoods especially pottery, handlooms, laundry etc and last but not the least bottled water which is selling as a big business today.

How water hinders or enhances livelihood

Using ground water for drinking with the help of digging bore wells is a revolution as it made drinking water accessible to millions of those who do not stay near any water sources. However unchecked use of these has depleted water table not only drying up sources of existing water source but also water necessary for replenishing small ponds and lakes. Similarly de-silting lakes and ponds in a village provides employment, when done without limits can harm the water oozing spots leading to drying up of the lakes. While water scarcity is a problem in south and west India, flooding severely hampers the livelihoods of people in the east year after year. Water intensive cultivation and water

intensive technologies are depleting water resources. While making carbonated drinks are creating livelihoods to some, they are stealing basic drinking water from the lives of many.

Ownership and access to water

Ownership of the water bodies could be either private or public. Under private water bodies fall the wells/ tube wells, ponds within the private property. The title to use these water bodies is very clear it belongs to the owner, if others need to use them then they need to seek permission and sometimes also pay money. In case of water bodies like sea, lakes, rivers etc. people are free harness them provided they have tools to do them. However there are limits to using these resources also as they need to seek permission from the governments which defines the boundaries and extent to which they could be harnessed. Access to water resources is also determined by how far the resource is located in terms of distance, skill and one's physical ability to use the resources for their benefit.

How to protect/consERVE/improve water

Improving forest and other vegetation cover to slowdown the surface runoff and to replenish underground water. Water harvesting is another method to save surface runoff. Water is used for irrigating fields. The canals should be properly lined to minimise losses by water seepage.

Sprinklers effectively irrigate the area by checking water losses through seepage and evaporation. In dry regions with high rates of evaporation, drip or trickle irrigation is very useful. Encouraging and enabling public participation in management of water bodies and in ensuring the rights of user groups like fishermen, cultivators and others will create a sense of responsibility towards this natural resource in them. This will also encourage them to contribute labour in building infrastructure like stop dams, check dams, small canals and other water conservation mechanisms.

Climate

Climate comprises sunshine, rain, wind, moisture and other associated elements that have a significant bearing on the lives and livelihoods of people. Apart from being directly useful, when harnessed with appropriate technology, climate provides additional benefits. For instance sunlight can be used to dry fish, make salt, is a good source of vitamin D etc. On the other hand harnessing sunlight and converting it into solar energy creates immense potential for lighting and other industrial uses.

Quality of climate

The quality of climate naturally changes over millions of years, but human intervention has largely impacted the quality of climate on the negative side. Industrialization, urbanization and indiscriminate consumerism have resulted in toxic emissions, greenhouse gases, increase in temperatures, erratic rainfall, rapid desertification etc. Increase in temperatures will adversely affect crop productivity thus jeopardizing food security, cause melting of glaciers and ice sheets resulting in rise in water levels and flooding low lying areas and increase the risk in the lives and livelihoods of people.

Converting climate into livelihood outcomes

Climate when used and harnessed with appropriate technologies can positively impact livelihood outcomes. For instance wind energy can be tapped using wind mills that can be used for drawing water and generating electricity. Similarly rain water can be harvested that can help recharge the water bodies and improve the ground water levels thereby helping the water consumption needs of humans and livestock. Areas with good moisture levels are suitable for horticulture. Sunlight helps in drying fish, pickling, making salt, water heaters, solar dryers etc. Indirectly, cold climate regions support livelihoods based on wool and leather and regions with pleasant/unique climate are tourist hot-spots.

How climate hinders or enhances livelihood

While industrialization and urbanization have helped many improve their incomes, indiscriminate proliferation of industries have diminished the quality of air we breathe and the patterns of rainfall and other climatic conditions. These changes in climate have severely hit the poor and the poorest that are highly dependent on nature for sustenance. Agriculture and forest productivity, productivity of livestock, productivity of fish are facing serious problems from climate change. Climate changes have induced food insecurity and also distress migration.

Ownership and access to climate

Climate is the treasure of every life on the planet of earth. No one has exclusive ownership on this natural resource. However the negative impacts of industrialization and urbanization are stealing this natural resource from everyone. While the rich have improved mechanisms to cope with, the impact is felt more among the poorer sections who have very limited means to cope with the change. On the other hand access to climate can be looked at from the point of access to information and technology in harnessing the climate which also means the capital required to access. The distribution of this technology and information is skewed with the poor at the losing end.

How to protect and improve climate

Climate change is happening. We need to slow down this process and we need to evolve mechanisms to cope with the change. This means more investment in the green infrastructure like harnessing clean energy sources like solar energy, wind energy etc. Pollution control laws need to be tightened and strictly enforced. Initiatives like watersheds and other rainwater harvesting mechanisms need to be scaled up. Indiscriminate urbanization and consumerism should be brought under check. Mass public transport systems should be encouraged. Efforts to increase forest cover needs scaling up.

Capsule 9: PHYSICAL CAPITAL:

In contrast to the natural capital, physical capital refers to all man made things. Among the man-made items, constructions are easily seen. Schools, clinics, houses, offices, factories, streets, parks, museums, public art, squares and bridges combine to form the physical capital of a particular place. Physical capital has potential to add financial, social and cultural value to its beneficiaries. Physical capital is built for personal use like house, well, tractor, bullock cart etc and for the benefit for larger group of people, like roads, bridges, dams, buses, market yards, hospitals, schools etc.

Categories of Physical Capital

There are several categories of physical capital that serve a variety of purpose. Some physical capital are meant to satisfy basic needs of an individual like house to provide shelter, wells or bore wells to supply water, store rooms or traditional grain containers etc. Certain physical capital are for larger public good like power plants, milk collection centres, bio-gas plants, vermi-compost pits shelter for animals etc. Similarly, fences play an important part in using or not using the existing natural resources and in protecting small ruminants from wild animals. Some physical resources like schools, colleges, hospitals, veterinary clinics, temples, post offices, police stations help in providing required services to the public at large. Several of the services that we enjoy require service delivery infrastructure. Examples include electric power, water, cooking gas, telephone, internet, radio, TV, etc. Physical resources like irrigation canals, check dams, hydro-electric plants, roads etc need a larger plan, coordination and financial resources and are crucial for supporting the livelihoods of people.

