PROCEEDINGS

Event Commemorating 30 Years of SDC-AFPRO Partnership:

Release of Partnership Document and Panel Discussion

AFPRO-SDC event commemorating the 3 decades of partnership between the two agencies was held at the India International Centre, New Delhi on 13 September 2010 and presented an invigorating debate for development enthusiasts. With around 150 participants, the event threw up very critical issues regarding food security, agricultural livelihoods and ground water levels - the forum definitely achieved a sense of intense enquiry. Prof. K. V. Thomas, Honorable Minister of State for Agriculture, Consumer Affairs, Food & Public Distribution, Government of India was the Chief Guest at the event, and H.E. Mr. Phillipe Welti, Ambassador of Switzerland to India was the Guest of Honour. The key highlight of the event was the release of "Winged Seeds" which documented the experiences of AFPRO-SDC partnership.

The event was divided in two sections, the inaugural session followed by a panel discussion and open discussion. Apart from the Chief Guest and Guest of Honour, other members on the dias in the Inaugural Session were Mr. K. P. Fabian, President, AFPRO Governing Body, Ms. Sybille Suter, Country Director, SDC, Mr. D. K. Manavalan, Executive Director, AFPRO and Dr. Ashok Jaitly, Distinguished Fellow & Director, Water Resources Division, TERI. An attraction of the inaugural session was presentations by three special invitees. One of these was Col B. L. Verma, Former Head, Water Resources Department, AFPRO. The other two were representatives of two partner NGOs of AFPRO under the SDC-AFPRO

collaboration, viz. Mr. Heera Lal Sharma, Sahyog Sansthan, Udaipur and Mr. Vijay S Borade, Marathwada Sheti Sahayya Mandal (MSSM), Aurangabad.

Dr. Ashok Jaitly, IAS (Retd) - Distinguished Fellow & Director, Water Resources Division, TERI chaired the Panel Discussion on the theme "Water and Food Security in a Changing Climate: Partnerships and Challenges". The other members of the Panel were Ms. Sybille Suter, Country Director of Swiss Cooperation Office in New Delhi, Prof. Amitabh Kundu, Centre for the Study of Regional Development, School of Social Sciences, Jawaharlal Nehru University, Mr. Sanjeev Sanyal, Economist & Environmental Specialist, Founder- Sustainable Planet Institute and Dr. Sudhirendar Sharma, Expert, Environmental Sciences. The event was concluded with a vote of thanks by Mr. S. C Jain, Programme Coordinator, and AFPRO. The detailed proceedings of the event are presented here.

INAUGURAL SESSION

Mr. D. K. Manavalan

Executive Director, Action for Food Production (AFPRO)

Mr. D. K. Manavalan began by welcoming all participants on behalf of SDC, AFPRO and all field level NGOs and community partners. Welcoming the Chief Guest, Prof. K. V. Thomas, Minister of State for Agriculture, Consumer Affairs, Food & Public Distribution, Government of India Mr. Manavalan expressed good fortune at having the Minister dealing with Sustainable Agriculture & Food Security as the chief guest, the SDC-AFPRO engagement having focused mainly in these areas of rural development.

Summarizing the spirit of the partnership, Mr. Manavalan called it an intense collaboration of 3 decades addressing AFPRO's focal areas and core competencies. He emphasized the central objective which was identifying sustainable ways to tap and manage Natural Resources for improved quality of life and livelihoods of marginalized communities. Highlighting immense learning and satisfaction among all stakeholders, he emphasized the role of benefiting communities and NGO partners as teachers and co-learners.

Speaking on the nature of low cost, environmentally sustainable rural development technologies and approaches adopted, he said that equal importance was provided to innovation through new technology and the strengthening of indigenous systems. He said that these models based on regional and local needs of project interventions are seeds for propagation.

Along with technological expertise, AFPRO internalized operational knowledge for working with rural communities and integrating their participation in various networks, including the government and the

Public Private Partnership model. This skill, Mr. Manavalan assured the Minister, has made AFPRO ready for larger alliance with various missions of Government of India under NAPCC, of which a very important mission is with the Ministry of Agriculture.

