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Indigenous Model of Sustainable Development: A Case Study of Techno-Traditional Wisdom in a Punjabi Village

ABSTRACT

The current paper is an attempt to build a case for the revitalization of Indigenous Knowledge System which is intellectual property of a native community that resides in a particular environment and enjoying a friendly ecological interaction with ecological niche. The commercialization of development theory with mere economic terms and statistics has hijacked the integrity of indigenous knowledge and resources. The local populations are under continuous mental stress to produce more and more to earn their living and monetary resources. This paper has a long term vision of refreshing the local knowledge as it discusses the gradual shift in development theory towards giving space for locally based knowledge system as a viable option for launching sustainable development. In fact, all considerable countries of the world are struggling to devise an alternative but sustainable strategy for their livelihoods. In such a case that most of the world's brethren is reviewing their local knowledge systems then why Pakistan lags behind the same. For Pakistan, sustainable development would simply mean non-reliance upon any foreign developmental model. The development that is sprung out of native and local resources both human and natural would call for development not only for the current generation but for the ones to come.

Key Words: Indigenous Model of Development, Sustainable Development, Indigenous Development, Community Mobilization, Community Organization,

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INTRODUCTION

Indigenous Knowledge System (IKS) is equally termed as "Traditional Knowledge", "Traditional Science", "Community's Science" "Local Wisdom", and "Traditional Wisdom". On conceptual level, IKS is the knowledge of any particular society or community that is acquired and accumulated though an interaction of community and its out environment including demographical factors, ecological factors, social and cultural environment as well as specific historical, economic and political realities. In the current world, in fact all of the countries specifically developing of third world strive to get self reliant development which is sustainable and erected upon the available native resources. Unfortunately, this dream has not come true because of the two important reasons. First, the technology is not evolved natively and second, the required human resource is not available within the recipient nations willing to see them pursuing the sustainable development. Another argument for IKS not being in its actual place and position is that after the advent of modern approaches towards development is its undermining on the part of governments and development agencies. Moreover, IKS could be helpful in current day's challenges as supported by Berkes (1993:1-9) in the following words:

"IK has been lauded as an "alternative collective wisdom relevant to a variety of matters at a time when existing norms, values and laws are increasingly called into question".

A similar argument was discussed by de Vreede (1996) as "development planning has often failed to achieve the desired result: *sustainable development*. In some cases, "dependencies have been created by an outside world that orders and demands (through laws and natural resource regulations) but does not truly contribute to development. Communities are often left to find their own means". The modern technologies remain foreigner for the societies as they were in past. While strictly evaluating the adoption of modern technologies, what we see is interesting because the upper quartiles of the society or community are allegedly the ones who embrace the new capitalistic technologies because this clout is in a position to take a risk to adopt the new and expensive innovations which lower quartile while lacking the resources cannot afford to go after these innovations. Shankar (1996) also agrees with the logic just mentioned as "Western techno-scientific approaches are (in themselves) an insufficient response to today's complex web of social, economic, political, and environmental challenges. The paradigm in support of "one technology or one knowledge system fits all" has been debunked. IK systems suggest a different approach to problem solving. Whereas Western science attempts to isolate a problem — to eliminate its inter-linkage with various other factors and to reduce a problem to

a small number of controllable parameters — traditional approaches usually examine problems in their entirety, together with their inter-linkages and complexities."

Similarly, the concept of Green revolution was also an idea that promised for revolutionising agriculture but failures of the same provided a chance to critics to revisit and research the gaps for the failures and side by side the importance of local wisdom was also well searched and documented. The same argument has been reinforced by Palanianppan and Annadurai (2003) as "Need for more intensive and economic agriculture production led to wide use of high doses of concentrated chemical fertilizer but insufficient use of organics led to negative results, decrease in fertility and soil structure. Chemical fertilizers and pesticides pollute our air and water. Agricultural chemicals, including hormones and antibodies leave residues in food that may cause cancer or genetic damage. Soil and energy resources are being depleted. Instead of recycling our wastes back into land as fertilizer, we allow them to pollute our water. We use non-renewable energy resources to produce artificial fertilizer. In future we may be forced to make radical adjustments in such agricultural practices. Thus organic farming requires the total elimination of the most damaging chemicals. Such restrictions would presumably satisfy most concerns about pollution and human health. High yields of crops are heavily dependent on use of chemical fertilizers. But in the long run many problems are encountered. Organic farming techniques will help to increase the organic matter content of soils, thus reducing the bulk density and decreasing compaction. There can be effective conservation systems since they provide soil cover during most of the year and with the greater use of rotation and green manure as a source of soil fertility. So unlike under conventional and mono-cropping systems, due to maintenance of crop cover during greater part of the year there is little runoff and erosion. Modern concept of conservation tillage is effective to reduce erosion but it employs excessive use of herbicides which are hazardous to our environment".