Another important category in the physical capital is the tools. In most civilizations tools are considered important only next to gods. Tools include wide range of things starting from a small chisel used by a sculptor to big weaving looms used by a weaver. Every livelihood activity requires certain tools essential for those activities. Lack of those

tools or improper tools reduces quality of output and hinders efficient functioning. Tools in certain livelihood activities are owned by the individuals using it and in other cases provided by the employer.

For example in case of an agriculture wage labourer, tools like sickle and bamboo baskets are carried by the labourers themselves. On the other hand when people are hired in a garment factory the factory provides them with sewing machines and other tools. In the former case availability of work and wages is dependent on whether a person possesses the necessary tool or not. But in the later case what is looked for is the skill and not so much the tool. In case of livelihood activities like artisans and other self-employed owning of tools determine whether the person would be able to carry on trade or not.

Dimensions of Physical Capital

Assets have value in themselves and in the way they combine with other capitals. The way they are designed, managed and maintained is a key determinant of how far their potential value is realized/useful. Every community as well as individuals have their own unique set of physical assets or capitals, and how these combine and are used determines the quality of life in any given community.

There are certain physical capitals required by all like schools, roads, water tanks, taps etc. But certain physical capitals are unique to a place depending on the livelihood pursued by most people. For example a cold storage is very essential for communities where dairy farming is an important livelihood whereas it is not necessary for a groundnut cultivator.

What the later needs is an efficient road and means of transport and market yard close by. One physical capital can be put to multiple uses. For instance building can provide a place for shop, for trade, to relax etc. Physical capital is also specific to the culture of the people using it. This is subtle, complex and largely invisible. It is concerned with how people read and understand a building. Is it welcoming or alien? Does its design and use connect, or make people uncomfortable? If certain structures are not built considering the need and cultural practice of a community it will not be used. For example where villagers are used to open defecation, building of lavatories might not help or may not be efficiently used. Lavatories are seen as unclean and non availability of water could be reasons that might make this infrastructure a waste.

Quality of Physical Capital

The intrinsic quality of physical capital lies primarily in its fitness for purpose and its longevity. The first relates to the suitability for the use to which it will be put and the second to the length of its usable life before it needs renovation, restoration or reconstruction. The issues related to the physical capital that complicate its analysis are the maintenance schedules and costs and the externalities involved in several of the common assets. Due to the externalities involved, the costs of maintenance are not necessarily borne by those who use the services. Hence, these externalities need to be detected, and managed towards internalizing the costs.

Indicators of the quality of physical capital might include:

- The quality and life expectancy of materials used
- The ease and cost of maintenance and renewal
- Alternative use
- Misuse and disuse
- The extent of interaction between people that the spaces enable
- The patterns of use by different people during the day, week and year

- The kind of people who use a building or a space
- The views of local people about their built environment, including such things as their knowledge, comfort, sense of ownership, memories, interest and dreams
- The degree to which people are willing to get involved in its maintenance

Factors influencing Physical Capital

The value of physical capital is defined by the context in which it is placed and the value changes with the change in these contexts - environmental and ecological context, techno-economic context, distribution patterns and investment and expenditure pattern.

Environmental and ecological context refers to the larger natural and social environment in which a physical capital exists. For example, in one of the coastal village of Andhra Pradesh, paddy cultivation and coconut farming was the important livelihood for many decades, good roads, irrigation canals were the important physical capitals of those villages. Due to repeated cyclone and soil erosion the fertility of soil reduced and the households started converting the agricultural land into fishponds and now fish cultivation has become the important livelihood.

This shift has put irrigation canals to disuse and the demand for other physical capital like fishing nets, drying platforms has increased.

Techno –economic context refers to changes in the technical and economic front. These two factors co exist as money is required for new technological inventions and new inventions lead to better economic prospects. In this cycle various physical capitals are generated.

However, a community or individual's adaptation to new technology depends on various factors like who are the users, ability of the community to invest in that technology, whether it is culturally acceptable. While leaf plate making machine could fetch more income for the tribal women in Andhra Pradesh, the machine was not put to use because all the women making plates were old and found it difficult to operate the machine.

Distribution pattern refers to the way a capital is distributed in the society. For example if all the taps are placed in the lanes where upper caste people live, and if dalit children are not allowed to fetch water from those taps, such capital is of no use to the dalit community. It is observed that most of the physical capitals are located and are in control of powerful people in the community.

Patterns of investment and expenditure of a family or community is another factor that influences how physical capitals are created and used. Surplus incomes promote savings and investment and expenditure on enhancement of physical capital.

Hindering and enhancing factors of Physical Capital

A well thought out physical resource is an asset. For example house is an important physical resource. It provides shelter to the people, space to clean, dry, store goods and process and store food. If the house is not well built with proper ventilation, sunlight and good roof, it may not be useful for drying and other activities. Grains get spoilt if kept in dark and damp rooms. Similarly digging wells is good but if a drainage line is built along the water sources the dirty water can seep into the good water and cause health hazards. Similarly, high-quality public spaces like hostels, guest houses and community centers can protect communities from calamities and crime. Using locally available material, investing in structures and tools for conserving energy and water can bring in sustainability. Economic performance can be improved both through productivity improvements in buildings and transport infrastructure, and through stimulating economic growth. Ignoring the opportunity of physical capital dissipates public investment and failure to capture its full potential value is an under utilization of a resource. It inhibits the effectiveness of other policy

responses, for example where poorly designed hospitals undermine health outcomes. When a simple irrigation canal is dug, it can increase the distance between one's home and his field. Similarly, the adoption of motorized boats calls for an increased dependence of the fishermen on skill that is not in abundant supply in their area.