Welcoming His Excellency Dr. Philippe Welti, Ambassador of Switzerland to India, Mr. Manavalan stated that the Swiss models towards rural development with pro-poor and rural focus will add to India's efforts for inclusive growth leading to financial inclusion of Rural population. Mr. Manavalan welcomed all the other members of the inaugural session including Ms. Sybille Suter, Dr. Ashok Jaitly, and Mr. K P Fabian, President of AFPRO Society, participants in the Panel Discussion, and special invitees including former AFPRO staff and representatives of NGO partners. He further welcomed members of AFPRO Governing Body and all participants to the event.

Finally, he said that as the move to more inclusivity takes place, it implies a bigger role for small and marginal farmers, appropriate support systems of civil societies, empowering of PRIs, and a priority thrust by the government of India once again recognizing the importance of the sector. Only then can we hope for India's transition from "India Incorporated" into "India Inclusive".

H. E. Mr. Philippe Welti

Ambassador of Switzerland to India

His Excellency Mr. Phillipe Welti thanked Prof. K. V. Thomas, Minister of State for Agriculture, Consumer Affairs, Food & Public Distribution, Government of India, for having accepted the invitation to the event. He described the event as momentous, with the release of the SDC-AFPRO partnership document commemorating three decades of strategic cooperation between the two agencies. SDC has been collaborating with diverse variety of organizations in India, both with government agencies of the Centre and State as well as credible Civil Society organizations like AFPRO, promoting interventions that are contextually relevant which would result in improving quality of life of the deprived communities. He remarked that SDC-AFPRO partnership was among one of the first such collaborations in India to introduce scientific and participatory watershed development approaches towards reduction of poverty through regeneration of natural resources. The interventions under the partnership have brought about sustainable improvement in livelihoods of poor and marginal communities.

Engagement of SDC in India was recently reviewed and reoriented. According to the new focus of SDC, it has moved away from classical development cooperation approaches to one of global cooperation in order to address issues of common interest to India and Switzerland in the area of Climate Change, in terms of adaptation, climate resilient models, energy efficiency and renewables. This provides new direction to the efforts of the two governments which will now be engaged in more frequent and relevant

initiatives with various governments on the global level for the benefit of all. This was reflected in the election of Micheline Calmy-Rey, Minister for Foreign Affairs of Switzerland, and Jairam Ramesh, Minister for Environment and Forests, India to the high-level panel of the UN Secretary General on Global Sustainability.

Switzerland's new approach has been influenced by its learnings and experiences over the years in programmes with organizations such as AFPRO. He remarked on the programme on adaptation to Climate Change (Vulnerability Analysis and Enhancing Adaptive Capacity to Climate Change in Semi-arid Areas of India) which had fructified from past experiences of partnership, climate change being one of the earliest programmes of SDC. He referred to the five case studies released based on the experiences of the project and hoped that these would make significant contributions in designing the missions under India's National Action Plan on Climate Change. He concluded by expressing the hope that many more such development seeds would grow strong and vibrant wings and help in the dissemination of good practices and experiences far and wide contributing to poverty reduction and sustainable development.

RELEASE OF WINGED SEEDS

H. E. Mr. Phillipe Welti, Ambassador of Switzerland to India released the AFPRO-SDC partnership document "Winged Seeds" and handed a copy to Prof. K. V. Thomas, Minister of State for Agriculture, Consumer Affairs, Food & Public Distribution, Government of India.

Mr. K P Fabian

President, AFPRO Governing Body

Mr. K. P. Fabian welcomed Prof. K. V. Thomas, Minister of State for Agriculture, Consumer Affairs, Food & Public Distribution, Government of India, H. E. Mr. Phillipe Welti, Ambassador of Switzerland to India, members on the dias and other guests.

Reflecting on the role played by SDC in the SDC-AFPRO collaboration, he stated that through the three decade long partnership, SDC had been not just a financial partner, but a fully engaged, alert, integrated partner. He said that the contribution of SDC-AFPRO partnership was about identifying and promoting technological solutions which would result in improvement of livelihoods of poor and marginal communities. He emphasized that at the grassroots food production was not about sophisticated technology, but more about appropriate technology and its adoption by rural communities. He spoke about his interaction with a farmer in Yavatmal where AFPRO had implemented a project on soil and water conservation. The farmer, who had been struggling to earn a livelihood from his land, was able to earn Rs. 80,000/- due to the treatment measures undertaken. Subsequent to this, with the help of a local NGO, the group of farmers, who did not possess title for these lands, started a campaign for obtaining the same and eventually were able to secure it. This reflected the social impact of improved livelihoods amongst the poor.