The indigenous methods of faming and communal life are based upon a friendly relationship with natural resources. The indigenous methods do not harvest the available natural resources on capitalistic approach rather sustainability is made sure so that the resources are also available for the upcoming generations. This argument is supported by WCED (1987) as "Sustainable development is "development that meets the needs of the present without compromising the ability of future generations to meet their own needs". Titilola (2006) has made the case further strong by stating that "Sustainable agricultural and natural-resource development means "the utilization, management and conservation of the natural resource base and the orientation of technological change to ensure the attainment and continued satisfaction of human needs — such as food, water, shelter, clothing and fuel — for present and future generations".

The growing concern upon the real notion and conceptualization of sustainable development is also evident from the works of World Commission on Environment and Development, that defined sustainable development and identified various objectives of it as Reviving growth; Changing the quality of growth; Meeting essential needs for jobs, food, energy, water, and sanitation; Ensuring a sustainable level of population; Conserving and enhancing the resource base; Reorienting technology and managing risk; Merging environmental considerations and economics in decision-making; Reorienting international economic relations; and Making development more participatory" (WCED 1987). Matowanyika (1991) made a likewise comment that "sustainable development comprises five functions as Biophysical and socioeconomic resources; External factors, such as available technologies and development ideologies; Internal factors, including socio-cultural belief systems and local production and technological bases; Population factors; and Political and economic factors". International Non Governmental Organizations (INGOs) like IUCN (1997:70-75) also started working on the conceptual clarity regarding sustainable development. According to IUCN "a society is sustainable when the human condition and the condition of the ecosystem are satisfactory or improving. IUCN has developed a series of eight (short) volumes to assess actions in terms of progress toward sustainability".

The central idea of the current research paper is that there is a growing awareness upon the effectiveness of putting indigenous resources and ideas to revitalize the development practices of the native communities. The need of the hour is that why Pakistan should lag behind the same strive so that a model of indigenous development is prepared and discussed in order to at least initiate the debate upon utilizing the natively conceived model for sustainable development. Lacking to which compel Pakistan to adopt another non-western but foreign model of development that would retard the dream of sustainable development from coming true.

LITERATURE REVIEW

Chambers (1985) says "Anthropologists have come to an interest in agricultural development through their long experience in working closely with the horticultural and peasant communities of the third world. This involvement coincides with a national interest in improving the agricultural productivity of "food poor" countries. Although the objectives of agricultural assistance programs may vary from project to project, for instance, some programs have as their goals, the elimination of rural poverty, through the introduction of farming technology and techniques, new plant varieties, commercial fertilizers and similar innovations. Other programs are developed around attempts to improve the nutritional status of people. Still other programs might be directed to deal with problems related to capital improvements in

lesser developed countries, such as encouraging agricultural self sufficiency and reducing the need for food imports, or helping a country develops foods for cash exports".

The contention here is that why most of the innovations in agricultural sector did not work as they were perceived in the laboratories or other control environments. An undeniable reason provided by a number of anthropologists to this dilemma is the ignorance of the socio-cultural and socio-economic factors that play a vital role in determining the human behavior to accept or reject. Doorman (1991) says Farmer's decision-making on agricultural technology can be analyzed from three broad perspectives that include (a) Diffusion of Innovation Research; (b) Farming System Research; and, (c) The Anthropological Approach.

Development strategies are often based on short sighted or erroneous ideas about the populations that they will affect. Anthropologists frequently challenge such ideas. It is true that traditional small operation farmers cannot be expected to embrace modern farming innovation, or is this simply a self-fulfilling prophecy resulting from the past systematic exclusion of these farmers from such opportunities. By the same token, anthropologists have sometimes challenged their own cherished notion of the development process. Most early research by anthropologists working in traditional rural communities tended to reject changes in subsistence practices on the basis of deep-seated value orientation. More than this Frank Cancian's study (1972) "Change and Uncertainty in a Peasant Economy" and Billie R Dewalt's (1984:29-60) "Modernization in a Mexican Ejido" have argued against this perspective. Both are of the opinion that "in some cases lower and poorer farmers are found to be more receptive to the innovations practices than middle class farmers who are financially secure".