Issues of access, ownership and use of Physical Capital

Ownership, whether private or public, is central to the idea of capital. An asset must be available for someone's use to confer benefit, whether to themselves or to others they wish to assist. Physical resources owned by individuals have clear access and ownerships. Other common physical resources like dams, irrigation canals, roads, that belonging to a collective or community is generally under the control of the government or other concerned authority.

Different owners will have different objectives. For instance a piece of land belonging to two people might be used to build a residential house by one and the other might build a house for commercial purpose of renting it. Historically, it has been the role of the governments to control usage of these resources, though owned by a private person.

Inter relationships between Physical Capitals

It is important to understand the links between physical capitals owned by public and private owners. Both of them can influence each other by either appreciating or depreciating value of the capitals created. For example local amenities like schools, bus stand, and factory close to a residential area will have a very direct impact on property prices in the area. Similarly construction of irrigation canal will impact on the land prices around it. On the other hand, construction of a drainage or garbage dump will diminish the usage of the surrounding land for residential complexes, schools or hospitals.

Tools to map Physical Capital

Transact walk, social map, traded-in and traded-out, livelihoods analysis, institutional analysis and value-chain analysis help us to assess and understand the existing physical capital.

Summary

Natural and physical capitals have a significant bearing on the lives and livelihoods of people. While natural capital comprise all those that naturally occur including land, forests, water, climate etc, physical capital refers to all man made things. Both natural and physical capitals are influenced by contexts and when positively exploited lead to positive livelihood outcomes. Maintaining the quality of these capitals is critical. Appreciating the nuances associated with their ownership and access is crucial in making any interventions.

Capsule 10: SOCIAL CAPITAL:

Many times we may not need great help to improve our livelihoods but we need only small support without which our life would be difficult. We need to invest our time and energy in building certain relationships so that they can provide support in times of necessity. The first of such support is the result of bonding that exists between the people of a **neighbourhood**. The neighbourhood plays a critical role in several emergencies, small and big, and stressful situations that a family faces. On a daily basis, there are several exchanges of goods and services between the neighbours to even out some irregularities in consumption. A small glassful of sugar or milk when some guest arrive unannounced; some help in domestic work during severe illness; taking care of children when their mother goes out for errands – are all examples of such small helps without which the life would not have been easier. The role played by the community during fire accidents, death in a household or a missing child is all well known.

This bonding, exhibited strongly among neighbours, also extends to the entire village or area and benefits an individual. Interviews with several migrants revealed that they came to know of the information regarding labour opportunities in cities and sites of migration through their friends and relatives belonging to the migrant's village. They

also stated that the success or failure after migrating depends to a large extent on the support provided by the near and dear at the site of migration towards shelter and food. This bonding creates the required networks that are the backbone of entrepreneurial success in many cases.

The extent of interdependencies forged (with a robust reciprocity), the extent of good and sad moments shared and a pride in belonging to the community determine the extent of bonding. However, many more factors like the intergenerational conflicts, leadership concentration and acceptance, the political and caste based divisiveness also influence the bonding. Another feature influencing the bonding is the distance between the home and place of migration. For example, though coming from different states of India, the bonding among Indians in the US could be higher. In contrast, within India, the bonding may be based on a specific state or specific region in a state.

The second important aspect of the support received from the community is the **voluntary advice and work**. We know of several cases where a graduating student helps the other students in their 10th class for exam preparation. In the past, the experienced elderly women used to provide support during the child birth. The consultations with a range of persons before finalizing a marriage alliance are commonly seen. In several cases, people have supported the Panchayats in settling disputes and in making plans. The children of the SHG leader are seen helping the SHGs maintain their financial records. In all these cases, we see that persons with generalist or technical expertise support others voluntarily. In many cases, the villagers decide to take turns and stand guard during rainy days to detect breaches in the tank. In another case, the managers of the road transport corporation agreed to run a bus to a remote village on an experimental basis. However, they made it clear to the group of villagers, that if the collections remained poor for the first 10 days, then the facility would be withdrawn. The villagers recognized that this was a pump priming issue. If the bus was regular and its timings became known to the villagers en route, they would use the service. But, this propaganda would take time. Hence, the villagers decided to take turns and travel in the bus in groups of 10 people in each trip of the bus. The bus became popular in no time, and the people could stop boarding the bus only to maintain the service after the sixth day. But for such collective support to the cause, the maintenance of the facilities by some central authorities could be very different.

The third support by social capital is in the realms of **managing the collectives** and enforcing obligations. A strong society is able to make rules relating to the usage and renewal of collective properties. Such society not only settles the disputes between persons amicably, but ensures that the obligations are met. Certainties in human relations result from this support.

The political and economic institutions are also part of social capital. For example, the presence of strong institutions promoting representation (like labour unions) and collective bargaining (like labour cooperatives) can contribute a lot by providing support to their members at the time of distress. The economic institutions like land lease and its terms impact livelihoods forcefully. The role of government in maintaining law and order cannot be underestimated in the present society.

Benefits of Social Capital

Social capital is important as it provides the community oversight on several activities that a person/household consider taking up. This facilitates quicker learning of the issues involved, and increases the chances of higher returns from the activities. The advise by more experienced persons can reduce tensions (where a person is unnecessarily worrying) or make him act faster (where he was lax, as in the case of taking his buffalo to the veterinarian), and thus gain. By deciding on conflicts at local level, it saves a lot of time, energy and money spent on dispute resolution using outside means.

In general, when people belong to communities with high levels of social capital, they are far more willing to work together and take chances on risky ideas. Thus, high social capital would fuel innovation.

In rural communities, social ties are often strong and long standing. Informal ties and social norms provide essential safety nets. These safety nets are especially important because:

- Income and the availability of food vary with seasons and depending on weather;
- In many countries there are no formal social programs or existing safety nets do not reach people in villages.