Emphasizing that the need was action at the right level and approach, a prime focus of the SDC AFPRO partnership, he spoke of exercises such as the auto-didactic learning for sustainability, and other Human and Institutional Development processes throughout the partnership which have made interventions effective. Referring the impact of technological promotion under the partnership, he highlighted examples of biogas technology which spread across the country, improvement of the India Mark II hand pump and the treadle pump. AFPRO has now taken the biogas experiences to Kenya under a capacity building project.

Reflecting on the goodwill and effort that went into the partnership, Mr. Fabian made special mention of Mr. Peter Erni, Ambassador of Switzerland to India when the Watershed Development programme in Devpimpalgaon was launched, and former Executive Director Lt. Gen. Dunn who was at the helm of AFPRO during the initial phases of the partnership.

“Winged Seeds” are like a lamp reducing the darkness, and lighting other lamps without looking any way diminished or loosing its own brightness. This is now being seen when the lessons of the partnership are being used in AFPRO’s programmes today. AFPRO’s cooperation with the Government of India in 15 districts under the Backward Regions Grant Fund and District Development Plan in District Dhule,

Maharashtra, where AFPRO was a Technical Support Organization is one such example. Agromet observatories promoted under the Climate Change Adaptation project have potential for widespread adoption in villages.

Thanking the Honorable Minister of State as a representative of the Government of India, Mr Fabian appreciated the support, guidance and good counsel provided by the Government to efforts of AFPRO. He stressed the importance of making development meaningful, sustainable and fast through collaborative efforts of the Governments and Civil Society organizations. Finally, reflecting on the development work that still needed to be done for poverty alleviation through promotion of sustainable rural livelihoods, Mr. Fabian emphasized the need for partnerships such as the SDC-AFPRO partnership and raised the need “to plan for another 30 years”.

Col B. L. Verma

Former Head, Water Resources Department, AFPRO

Col. B. L. Verma related that he was very proud to be member of AFPRO as it was one of the first organizations in the field of water resources management and social engineering. The fact that the second Executive Director of AFPRO, Lt. Gen. P. O. Dunn was invited to speak at the United Nations as representative of Indian NGOs, itself points to the stature of AFPRO as an NGO during the 1970s. In 1978, during one of the worst droughts of India, AFPRO was designated to coordinator of all voluntary efforts. In 1979, the Agricultural Finance Cooperation assigned AFPRO the task to undertake a topographic survey over – one million acres of land, in seven command areas. AFPRO had the finest equipment and finest staff with honesty of purpose.

In the early 1980’s, three major regions of interventions were identified by AFPRO for intervention – Drought prone regions, Desert regions and Flood affected regions. Accordingly teams were working in Jalna and Aurangabad representing drought prone areas, Gorakhpur representing flood affected area and Kelansar, being a desert region. AFPRO-SDC interventions supported this approach and efforts under the partnership were to provide solutions for regenerating environment and integrating people, water, land and soil. It was very important that people had to be mobilized and be a part of the entire operation.

Col. Verma said that the projects initiated and approaches adopted under the SDC-AFPRO partnership were revolutionary. The Government of Maharashtra, with the intervention of the Government of Switzerland and AFPRO took up the watershed approach as a government project. Mr. Peter Erni, Ambassador of Switzerland to India, while dedicating the Watershed project to the people of Devpimpalgaon made a statement “I have come here to bring smiles on your faces”.

Mr. Heera Lal Sharma

Sahyog Sansthan, Udaipur

Mr. Heera Lal Sharma shared experiences from the Programme on "Vulnerability Analysis and Enhancing Adaptive Capacity to Climate Change in Semi-Arid Regions of India" implemented under the SDC-AFPRO partnership by Sahyog Sansthan in Village Kundai, Vallabhnagar Taluk, Udaipur District in Rajasthan.

With objectives to enhance the adaptive capacity of local communities, improve delivery systems, promote multi-level policy dialogues and general awareness to climate related impacts, the V & A programme adopted four hypotheses – water, agriculture or land-use, livestock and energy.