Bartlett (1980) says that the contribution of applied anthropologists to problem bearing on agricultural practices and innovations have been limited [as have contribution by anthropologists in many other policy domains], by the tendency for the anthropologist to be utilized solely as "trouble shooters" by change agents and government researchers. In this mode of practice in terms of the "consultant" the role of anthropologist is called upon to explain, why a development scheme went wrong or, to anticipate the potential for conflict and misapplication in a newly planned agricultural development schemes. Anthropologists whenever have had an opportunity to work closely with other agricultural specialists over a long period of time their contribution have usually been impressive. But most of the recent work of anthropologists interested in agricultural development has centered on problems of farm management. The work attempts to match formal models of economic

development with a greater understanding of the ways in which farmers make agricultural decision.

Anthropologists have conducted much of their work among agrarian peoples. It is only, recently that a clear potential for applied specialization has emerged in this area. Much of the earlier work to the extent that it had applied implication can be subsumed under the somewhat broader category of community development. Recently, however a number of anthropologists have called for concerted efforts in these areas. Robert Rhoades and Vera Rhoades (1980) for example have argued that anthropologists should be encouraged to specialize as agricultural scientists and to seek employment with the government agencies and firms involved in agricultural development. The recently established bulletin "culture of agriculture" published by the anthropological study group on agrarian systems serves as a vehicle of communication of anthropologist interested in such matters.

Dube (1995) in his book states "The naiveté of the earlier developmental strategy is now apparent and the Third World is left with the sober realization that the process of development is infinitely complex and involves a wide range of interpenetrating variables. Development is not a simple matter of making calculated inputs to raise the output to the desired level. The transfer of technology bristles with difficulties: the transfer of institutions, even if desirable, is almost impossible to accomplish." De Silva (1988) argues "by borrowing foreign technology, the growth of appropriate local technology was smothered; as a result, the developing nations neglected to foster their own research capabilities and innovativeness, perpetuating a dependent relationship. The very character of development, however, ensured a grossly unequal distribution of the benefits and the disparity grew enormously per cent since 1960, this growth has been very unequally distributed among countries, regions within countries and socio-economic groups."

Wigna Raja, et al, (1998) says "Ideas regarding the up-gradation of indigenous knowledge and technology, organization and the conceptualizing of experience could be provided by Participatory Action Researchers. These action researchers would be a new breed of "organic intellectuals". They would be identified and absorbed in the culture and knowledge system of the people and also be equipped with scientific training. Such researchers, while engaged in the struggle alongside the people, would be interacting with their creative ideas and knowledge and at the same time helping to conceptualize the results of their collective social, political and productive efforts. Finally, Participatory Action Research could help rediscover folk literature and use it to reconstruct a sense of community identity. Such consciousness could reinforce the contemporary creative quest of the community". Dube (1995) further adds that "much of the early thinking on development did not accord to culture a central place either as

a goal or as an instrument. A current of thought, powerful in the nineteenth century, held that the continuing and obstructive persistence of tradition would block substantial modernization as traditional values and institutions are incompatible with modernity."

METHODS

A brief introduction about the locale of study and tools of study are in the following:

Locale

The current study was conducted in Union Council of Sacha Soda in tehsil and district of Sheikhupura district of the Punjab province. The life of this Union Council is characterised by big political players who acted as middlemen in the local power structure. The village community presents the picture of a rural society in transition. This village in recent past has experiences three major development intervention in the domain of agricultural development that include firstly, the installation of tubewells to cope with the water logging problem; secondly, the water management program; and thirdly, Agronomic Research Project to encourage the farmers towards High Yielding Varieties (HYVs) of various crops for better crop produce per acre.

Data collection was done through the exploratory method while using main techniques of participant observation, in-depth interviews, and key informants. The observational checklist was prepared that focused the variable and sub-variables along with all relevant indicators related to the topic of inquiry. The observational provided earlier scrutiny of the events and further allowed the sorting of respondents for later in-depth interviews.

Dick (1998) is of the view that "focus groups are a method particularly suited to preliminary research where some time-economy is a need, and where a more structured approach may be premature. It is common for the group session to be audio-taped (or sometimes videotaped) for later analysis, though that is not my preferred option. Focus groups are a method of group interviewing for obtaining qualitative data. It is not so much a research design as a data collection method" (Dick, 1998). The way of conducting focused group discussion was very interactive in which members were very keen to participate. In a sense, it also provided a forum to the senior representatives to speak up and share their experiences. This method served four important functions which were as under:

1. Firstly identification of the respondents who had been involved in similar activities;

2. Secondly, the preference was given to respondents, who were somehow involved in skills trainings or knowing the importance of the process;
3. Thirdly, the necessity of knowledge about development and community organization in their local terms; and,
4. Fourthly, their willingness to share their experiences was the basic condition during core group operation.