Social capital is significant because it affects rural people's capacity to organize for development. Social capital helps groups to perform the following key development tasks effectively and efficiently:

- Plan and evaluate – make decisions;
- Mobilize resources and manage them;
- Communicate with each other and coordinate their activities;
- Resolve conflicts.

Social capital is a mediator for collective action and can help people build common property resources, such as fresh water wells. Not only can social capital improve access to natural resources, it can also improve access to physical capital. Some more benefits to the individuals because of social capital are:

risk management and social insurance

better management of common and shared resources, through group action

reduced costs of conducting business and increasing the capacity to exploit economies of scale

increased ability to innovate and to sustain activities beyond the life of projects

improved access to information and services

greater influence over policies and legislation

When can Social Capital hinder livelihoods?

As in the case of the other capitals, the social capital can also hinder the livelihoods of the people. In one case, a household took to rearing pigs as an economic activity after making all necessary inquiries. However, the family had to sell all the pigs it bought due to ridicule by the neighbourhood. A strong social capital, based on inequitable norms, binds the persons to traditional/family based occupations and restricts movement across the economic strata. Such institutions could work to the advantage of only a few. Several cases exist where the extended families have restricted the migration to distant places in search of employment. It has also been postulated that a strong social capital discourages innovation.

Certain cases exist in the country that a bank manager rejects the loan application of some people based on his past experiences with the people belongs to the same community to which the applicant's belong where the people in the applicant's own community took loans and failed to repay. The presence of a strong social capital that hinders livelihoods of the marginalized could therefore require a much intense campaign and long drawn interventions, than otherwise.

Sometimes, relationships can get so strong that the community becomes complacent and insulated from outside information and challenges. Strong ties can also promote the sort of conformity that undermines innovation. Stephen P. Robbins 'Groupthink' concept furthers our understanding. Groupthink is a phenomenon in which the norm for consensus overrides the realistic appraisal of alternative course of action. In communities where the social capital is high adherence to the norms of the community/group is also usually high leading to groupthink phenomenon. Weak ties, on the other hand, allow a basic level of information sharing and collaboration while permitting newcomers with

different ideas to be accepted quickly into the social network.

How do contextual factors affect the capital?

The context in which a family/ community lives effects the social capital either positively or negatively. For instance, people living in eco-fragile areas which are more prone to floods, earthquakes, etc., will have more social bonding compared to people living in non-fragile areas. They support each other in times of crisis by giving shelter, food etc. People living in forests or near the coast exhibit more social capital, as they have to manage these natural resources, vital to their livelihoods collectively. Similarly we saw many occasions where people strongly came together to fight against certain government policies like mining in forest areas and also to demand for favourable policies like increasing the minimum support price for the crops etc. We are also witnessing a movement of self help groups which are basically formed to help each other and also to access certain programs from the government.

As many poor women have no property to show to the banks as a security for taking loans which banks require, they formed into Self Help Groups and by demonstrating that they are bankable by lending their little savings internally they are able to access bank loans.

Many times technological innovations may not be accessible to any individual household. In those times people who want to access those technologies come together and collectively access and manage them. For example, we see farmers collectively buying harvesting machines in some places which otherwise would be difficult for them to access.

Influence of social capital on livelihoods outcomes

Social capital is very important for any individual/ household/ community to develop. It helps in achieving all livelihood outcomes (Increasing income, reducing expenditure, increasing number of days of employment and reducing risk) in many ways.

In a tribal village, the non-timber forest produce collectors are seen exploited by the middlemen. The middlemen pay them very less price when compared to the nearest town/ city markets for the forest produce they take from the tribals. One voluntary organization made the tribals realize that they can get better prices if they sell directly in the town/city markets. The tribals discussed the issue and found that it is not viable for each tribal to go to the market individually and sell, as each one collects only very small quantities. Therefore they decided to pool the produce from all the collectors at one place and send two persons to sell the entire produce at the nearest town market. By that they were able to realize more than 50% than what they were getting previously. If the tribals did not have trust on the people doing the sale in the market they would not have realized better income. Thus existence of a strong social capital helps in increasing the incomes of an individual/ community.

In another village, all the women of a village organization bought groceries collectively due to which they were able to cut costs in two ways – one, transport costs where instead of each woman going for groceries, two women would made the collective purchase for the entire group and two by buying in bulk in the wholesale markets they were able to get a discount on prices. This initiative considerably reduced the monthly expenditure of families in that village. From this example we can understand that having networks can help community in increasing their well-being. Thus social capital also helps in achieving the second livelihood outcome – decrease in expenditure.

Social capital can also help in increasing the number of days of employment. In the case of wage labour, they usually do not get work all throughout the year. After agricultural operations season, most labour become unemployed and search for work. In those times the network of their friends and relatives residing in cities and towns help them in finding work for some months in a year thus increasing their number of employment days. They often also provide shelter and food in the initial days of migration.

Social capital also helps in reducing risk. We observe people helping their neighbours, friends in the time of any crisis

such as fire accident in house or wedding of their daughter's marriage etc. Similarly community's collective knowledge helps the villages many times in protecting from river and tank bund breaches etc.

Factors affecting the quality of social capital

Social capital is cyclical in nature. The more benefit people get out of social capital, the more the investment that people would be willing to make into social capital.

Though every individual/ family depends on social capital to some extent, the quality of the support that comes from social capital depends on various factors like culture of the community, gender, geographical location etc. In some places we see some people are kept away from the community for reasons such as having leprosy, HIV and other cultural reasons. These people may not be able to get any support though they require it so much. Also dimensions of caste, gender etc can affect one's access to social capital. Similarly all of us know that people living in rural areas are comparatively at a better position in accessing social capital than their urban counterparts as rural communities are more connected and feel more affiliated to their community members.

Capsule 11: HUMAN CAPITAL:

Human beings, with their skills, knowledge, abilities, attitudes and aptitudes, are instrumental in contributing to the livelihoods of the individuals and also drive the progress of countries. It is these attributes that make human beings into human capital.