Under the Water hypothesis, the aim of the project was to empower community with access to weather monitoring and prediction data as well as community managed water resource systems. This would lead to greater water use efficiencies and improved adaptive capacities. In Agriculture and Land-use, village level land-use maps providing options for different rainfall scenario – drought, normal and excess were promoted for stabilization of yields from rain-fed farming. Strategy promoted for strengthening livestock as a livelihood option in the face of climate change included encouraging buffer stocks of fodder, adoption of good breeds and pastureland development. Under the energy component, improved chulahs for improved thermal efficiency in the use of biomass were recommended as coping mechanisms.

Mr. Hiralal specifically highlighted processes adopted in interventions for strengthening water resources management. As participatory processes are essential for ownership of interventions and their sustainability, the processes adopted included series of meetings with farmers for situation analysis and need assessment, detailed technical studies such as well inventories, topographical surveys, land-use mapping, baseline surveys etc. Finally the action plan was prepared negotiating co-sharing methodology and developing management systems.

Together with the community, attempts were made to identify any linkages of climate change on the water resources in the region. The community noted that erratic rainfall patterns and increased dry spells were being observed. There was limited water availability for drinking and irrigation, and opportunity for groundwater recharge was reduced. Over-exploitation of groundwater was taking place with serious implications. Overall, the community faced increased difficulty in maintaining sufficient levels of agriculture production and livestock-based livelihood. This was also leading to increased tendency for migration and diversification of livelihoods amongst the communities.

In order to promote appropriate solutions, existing traditional methods, including those for enhancing yield of wells and the problems in management of groundwater were studied. Area specific low-cost technologies, such as lining of irrigation channels, renovation of wells and water banks were adopted through awareness promotion and mobilization of the community.

The interventions have had positive impact, most significant being the increase in area under irrigation by 1.33 ha in Rabi 2008-09 in comparison to baseline of 2006, provision of irrigation at critical stages during Kharif production in 2008 and 2009, and saving in time and labour for irrigation due to increased efficiency of irrigation channels. In addition, the culture of growing vegetables too has been adopted due to increased water availability, and there is assured drinking water for both people and livestock. Community capacities have been strengthened and processes established for management of created structures. Linkages with institutions such as the Department of Agriculture of the Government of Rajasthan have also been established for horticulture development and crop demonstration through varietal trials, so that inputs on appropriate agricultural and land-use practices would be accessible to community members over the long-term.

Mr. Vijay S Borade

Marathwada Sheti Sahayya Mandal (MSSM), Aurangabad

Speaking on the SDC-AFPRO partnership, Mr. Vijay S. Borade thanked SDC for support provided to MSSM on three remarkable projects and stated that the collaboration was very rewarding. MSSM is also grateful to SDC and AFPRO for various institutional development processes.

AFPRO's contribution in geo-hydrological work was very important, as studying water in aquifers has direct connection with food security.

He remarked that the "Smiles" as stated by Col B. L. Verma quoting Mr. Peter Erni, are still very much there. At present a lot of economic improvement and technological developments have taken place. Hi-tech farming is being adopted, and capsicum and other vegetables are being grown using controlled farming systems. SDC-AFPRO partnership has promoted the importance of water conservation and management. Now farmers are making detailed estimates of water required to be stored for growing a crop.

The watershed projects promoted in Devpimpalgaon and later in Adgaon, apart from the land and water resource development activities, also provided a platform for MSSM to build linkages and work with the Government. As a result, MSSM has been able to play a greater role with the Government of Maharashtra in rural development in the state of Maharashtra.

Among the important issues today for promoting food security is providing technology in farming to women farmers and building their capacities for use of appropriate technology. Women make the largest contribution in farming and in order to lighten their burden, mechanization of farming is a must in all the activities women are involved.

Another important aspect for food security is soil health. Scientists tell us that if level of organic carbon content in soil is 0.35% or lesser, the soil is dead. Level of organic carbon in soils has to be increased to at least 1% for purposes of food security -this is a challenge.

The challenge of global warming needs to be met and techniques such as controlled farming systems can be promoted as a solution. We have started introducing the concept of lux levels among farmers, making them aware about the concept.

MSSM's experience as an organization having one of the first drilling rigs in the country led them to the realization that they were sucking out water from the earth. This realization caused them to gift away the rig to another organization, considering the act as a grievous wrong done to earth. Since then, they have started on water conservation and attempt to ensure that there is no utilization of water without conservation. The organization's main emphasis is on soil conservation, as this will result in conservation of both soil and water.