RESULTS AND DISCUSSION

IKS is a "complete traditional understanding of local people about the natural environment of their society that is based on centuries and continued passing through generations". The IKS is a scientifically verified repertoire of information that includes the cause and effect relationship among the diverse variables. This aim of the current paper was to see how the locals of the village viewed the sustainable development, planning, IKS, participatory development and how these complex terminologies got connected to each other. The current paper is divided into two sections covering indigenous perception of development, indigenous model of development and biases against IKS in development practices.

1. Indigenous Perception of Development
2. Indigenous Model of Development (IMD)

Indigenous Perception of *Taraqqi* (Development)

To conceptualize the term *'taraqqi'*, a senior respondent summed up that '*taraqqi bunyadi tur tey wasaael day khatmay day naal, wasaael dey barhaway da naa ay'* (development is basically to utilize resources to ensure its best use without fearing its exhaustion). People of village think that collective efforts can bring positive results and can also help community organize for a joint social cause. Village community is more concerned about their surrounding circumstances in terms of social cohesiveness. The population is segregated in various caste groups which are united at *parya* level. Matters related to village are dealt by seeking social consensus which is the only mean to plan or launch any intervention.

People compare their experience with previous developmental efforts in village and state that development should not be something that puts people in negative competition. This negative competition was experienced by people during running of ARP, SSTP, WMP and Devolution of Power. People view that the projects had weaknesses in its implementation phases. Moreover, the project staff was not trained to cope with the potential hurdles. Many hindrances were oversimplified or ignored by staff and planners which later on turned devastative. Village community thought

that these weaknesses were manipulated by influential landlords to increase their hegemonic control over people. According to them, projects were not democratic in functioning therefore people who did not have any link or support from village power factions were excluded from beneficiaries list. It was due to this pressure that turned people to join these factions just to take benefits from project offerings.

Taraqqi is independence from externalities not an addiction. The beneficiaries have to take their independent decisions in order to exert better and effective control over their livelihoods and available resources at community level. According to local notion, development in terms of mechanical technology as experienced by village farmers has even worsened the situation and led to many problems in village. Firstly, it created an army of unemployed laborers; secondly, it compelled people to migrate to adjacent towns and especially to neighboring districts in search of jobs; thirdly, it caused a trend in favor of international migration especially in Gujranwala district; fourthly, the cities currently experiencing pressed economic crisis were not able to provide work opportunities to all migrants. The bulk of unemployed laborers were frustrated and their idleness raised incidences of conflict and violence within households as well as in village's social life. The negative impacts were more over the middleclass of village that lost its interests in work diligently. Villagers referred to rise in cases of adultery, drinking, theft, money and cell phone snatching. Upon further probing, respondents replied that it is the village youth that is indulged in such criminal acts. Few cases of elopement and consequent fights were also cited. Elders of village responded that unplanned and overwhelming shout for mechanization instead of helping rural people resulted in problems.

Majority of villagers who experienced farm mechanization are again shifting back to their traditional farming practices. The case of economic factors was main reason due to which farmers thought to reap more benefits and the same resulted in the rejoin of traditional practices. The modern agriculture methods became economically infeasible for the subsistence level farmers to keep their pace with it. The process of mechanization only suited wealthy and big landlords who had resources to join commercial agriculture. Their economic cushion provided them a shelter to transform their agriculture chores into a profitable business activity. A core group of key informants of village were comparing their experience with previous projects in which planners and project officials were under influence of powerful factions of village. This core group was critical of '*naukar-shahi'* approach (top-down) adopted by development experts and agencies. Whereas, the core group opined that instead of launching a real grass root development opportunity, the bureaucratic styled development approach only favored power holders of village. It simply excluded the laymen from development process. The local strategy adopted by lay men was that

they also decided to join the factions run by power groups of village to be a part of this exercise.

The core group of villagers insisted upon the local skills to be employed as featuring village level development process while utilizing the local resources. These resources whether they are natural or human have to be locally available so that traditional independence of rural areas is reinstated. This thing could in turn also result positive in favor of controlling overwhelming rural-urban migration. Respondents shared that for long lasting effects of development initiatives, masses have to be the first to receive the benefits. Villagers were critical of public offices because they thought that a layman cannot consult them at his own will. There is no mechanism to assist layman in these departments. Political influence has turned the delivery system to be weak to address a common man's needs. The core group also added their views on why the system in Pakistan stopped responding to the need of people of Pakistan. The views included instability of political office and inefficient delivery system to reply to social needs of people. It is due to which the social institution of family, caste and personal support networks are still influential and operational. People have more faith in their local patron who though exerts power but also helps in cases especially related to dealing with police and other important district offices like agriculture, irrigation, revenue, rural development, community development, education and health.