The human capital is important as it converts/combines/uses all other capitals to produce livelihoods outcomes. There are several examples to illustrate this point. Farmers on the banks of the river Krishna in Raichur district of Karnataka did not know much about the potential offered by lift irrigation, before PRERANA intervened. Thus, the knowledge was crucial in using the good natural resources present in the surroundings. The human capital plays a pivotal role in any effort to improve the livelihoods.

The human capital existing outside the household is as important as that existing within the household. Each livelihood is dependent on a set of complementary and supplementary skills that are required to be present in the society. This understanding is important to analyse the existing livelihoods and suggest any improvements. For instance supporting the purchase of milch animals without ensuring adequate access to veterinary health services and training to the beneficiaries to tend to the improved breeds resulted in several of the animals being sold out by the beneficiaries.

Even entrepreneurial activity suffers due to the absence of such complementary human capital in the community. An entrepreneur started a coconut fibre (coir) factory in an agriculturally rich area. The factory needed to be run for at least two shifts a day. But the labours got absorbed in agriculture and were not available for second shift. These attitudes among the work force, while were consistent with the agricultural society, were not compatible to industrialization. The factory went into losses and had to be closed. Thus, the human capital existing in the environment outside the household also influences the livelihoods outcomes.

There are several vocational skills like related to agriculture, artisan activities, teaching, industrial and non-industrial trades, medical and para-medical professionals, community animation and facilitation, etc found in the community. A combination of these myriad skills make possible, and assist, the livelihoods present in the community and the progress of civilization. The soft skills of finding an acceptable solution to complex problems, setting a purpose and infusing it among others, directing others' efforts towards a goal, and holding a group together are all required for livelihoods to prosper. Similarly communication skills of making a representation, negotiation, arguing convincingly, appraising others of the situation in the least possible time are all required. The skills associated with learning also play a part in improving the livelihoods and enhancing the livelihoods options.

Another set of skills make the continued existence of human conglomeration in the present form a possibility. Examples include the skills possessed by the entertainers and people tending to religious needs. The entertainers could be of various types and hues from the street dancers to the maestros of classical music. In these cases, there is a two way relationship. The religious and entertainment needs fuel some persons livelihoods, while these livelihoods perpetuate by creating further needs for their services.

A lot of knowledge exists in the society and this collective knowledge supports the livelihoods. This knowledge could relate directly to the skill (like the knowledge of acids for blacksmiths), or could relate to the environment in which they live (like the local medicinal herbs and traditional medical practices). This knowledge could also relate to the markets – both local and distant, and also be the basis for networking with other communities. This collective knowledge can result in a better appraisal (as compared to that of an individual) of any option before the community. The knowledge acquisition could be both direct and vicarious. Also, scientific temperament and spirit of enquiry, with adequate reverence for the age old tradition, need to exist for the traditional knowledge to be most useful.

The ability of the human beings to use the skills dictates the extent to which the skills actually contribute to the livelihood outcomes. Many times, it is the ability that brings out the skill possessed by a person. Even the most skilled goldsmith would not be able to turnout a good work if he cannot hold his hand steady or examine the finer aspects of a design on an ornament made by others. As a general rule, a person that lacks energy and vigour (of both the body and mind) may not be able to accomplish much.

The abilities are of various kinds and the requirements could change with the job in hand. The person who ensures quality at a tea factory may need totally different abilities than a person who is in-charge of maintaining a warehouse. The ability to bring the mind to attention for a long time could be important not only for book keepers but also for data entry operators. Disabled are engaged in both these vocations. Therefore, we need to understand the abilities relevant for the livelihoods at hand or those inherent in the proposed livelihoods interventions and ensure the presence of the same. We should not be bogged down by healthy body alone.

A person's aptitude for or comfort with learning new concepts and application of known concepts is important as the livelihoods are changing constantly in these fast paced times. Newer methods of cultivation, newer designs in craft, newer places of sourcing, newer methods of organizing the production – all need to be learnt and learnt as quickly as possible. The more persons in the target group have these aptitudes, the easier is it for the intervenor to animate the community and facilitate interventions.

All the work these days involves team work, which involves certain way of thinking and feeling about the others. These attitudes need to be inculcated/ promoted, by which the human capital can be improved. The attitudes towards newer/ industrial/ service livelihoods are important for interventions promoting rural non-farm sector. The inability of several youths to adjust to the constraints placed on them by the organizations leads to several costs, both to the individuals and the organizations. Such difficulty is more pronounced among the youth in the migrant families of urban areas and restrains several livelihoods opportunities.

Capsule 12: FINANCIAL CAPITAL:

Understanding Financial Capital

Financial capital is one of the important capitals that an individual/ family require. It denotes the financial resources that people use to achieve their livelihood objectives. There are two main sources of financial capital: available stocks, which can be held in several forms such as cash, bank deposits, liquid assets such as livestock and jewellery, or resources obtained through credit-providing institutions; and regular inflows of money, including earned income, pensions, other transfers from the state, and remittances.

To live, a human being needs to use several goods and services, which he obtains by four methods.

- He collects from nature and consumes them. Examples include the fruits, roots and seeds available in the forests and fishes available in the rivers and seas. Some kind of simple processing may be required to enable the consumption of some of these items. But, essentially these are available for free and only need to be collected and consumed.
- To obtain a few other goods, he works on something, produces it and consumes it himself. Examples include agriculture, backyard poultry, kitchen garden, etc. The core characteristic of this set is production for self consumption.
- He obtains yet a few more by entering into an informal give and take relationship. The relationship in this case is not a pure exchange in itself – there is no clear one to one relationship between the items exchanged. He has some excess papayas from his kitchen garden, and they are not so many that he can take the trouble of marketing them. So he gives some to his friendly neighbour, who might respond by sharing a few lemons in the future. There is no strict one to one correspondence in these exchanges.
- To get some other goods and services, he has to depend on the market. In the beginning, this dependence was by way of barter. At some later point in time, the money became the means of exchange. Money enables the interaction of a person with the market.