MSSM's next challenge is how to maximize recharge to groundwater. AFPRO needs to be complimented as it stresses on groundwater enhancement. There is enough of rainfall and this needs to be recharged to groundwater. However groundwater recharge is a process which requires time.

Prof. K. V. Thomas

Minister of State for Agriculture, Consumer Affairs, Food & Public Distribution, Government of India

Prof. K. V. Thomas complimented the AFPRO-SDC partnership in showing the way through large number of micro interventions for streamlining governance of natural resources. He specifically referred to the watershed development programmes of the early 80s, the development of the India Mark II handpumps promoted by UNICEF, climate change adaptation programme in semi-arid areas of India based on vulnerability assessment, conservation, strengthening and value addition of the resource base. Winged Seeds represented various models from well-tested interventions adopted by communities, and which have spread across the country with the help of a large number of civil society organizations, central and state governments.

He said that the issue of food and water security of a large country like India is a global concern, and though the population might stabilize shortly, the demand on all India's natural resources to feed, house and productively employ the large population will increase substantially. India's food production has to increase to around 300 Million tons per annum from the present 200 plus million tons. This involves in the

conventional sense, a high dependence on water, surface and ground, fertilizers, mechanization and other intensification of inputs.

He said that the green revolution model successfully employed the first phase in the north-western part of India, has provided a reasonable amount of food security in terms of food grains. However the country continues to be short of pulses and other protein-based nutrients. Unless an ecologically sensitive production pattern is adopted by all the states and regions which have potential, it is an insurmountable challenge.

India cannot hope to afford import of any large quantity of major food item as it will push up the prices in the rest of the world as well as create a physical shortage in poorer countries. This increase in production therefore has to be managed in a more regionally balanced and participatory manner. It has to be provided for by water resources, without damaging the resource base; fertilizers have to be adopted without polluting the water resources; sustainably improving farm mechanization without a huge draw on fossil fuels. This is a major development challenge which we cannot overcome without high degree of participation and technological breakthroughs.

One of the technologies on the horizon is clearly the applicability of second generation genetic technology involving genetically modified crops. The ecological impact of genetically modified organisms in the country is being evaluated under various phases and trials. There is need to attain more clarity in this respect and adopt a clear approach to involve GM crops as well in our overall strategy. If India fails to tap the productivity revolution which flows from rationalization of inputs and optimization of input

technologies, there is every chance that India could face problems in feeding its fast increasing population.

The other imperative before the country is to reach the poor effectively with the food production it achieves. The country has a subsidized distributive regime using the Public Distribution System. Various options are being discussed in policy circles to improve the access of poor to this basic lifeline. Many stakeholders and even the judiciary are concerned on the malnutrition levels of children below the age of 5 years and the rural population in general. There is a feeling that the subsidy deployed in running the food subsidy system at the grassroot level is not adequately reaching the needy despite our best efforts. At present, calculated estimations show that 37% of the Indian population is poor, while in some rural area it may be 42%. Whatever the counters of the Food Security Act are, the poor would have to be reached with substantially subsidized grains using a transparent system which minimizes various arbitrage losses. Various options like smart electronic cards are being considered at the moment to avoid diversionary losses.

While the poor need to be supplied with cheaper grains, we have to take adequate precautions that two calamities do not occur out of this - first, the degree of subsidization should not render farming an unproductive activity, where the farmer is denied a competitive reasonable price. Second, the mechanism of delivery of the subsidy should not result in large grain diversions from subsidized to non-subsidized regions or in the open market where it commands higher prices. This is the crux of the matter. The instrument which we use to establish the Food Security Act must have adequate safeguards whereby conflicting objectives are reconciled. Without systematically revamping the distribution network, involving the strength of retail sector and improving the storage potential, India cannot hope to achieve its target in food security.

Overall improvement in agricultural productivity with minimal environmental backlash is the primary factor which will determine this as nothing can substitute adequate production of grains and other essentials in controlling the prices in the market. Sustainable larger production is the only way in which larger access towards basic essentials can be ensured for the relatively poorer population.