Baba Waris (an elder from core group) commented that *basti* serves two purposes. Firstly, it responds to the individual needs of persons and secondly it serves the collective social needs of community. Baba Waris divided village community into five classes according to their role and functions in social change process and community work in village. Development is evidently a process of increasing the efficiency of social institutions to respond fruitfully to folks' needs. The classifications propounded by Baba Waris are as under:

1. *Jantey Nahin* (a group of people who have no access to information. They are simply ignorant);
2. *Jantey Hain, Maantey Nahin* (a group of people who possess knowledge and know how to take initiatives but they do not take risk and therefore refrain from accepting change);
3. *Maantey Hain, Amal Nahin Kertey* (group of people who know worth of collective efforts for development but they do not become a part of development practice);
4. *Amal Kertey Hain, Kayam Nahin Rehtey* (a group of people who do accept change and practice but they do not assume the change on sustainable basis); and,

5. *Amal Kertey Hain, Kayam Rehtey Hain* (a group of people who accept and practice change on sustainable basis).

Unlike conventional styles of development, indigenous development notion is erected upon the sustainable utilization of both *abaadi* and *wasaael.* The top-down approach and its immediate opposite bottom-up approaches are directly exclusive of its opponent. The indigenous styled development approach is inclusive of encouragement of self reliance over available human and natural resources. The *basti* approach is the best carrier of indigenous development. It makes a usage of working for the people through people and by the people. The resources are best utilized without the commercial harvest of natural resources. People of village cite examples of *shamilat* (communal land) to be best source of animal pasture during fodder dearth. It also served a source of fire material and provided certain medicinal plants and herbs to the village community. The disappearance of communal lands due to seize of power groups and manipulations of other influential factors, the community lost its traditional source of animal pasture, fuel source and medicinal plants. The deforestation of forest also affected the aesthetics, medical as well as environmental resources of village.

Indigenous Model of Development (ID)

In the lines below, we tried to describe the stages of development as perceived by village people as well as dynamics of how community once responded to communal tasks along with relevant cases and practices.

First Stage: *Sooch Bichar* (Conceptualizing)

Indigenous Development (ID) advocates strong conceptualizing of the term 'development' as it believes that development indicators and needs could be different because of diverse natured challenges faced by communities. As a result of which the needs' prioritization list could be different for different communities. ID believes that development model on macro level must be containing all feed backs from local communities so that common and especially the unique developmental needs are also reflected in the development policy.

Second Stage: *Shinaakhat* (Identification and Homogenizing)

This stage is a multi cluster stage that comprises the following:

1. Consultation on needs and aspirations;
2. Identification of developmental needs;
3. Prioritization of developmental needs; and,

4. Seeking communal consensus on exclusive classification of needs.

This stage is participatory in its nature and requires people to participate in the process so that consultation may lead to some concrete conclusion and results. Usually done in an informal way, the community exchanges ideas and views on required necessities and what additional is required. This is used to happen in communal meetings, like marriages, village council sessions, in planning to fight against any natural disaster, etc. The long continued discussion facilitates step wise clear demarcation between what is really required i.e. Need and what is beneficial but not crucial for survival. Once this has been done, the community itself develops a priorities list and again shared among the community members. The purpose of doing so is to get wider acceptance from community members and to attach a community's ownership feelings towards solution of issues.

Third Stage: ***Farahmiyee Wasaael aur Intizaam*** (Resource Management)

1. Resources Identification;
2. Resource Categorization; and,
3. Resource Allocation and Mobilization.

Comprising of three factors mentioned above, the importance of resources is authentic and mutually agreed to fix problems within community. The community through an informal chat ponders upon prerequisites for problems' shooting and solution. The resources required for an issue are discussed by community members and further process of identifying the resources is also held. It is done to identify location where the required resources are available. Once the resources are indicated location wise, then comes the stage where there is a discussion about categorization of resources (but this only happens when few of required resources are not available within community). This is called the categorization of resources to see whether problems or issues can be fixed with help of internal resources or some external resources are required (if so then, finding the locations of desired resources and its social cost to be borne by members of community). The community again peeps into possibility of mobilization of resources regarding locally available resources. On the other hand, snow ball method is adopted to find out how to access the available external resources.

Fourth Stage: ***Tajaweez*** **(Interventions**)

1. Planning an Intervention leading to Public Participation; and,
2. Identification of Good Practices.

The planning phase contains the social consensus over nature, time and pattern of intervention that is been planned by community members for solution of issue. While going to do so, village experts usually give examples of good practices so that non-renewable resources (time and labor) are saved from waste. Another purpose of discussing and quoting good practices leads to selection of best suited methodology to solve targeted items with sustainability approach. The overwhelming stress on sustainable solutions is because of fact and reality that resources are meager and may not be available for next time therefore best utility of same is to be ensured to root out the issues on permanent basis.