Financial capital (or money and its access) can be used to influence the four arrows. However, in the absence of other capitals, markets themselves are underdeveloped and money alone may be able to neither sustain the livelihoods nor result in the four arrows. For example, if a billionaire were to crash land somewhere in the Sahara desert, all of the money that he is carrying cannot bring him relief from the heat of desert or quench his thirst. The range of financial capital involves cash savings, silver/gold ornaments, small ruminants, backyard poultry, grains saved, investing time and energy to keep the landlord/ moneylender happy so that he extends credit when required, trees in the homestead lands, chits, daily savings, savings accounts in banks/ post offices, cultivating some vegetables in the farm to earn a regular cash flow, etc.

Characteristics of financial capital

Financial capital has two important characteristics: stock and flow.

Stock is the amount of financial capital one has or can access at any given point of time. This not only includes ready cash, but all the deposits that can be converted into cash. In rural areas, these also include the small ruminants like sheep and poultry that have ready market, apart from gold and other valuables that can be used as a guarantee for accessing credit. The reputation one enjoys in the credit markets, and the ease with which one can access it, are also part of the stock. Savings are the preferred type of financial capital because they do not have liabilities attached and usually do not entail reliance on others. They can be held in several forms: cash, bank deposits or liquid assets such as livestock and jewellery. Financial resources can also be obtained through credit-providing institutions.

The **flow** is the periodicity, regularity and predictability of the money inflow into the household. These flows could come from doing something like marketing agricultural surpluses, working for others, offering services, selling and merchandising, etc. They could also come from entitlements like pensions, interests on investments, trust disbursements, etc. The remittances of migrants received by the households are also part of the flow. When the flow matches the requirements, the risks are lowered. In order to make a positive contribution to financial capital these inflows must be reliable (while complete reliability can never be guaranteed there is a difference between a one-off payment and a regular transfer on the basis of which people can plan investments). An assured flow also enables/facilitates the draws from the stock (or makes it easy to draw from the stock).

How does the financial capital get converted into livelihood outcomes?

It is obvious that if a person has access to money, he can invest it into any activity which can generate more income. If any person does not have access to formal sources of credit like banks and other financial institutions for taking loans for investment, he/ she may have to depend on informal sources of credit such as money lenders who charge exorbitant interest rates because of which the person's expenditure will increase. Hence access to financial resources at cheaper rates will help in reducing expenditure. Similarly if a person has access to financial capital he can use it to diversify his livelihoods by starting new economic activities which can help in increasing the number of days of employment. For example a farmer may use his surpluses that are generated in the farming activity to buy some buffaloes so that he can earn regular income throughout the year or he may use that money for establishing a small enterprise which can increase his employment and income.

Further, diversifying livelihoods by using financial capital reduces the risk of a household. As the old saying goes, 'Don't put all your eggs in one basket'. This means depending on any single source of livelihood will increase the risk of any household. For instance if the dry land farmer invests whatever little money he has only in farming, the income he can earn depends completely on weather conditions. If the weather is not favourable, he has to lose the investment. On the other hand, if he has access to more financial resources or to cheaper sources of credit he would invest also in other livelihoods which can help him in realizing incomes from other sources though he loses in farming. Thus financial capital helps in diversifying the livelihoods thereby reducing the risk involved.

Three issues, among others, influence the ability of a household to convert the financial capital into livelihood outcomes. They are:

- Time of access

- Ease of access

- Security of stock in transit

Money is valuable only if it is available to a person at the time of need. This is clearly brought at the time of mismatch between the timing of receivables and payables. A person would need money at the time of sickness, and he can't wait till the harvest about two months down the line to go to a doctor. Unavailability of money at the time of need decreases the ability of the person to participate in the market effectively, reduces his chances of income, and increases the costs of consumption and the risks.

Money should not only be available on time, but one should find it easy to access the available money. A case in the point is the situation of woman in several households. She has to come forward and ask which in itself could be an emotionally stressful exercise in some homes. The woman may have saved some money here and there. But, she may be hesitant to take it out before her husband or in-laws and spend it. Hence, though money is available, it may not be easily accessible to her. This hinders her ability to use the money. Another issue that hinders the ability of a household to convert the financial capital available into the livelihoods outcomes is the security – which relates to both the stock of money held and during transit. The security is at the core of several ills seen among the platform dwellers and migrant labour. As the platform dwellers cannot safely save it for a later day, they spend it in present on all vices. This increase the costs of emergency services when they require it – they have to borrow money and very high interest rates of up to 5% per day have been reported from Delhi and Ahmedabad. Similarly, the migrant labour in Hyderabad spends a lot of their money as they don't feel that the money can be securely transferred to their homes back in Orissa or Bihar.

Among the LEAP tools, social map provides us information related to the credit institutions present, the money lenders present in the village, and the general stock of sheep or backyard poultry available with them. The SHGs and

other savings institutions present are also known in the social map/institutional analysis. The income and expenditure statements of individual households give us insights into the stocks and flows of financial capitals, as also the time of access. The same is also verified with the help of traded out and traded in. The focus group discussions and social analysis can bring out the ease of use of money and market participation.

Just possessing financial capital or having ready cash (or cash equivalent) as fall back option can change the activities of the household. It can invest in education of children or increase in skills or in searching for options that give higher returns. In such cases, the financial capital may not actually be used – but it only gives the necessary confidence for a household to take a different set of activities.

How do contextual factors affect financial capital?

Though financial capital is important for enhancing the livelihoods, the availability and quality of this capital to each family varies from place to place based on the context in which the family is living.

The ecological context in which a certain family exists influences its access to the financial capital. For example the tribals living in remote forest and hilly areas may not have access to the formal sources of credit as the banks and other institutions would not establish their branches in these areas because of difficulty in operations. This situation is equally true with the people living in small island areas.