Fifth Stage: *Amali Jama aur Nigraani* (Implementation and Monitoring)

1. Implementation of Intervention;
2. Benefits Acquisition; and,
3. Lessons Learnt.

Most vital is 'implementation stage' where envisaged intervention is allowed to be executed by community members through joint and mutual consultations. This is done in presence of community elders because during this phase chances of misunderstandings are high, therefore, village nobles and community make sure that they are there to witness process when an intervention is being executed. If planned intervention requires various implementation phases, then relevant experts of each phase are also supposed to be there or at least remain available on first call. For example; building a house is diverse natured works that admits many faculties in itself. Like for digging the foundations of house, only a supervisor and labor is required, whereas during construction of walls, labor under supervision of a qualified mason is required. If furnishing of doors and cupboards is at hand, services of a carpenter are needed, similarly an electrician deals in his areas of expertise so does the sanitary person. This phase involves all actors of this phase while bringing overseer under the monitoring of experienced community people.

Sixth Stage: *Takhmina aur Jaiza* (Evaluation and Updating IMD

Learning of Best Practices.

The final stage is operated at community's experience level and thought processes of villagers in which it helps villagers in comparing things and terming them as good, or better and bad or worst. It is to see that limited resources may not diminish. This stage is operationalized soon after the execution of intervention so that product, process and effect of the new intervention are evaluated in terms of its economic, environmental

and cultural value. The stage is also a future reference for all such kind of activities. Purpose of this exercise is to increase and update knowledge repertoire with previous and current activities. These specific activities are thus evaluated and labeled as good or best practices by the village people with respect to their utility.

DISCUSSION

It is a reality that majority of the agriculture domain is constituted by small farmers who just live up to their subsistence level. It is unfortunate that modern agriculture and its mechanized techniques do not have space for these small growers. Therefore, in agriculture development process these small farmers have left behind and they feel ignored on behalf of stakeholders involved in agriculture development process. The development staff especially the agriculture research agencies seem ignorant of the grass root needs of these small farmers. All major interventions centralizing agriculture development process are single-handedly promoting mechanized agriculture to be single solution to achieve sustainability. Lefeber (1992) in this regard says that 'Industrial (modern) agriculture leads to the concentration of wealth and decision-making in a few corporate and individual hands, thus hindering the efficient allocation of resources as prices become controlled through corporate collusion and the prevailing subsidy programs of a few industrialized agricultural exporters' (Lefeber, 1992).

There is an agreement among farmers that they are not represented in government initiatives regarding agriculture. These farmers are left at their own to make their living out of their traditional system of production. In addition, there is a voice at international level to support small scale agriculture because this domain could be a good source of providing employment. It could thus raise independent living for these farmers. In this connection, Oxfam GB advocates:

Smallholder agriculture provides considerably more employment and food staples in less developed countries than do larger commercial farms (Oxfam GB, 2000:1-6).

Grinspun, (2003:49) also contends that:

Small-scale farmers who produce basic grains are critical to the domestic food supply and hence to food security. They contribute to social and biological diversity (through, for example multiple cropping systems) and thus to sustainable development (Grinspun, 2003: 49).

These scholars also see interrelationship of small scale agriculture with sustainability and thus empowerment due to farmers' equitable opportunities and decentralized

landownership. Grinspun (2003) advocates that social organization of small-scale farming may promote empowerments and community responsibility through equitable opportunities and decentralized landownership. For both scholars, small scale farming is often the social basis for community organization and for locally based development initiatives, required for rural diversification and other community goals. Ritchie et al., (1999:3) also describe:

Small scale farms are economically more efficient than large scale operations in terms of resource utilization and productivity (for example out per unit area) (Ritchie, et al., 1999).

Spending in small scale agriculture and developing small scale farmers would contribute in controlling the rural-urban migration. It could also help in controlling the hazards regarding already pressed economic situation in cities. The authors have already described due to absence of patronage for small scale agriculture, particularly in a situation where government is not playing its role for protecting small farmers due to which these farmers have to move to urban centers in search of jobs. Keeping in view current issues of economic stagnation of country, the cities are also unable to provide work opportunities and jobs. Whereas, recognizing the small scale agriculture would facilitate in controlling this trend and would contribute in providing jobs to these people at their local levels.

Small scale farming and local small scale, value-added enterprises are the only foreseeable alternatives to prevent massive migration from the countryside to peri-urban slums and the consequent social and economic burden this process imposes on underdeveloped countries. (Grinspun, 2003: 49).

Therefore, Ricardo Grinspun (2003) has strongly argued that:

Despite its importance, small scale agriculture is seriously endangered by current neo-liberal policies, and the implications for rural poverty, food security, and urban migration are far-reaching (Ibid: 49).

On other hand, modern agriculture has put pressure on the farmer community from two ends. The first is from within their own farmer' community to compete. The second is the criticism over small farmers from government and advoactes of modern farming blaming the former not complying with national nutritional requirements. Whereas this is a fact, that modern farming has caught the farmer community into a very expensive nexus of practices that do not simply match and affordable by majority of small scale and subsistence level farmers. Some of them who apply for

the agri-credits from *Zarai Tarraqiati*[1] Bank of Pakistan complain 'red-tapism' in disposal of their applications. Those who go after local money-lenders report that in such case, they are caught in high debts which later on become impossible to be repaid. In this realm of affairs, they feel satisfied with their traditonal system of production that doesnot pose threat to farmers for mortgages. Shrybman says that 'industrial agriculture has tied the fate of farmland to that of fossil fuels thus further threatening the sustainbility of food production' as well as 'growing health costs from food altered diets based on animal fats and processed foods, and from foods polluted with agro-chemicals.' Furthermore 'monocultures and the increased reliance on biotechnology also threaten biodiversity' (Shrybman, 1999: 46). Grinspun has made a similar quote that 'agribusiness (modern farming) also create new costs that do not exist in sustainable, small scale agriculture, such as loss of biodiversity' (Grinspun, 2003: 51).

It can be concluded that rural development programs that focus rural restructuring bring forth a situation for small scale farmers to lose power gradually and thus control over their livelihoods and finally their lives. In this scenario, only those survive who manage to manipulate the situation while making lawful as well as unlawful intrigues. The big landowners due to their local influence, stable economic status and political clout remain largely successful to reap benefits from all such modern opportunities. This real of affairs hold true in case of wealthy and powerful landlords who are major shareholders and benefactors of modern and mechanized farming methods. The statement below verifies the argument that is based upon views and observations extracted through interactions with farming community of Sacha Soda.

Experience demonstrates that urban centers and commercial agriculture are ill prepared to absorb the vast number of poor people (especially small scale farmers) in the countryside (Bailey, 2000:1-8).

To sum up, Fox's work is most relevant who revisited 'the Colonial Policy of British Imperialism' and concluded that:

The English destroyed the old Indian feudal landed system, expropriated the old landlords, but far from liberating the peasantry from feudalism, as agrarian revolutions carried through in capitalistic countries have liberated them, or at worst turned them into wage laborers working on a landlord's estate, they bound the Indian peasantry to an even more worse serfdom, at the same time crushing down a great number of the old landlords to the same positions (Fox, 2008: 15-16).

[1] Agricultural Development

It is a reality that majority of the agriculture domain is constituted by small farmers who just live up to their subsistence level. It is unfortunate that modern agriculture and its mechanized techniques do not have space for these small growers. Therefore, in agriculture development process these small farmers have left behind and they feel ignored on behalf of stakeholders involved in agriculture development process. The development staff especially the agriculture research agencies seem ignorant of the grass root needs of these small farmers. All major interventions centralizing agriculture development process are single-handedly promoting mechanized agriculture to be single solution to achieve sustainability. Lefeber (1992) in this regard says that 'Industrial (modern) agriculture leads to the concentration of wealth and decision-making in a few corporate and individual hands, thus hindering the efficient allocation of resources as prices become controlled through corporate collusion and the prevailing subsidy programs of a few industrialized agricultural exporters' (Lefeber, 1992:215-229).

There is an agreement among farmers that they are not represented in government initiatives regarding agriculture. These farmers are left at their own to make their living out of their traditional system of production. In addition, there is a voice at international level to support small scale agriculture because this domain could be a good source of providing employment. It could thus raise independent living for these farmers. In this connection, Oxfam GB advocates:

Smallholder agriculture provides considerably more employment and food staples in less developed countries than do larger commercial farms (Oxfam GB, 2000:1-6).

Grinspun, (2003) also contends that:

Small-scale farmers who produce basic grains are critical to the domestic food supply and hence to food security. They contribute to social and biological diversity (through, for example multiple cropping systems) and thus to sustainable development (Grinspun, 2003: 49).

These scholars also see interrelationship of small scale agriculture with sustainability and thus empowerment due to farmers' equitable opportunities and decentralized landownership. Grinspun (2003) advocates that social organization of small-scale farming may promote empowerments and community responsibility through equitable opportunities and decentralized landownership. For both scholars, small scale farming is often the social basis for community organization and for locally based development initiatives, required for rural diversification and other community goals. Ritchie et al., (1999:3) also describe:

Small scale farms are economically more efficient than large scale operations in terms of resource utilization and productivity (for example out per unit area) (Ritchie, et al., 1999).