Some technological changes also affect the financial capital of the people either positively or negatively. If a farmer buys a new harvesting machine, though it may cost him more for buying, it will reduce his investment needs in future as there is no need for him to engage labour for harvesting. On the other hand, the labour in that village loose employment for some days which affects their cash flows. Similarly the economic context affects the financial capital in many ways. The government's policy towards poverty alleviation that, women self help groups should be promoted actively and used as a channel of poverty reduction, has created access to the financial resources to many poor women.

The distribution pattern also will have its impact on the accessibility of financial capital. We see people who are having more land will have access to financial capital better than the people who are having small fractions of land.

Factors affecting the quality of financial capital:

Quality of financial capital depends on:

- adequacy of availability
- timely access
- cost of access

The capital that is present may not be adequate enough. For example, Rs.300 is needed to pay examination fee of the child but only Rs.200 is available. This inadequate availability is as good as non-availability, as examination fee cannot be paid in part. Similarly, a visit to the doctor may require Rs.50 towards doctor's fee and another Rs.50 towards medicines. Having less than Rs.100 may not help in any manner – just paying for the doctor without purchasing medicines is worthless while one does not know what medicines to purchase without doctor's advice.

Timely availability of this capital is crucial. Availability of credit at the time of purchase of agricultural inputs can enable the farmer cultivate his land better and in a timely manner.

A case study from a village

In a village near Warangal town of Andhra Pradesh an NGO tried to intervene for the income enhancement of cotton farmers. The NGO asked the farmers to form into SHGs and their federations so that they can provide credit to the

farmers at cheaper interest rates and also market their produce collectively after harvest. The farmers formed into collectives, took the support of NGO and marketed the produce through collective. But an analysis at a later point of time revealed that most of farmers marketed only a part of their produce through the collectives. Remaining produce was being sold to a fertilizer shop owner at Warangal at a price much lower than the price they realized by selling through collective. When enquired about the reason the farmers told that the fertilizer shop owner gives fertilizers on credit when required under the agreement that the farmers sell the produce to him only. The NGO asked the farmers why there is a need to take credit from the fertilizer shop owner when the NGO is giving credit at the beginning of the agriculture season at cheaper rates of interest. The farmers told that the NGO is giving credit only at the beginning of the season and that too only for the purpose of investment in agriculture only in the extent of land supported by the NGO. But the fertilizer shop owner not only gives fertilizer on credit but he also provides credit as and when required and towards any purpose. In fact, a woman farmer told that she wrote on a small piece of paper mentioning her need for a credit of Rs 5000 to perform her father-in-law's funeral and sent the paper to the fertilizer shop owner with an auto driver who goes to Warangal regularly from her village. The shop owner sent money in the evening with the auto driver without asking any guarantee. The interest rate is very high. However, if credit is available on such simple terms, poor people tend to lean towards it even though they have to pay exorbitant interest rates.

Cost of access can be an issue, particularly with the illiterate. Many poor people require credit on very simple terms as they do lack of proper knowledge to understand all the processes involved in obtaining credit. But the formal institutions, though they charge nominal interest rates, follows critical procedures which are difficult for the illiterate poor people to understand. Hence they depend on informal credit sources like local money lenders even though they charge exorbitant interest rates because these people give credit as and when required and also on very simple terms.

Summary

In this chapter, we have discussed the meaning and benefits of social capital. The factors affecting social capital and also how this social capital can be converted into livelihoods outcomes are also discussed. The other important capital i.e. financial capital is also discussed to give you a picture of how it helps in achieving livelihoods outcomes.

Capsule 13: SPIRITUAL CAPITAL:

Spiritual capital is the specific quest present in human beings that makes them seek a better living than the present, and a spirit to fight in the face of adversity. In simple words spiritual capital refers to drive or eagerness in a human being to complete as well as excel in a particular task/work/activity. This drive is also referred to as motivation. It needs to be noted that 'spiritual capital' is in no way related to the religion.

This spirit is very strong in some but not so in several people. This spirit is exhibited by persons as a will to take ones destiny into one own hand, seek, recognize and adapt to changes and persevere in the face of adversity. Persons who lack this 'will' do not benefit from improvements in other capitals or contexts. Moreover, they may even lose any assets that accrued to them under some assistance programs, as they do not recognize that change is expected of them as a result of the new asset holding. Thus, the spiritual capital is the alchemist's magic that turns all other capitals into livelihoods outcomes. A strong quest to change for better might even motivate a person to seek improvements in the other capitals. Therefore, this deserves a separate mention though it is covered as an attitude under human capital.

This is an important capital as human beings with high spiritual capital bring in positive attitude in completing activities towards a larger goal. Efforts are put in overcoming obstructions and they look for all possible strategies or plans to complete the task. Such people need minimum supervision and are self motivated. The above characteristics were worded in different ways, some of which are given below:

- Travelling an extra-mile
- Tenacity
- Action oriented
- Taking the initiative
- Willingness to change
- Taking ownership
- Pro-activeness
- Focus on the 'circle of influence' and not on 'circle of concern'
- Primacy of and focus on purpose
- Strong will, to oppose even the world for something that they believe in.
- Making the most from the present resources and situation
- Building networks

The phrase 'the fire in the belly' is used in several occasions to describe some set of characteristics like these.

Study of cases to identify factors that contribute to development impact indicated that several elements, not specifically covered in the five capitals and the four contexts, were involved in the success. These factors were described as absence of the characteristics listed above – something which exists within human beings and cannot be brought about changing the outside factors alone. Moreover, the absence of these aspects also explained the failure of interventions by development organizations. This indicates the importance of spiritual capital. Spiritual capital of a person is built or enhanced by various things. A powerful ideology, a good role model/leader can inspire and direct people towards action. In history we have seen such examples as in case of Mahatma Gandhi who inspired a country or Dr. B.R. Ambedkar who inspired a whole community with their powerful vision and leadership. Similarly Narmada bacho andolan, Bhoodhan movement, Farmers movements have inspired many individuals to define the course of their lives differently. In a closed/small community, success stories of individuals can increase the spiritual capital of others in the group.