Spending in small scale agriculture and developing small scale farmers would contribute in controlling the rural-urban migration. It could also help in controlling the hazards regarding already pressed economic situation in cities. The authors have already described that due to absence of patronage for small scale agriculture, particularly in a situation where government is not playing its role for protecting small farmers due to which these farmers have to move to urban centers in search of jobs. Keeping in view current issues of economic stagnation of country, the cities are also unable to provide work opportunities and jobs. Whereas, recognizing the small scale agriculture would facilitate in controlling this trend and would contribute in providing jobs to these people at their local levels.

Small scale farming and local small scale, value-added enterprises are the only foreseeable alternatives to prevent massive migration from the countryside to peri-urban slums and the consequent social and economic burden this process imposes on underdeveloped countries. (Grinspun, 2003: 49).

Therefore, Ricardo Grinspun (2003) has strongly argued that:

Despite its importance, small scale agriculture is seriously endangered by current neo-liberal policies, and the implications for rural poverty, food security, and urban migration are far-reaching (Ibid: 49).

On other hand, modern agriculture has put pressure on the farmer community from two ends. The first is from within their own farmer' community to compete. The second is the criticism over small farmers from government and advoactes of modern farming blaming the former not complying with national nutritional requirements. Whereas this is a fact, that modern farming has caught the farmer community into a very expensive nexus of practices that do not simply match and affordable by majority of small scale and subsistence level farmers. Some of them who apply for the agri-credits from *Zarai Tarraqiati*[2] Bank of Pakistan complain 'red-tapism' in disposal of their applications. Those who go after local money-lenders report that in such case, they are caught in high debts which later on become impossible to be repaid. In this realm of affairs, they feel satisfied with their traditonal system of production that doesnot pose threat to farmers for mortgages. Shrybman says that 'industrial agriculture has tied the fate of farmland to that of fossil fuels thus further

[22] Agricultural Development

threatening the sustainbility of food production' as well as 'growing health costs from food altered diets based on animal fats and processed foods, and from foods polluted with agro-chemicals.' Furthermore 'monocultures and the increased reliance on biotechnology also threaten biodiversity' (Shrybman, 1999: 46). Grinspun has made a similar quote that 'agribusiness (modern farming) also create new costs that do not exist in sustainable, small scale agriculture, such as loss of biodiversity' (Grinspun, 2003: 51).

It can be concluded that rural development programs that focus rural restructuring bring forth a situation for small scale farmers to lose power gradually and thus control over their livelihoods and finally their lives. In this scenario, only those survive who manage to manipulate the situation while making lawful as well as unlawful intrigues. The big landowners due to their local influence, stable economic status and political clout remain largely successful to reap benefits from all such modern opportunities. This real of affairs hold true in case of wealthy and powerful landlords who are major shareholders and benefactors of modern and mechanized farming methods. The statement below verifies the argument that is based upon views and observations extracted through interactions with farming community of Sacha Soda.

Experience demonstrates that urban centers and commercial agriculture are ill prepared to absorb the vast number of poor people (especially small scale farmers) in the countryside (Bailey, 2000:1-8).

To sum up, Fox's work is most relevant who revisited 'the Colonial Policy of British Imperialism' and concluded that 'The English destroyed the old Indian feudal landed system, expropriated the old landlords, but far from liberating the peasantry from feudalism, as agrarian revolutions carried through in capitalistic countries have liberated them, or at worst turned them into wage laborers working on a landlord's estate, they bound the Indian peasantry to an even more worse serfdom, at the same time crushing down a great number of the old landlords to the same positions' (Fox, 2008: 15-16).

CONCLUSION

The study indicated that indigenous methods of agriculture were still in practice by village people especially in the agricultural, health, and political organization. Majority of farmers still practiced traditional methods as they believed that modern methods were not beneficial for them. They came up with examples of problems arising out of use of modern equipment and technology like decline in soil fertility, soil compaction, incompatible fertilizers, habitat destruction, contaminated food, non suitability of modern agricultural tools and nitrate run-off. Not only this, a number of

procedural reasons were quoted by villagers as to why they thought their local methods were beneficial. The reasons referred to as were also important as the modern methods of farming only benefited the wealthy and big land owners, non availability of seeds and sprays during peak seasons. Amongst all these reasons was non-cooperative staff of agriculture department and other agencies, non availability of extension staff for guidance and manipulation of local influential people. For most of the farmers, traditional methods were their heritage left by their forefathers. They emphasized that they experimented that main hallmarks of local methods that included local traditional methods being developed in the local environment and thus able to respond to needs of farmers as well as not destroying the natural resource base.

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