Case studies showing display or lack of spiritual capital

The following examples help us understand this idea better.

Example1: Landless labour in Anantapur

All the 65 inhabitants of a village were landless labourers working for a big landlord, whose lands were irrigated by a huge tank located in his land. During the process of LEAP, they identified dairy as a priority area for reducing their poverty and requested the project authorities to give them some milch animals. The poverty alleviation project, which worked for their social mobilization, appraised their request. It found that most of these people herded the cattle of the landlord; there was enough fodder to sustain the animals proposed; and the milk collection van could be asked to visit the village each day. As all the prerequisites were present, the request for milch animals was approved. Each family used the money to procure the crossbred animals of their choice. The coordinator of the project ensured that people got good prices for the milk and that the milk bills were paid regularly by the dairy. The regular visit of the veterinary doctor was also ensured.

After about three months of the purchase, when the monitoring team visited the village, they found that only six families still had the cow given by the project and others had sold the animal and the money was used for daily needs.

The situation was despite several efforts by the coordinator during the last three months. The coordinator, along with several other motivators from neighbouring villages, went door to door pleading people not to sell the animals. Big posters with the names of top five people who made profits were displayed every fortnight to motivate people. Special efforts were made to retain the milk transport vehicle for a longer duration, so as to cater to the late comers. A community meeting was held to discuss the issue at the instance of the monitoring team. During the meeting one person articulated the reason for selling the cows as "What else do we do? These cows took all our free time and bound us to the house after we came back from our work. There was no way I could visit my in laws house along with my wife for the festival with these loitering around. I could not even go to a movie along with my wife till I could sell off the animal!" He was so displeased with rearing the cow that he used several bad words while sharing this.

During the informal interactions, several members referred to the cows as unholy animals! They said that the cows led to several fights between husband and wife! Another woman said that "Since the cow came in, my daughter in law has prioritized care for the animal than heeding to her husband's wants! What use is the cow if my son has to get a secondary treatment than the cow?"

Visit to this village after another six months indicated that several other efforts by the coordinator like promotion of kitchen gardening, adult education centres, skill training for grafting and nursery rising, etc., also failed. But the results were the same. The community was not ready to make changes to their existing routine, and take on new roles, even though it meant additional income. Thus, without focussing on changes required in these aspects, investments in development may not result in adequate impact.

Example2: Settlement colonies in irrigated areas, Raichur and Kurnool Districts

People sold their meagre agricultural lands in prime agricultural belts to purchase larger extent of lands in areas where canal irrigation facilities are likely to come up under some dam. People who migrated from the same locality generally stay together and establish new settlements/colonies. Visits to such areas indicated that the migrants had overall better yields compared to the local people. The migrants enjoyed a diversified livelihoods portfolio and a better labour participation ratio among women. Though not staying in the main villages, the children of these migrants were enrolled in the schools. Interviews with the teachers indicated that these children, as a whole, performed better in the schools than those of the local people.

Interactions with the community indicated that the willingness to change, which was strongly exhibited by their moving out of their original place, and staying on despite low initial yields till the lands were won over and irrigated, contributed to their success in new place. On the other hand, the locals were not willing to change the intensity of their agriculture despite their lands being irrigated. The increased availability of the fodder and market for manure were not noticed by these locals.

Thus, the will to take ones destiny into ones own hand, willingness to change and persevere in the face of adversity seem to characterize people who have benefited either from an intervention by a project or from their own initiative. Those who lacked these could not benefit from improvements in the other five capitals or the contexts or both.

The 'spirit' to persevere, fight, change and survive to improve the present situation, with a strong belief that the things could be changed for the better, is at the root of all the above described behaviours.

Importance of spiritual capital

The 'spiritual capital' is like the driver of a bus, in which a good engine, fuel, and all that are required to drive are present. It is the driver who gives the power to the inanimate bus to move forward. Without a driver, the presence of all the other essentials will not make the bus move along the desired path. On the other hand, if a good driver is present and perceives the need for a vehicle in any given situation, he will make all possible efforts to get a bus and

take people to the desired destination. Perseverance, combined with learning and action, pays. This is the essence of 'spiritual capital'.

In other words, spiritual capital is required for better livelihoods outcomes even where all other five capitals are available. And if the spiritual capital exists, the person tries to gather other resources to reach the desired end. The presence of other capitals in such circumstances aids the conversion of other resources into livelihoods outcomes.

Person with high spiritual capital sees opportunities everywhere, this attitude helps them in finding varied livelihood activities thereby increasing their employment days and there by the income. As people with high spiritual capital are innovative they are always on the lookout for newer methods or strategies of reducing risks and expenditure.

Summary

In this unit we have understood that Human capital refers to human beings with relevant physical/ bodily ability, skills, knowledge, attitudes and aptitudes for a work. Human capital is important as it converts/combines/uses all other capitals to produce livelihoods outcomes.

Human capital can be grouped according to its location and skill sets. Many factors influence enhancement of human capital, accessibility and availability of opportunities and infrastructure, socio-cultural factors are important ones. Nature of human capital is that it can be ever expanding and can be transferred and most importantly the value of the capital will not decrease even after transferring to others. Context in which human capital is placed determines the market value of the human capital which plays a role in determining the livelihood outcomes.

Spiritual capital refers to drive or eagerness in a human being to complete as well as excel in a particular task/work/activity. This drive is also referred to as motivation. It needs to be noted that 'spiritual capital' is in no way related to the religion. A strong ideology, vision and leadership, positive experiences are external factors that can enhance spiritual capital of a person or a community. It is possible to identify presence of spiritual capital but not possible to measure it or quantify it. ❖