The Minister was keen to look into the AFPRO-SDC Climate Change Adaptation project in Rajasthan and Andhra Pradesh, and has agreed to come and visit the sites personally. Here mini agro-met observatories results which provide timely available agricultural meteorological advisories to farmers, water banks, improved chulahs etc. are contributing innovatively to the welfare of farming communities. He has also promised to ask the Indian Council of Agricultural Research to have this initiative assessed and to be used in the Krishi Vigyan Network for scaling up across the country.

PANEL DISCUSSION

Water and Food Security in a Changing Climate: Partnerships and Challenges

Ms. Sybille Suter

Country Director, Swiss Agency for Development and Cooperation (SDC)

Congratulating AFPRO on the release of "Winged Seeds", Ms. Sybille Suter said that it highlighted the lessons, achievements and challenges of 3 decades SDC-AFPRO partnership spanning 30 years. She said that the collaborative partnership was based on strong foundations, solidarity, mutual trust, commitment and shared values that have withstood the test of time served as a good model for other agencies undertaking similar work.

Reflecting on the meaningful collaboration and contribution of SDC-AFPRO partnership in many diverse areas of development, she broadly classified the interventions into four categories

a) People-led watershed development programmes using a combination of social and technical approaches,

b) Groundwater exploration in times of drought and famine, promotion of sustainable agriculture,

c) Capacity building of grassroot NGOs in NRM which means Human and Institutional Development, and

d) Vulnerability assessment and adaptation to climate change. She specifically mentioned Case Studies released recently by SDC under the "Vulnerability Assessment and Enhancing Adaptive Capacity to Climate Change in Semi-Arid Regions of India" programme, stating that four of the five case studies published dealt with water and food security.

She spoke on the relevance of theme to the current challenges facing the country, especially access to and control over water and farm resources by the poor. She said that the Government of Switzerland clearly recognized its responsibility and commitment to enhancing its share of support towards the larger objective of eliminating poverty and hunger from the world. Keeping this in mind, the Swiss government has plans of enhancing Overseas Development Funding from the current 0.47% to 0.5% of GDP.

What is clearly evident is that in a country like India all the required financial, human, physical, intellectual as well as institutional do exist, to achieve not only water and food security and but the larger Millennium Development Goals. She emphasized that there was a need to accelerate progress in this direction through continuing with time tested policies, strategies and interventions while making a clean break with

those approaches that do not work. This is possible through the coming together of diverse actors including the Government, Parastatal institutions, Private sector and Civil Society Organizations in a truly partnership mode effectively pooling resources, expertise, competencies and strengths. Panel discussion will go a long way towards devising and implementing innovative, context specific strategies and approaches aimed at ensuring water and food security to the poor and vulnerable communities.

Prof. Amitabh Kundu

Centre for the Study of Regional Development, School of Social Sciences,

Jawaharlal Nehru University

Prof. Amitabh Kundu, complimented AFPRO on three decades long partnership with SDC in the field of social engineering interventions at the grassroots level with rural development within the framework of sustainability.

He agreed with the statement of the Honorable Minister of State that production of food grains have to be increased to 300 Million Tons from the present 210 Million Tons, keeping in mind the fact that the country's population growth was still to be controlled. He however stated that the Food Security achieved till date over the past three decades was at the Macro level. This fact was based after consideration of factors such as the total food production, exports and imports, stock adjustments, assessment regarding nutritional requirements as given by the National Institute of Nutrition (163 kg per person), and adjustments for age-groups: India has relatively enough sufficient food grains as per NSS data. At the macro level, except in case of a drought, India doesn't depend on import of food on a long term basis.

However, Prof. Kundu highlighted that there was serious food insecurity at micro level based on the criteria such as household levels, social groups, micro regions and remote or distant areas. There are plenty of cases at the micro levels where no nutritional improvement had taken place over time. In fact, calorie intake in many of the districts has declined. The National Family Health Survey states that 48% of the children below 3 years of age were severely or moderately malnourished; for mothers, malnourishment figures are even higher. Thus there was a serious food insecurity issue at the level of various groups based on marginalization, religion and other social barriers such as Scheduled castes and tribes, and in many micro regions.

Comparing India's growth rate with poverty reduction achieved, he said that India had a good growth rate that was at an impressive 8% plus over the period of 7-8 years (except last year due to the global meltdown). However, he commented that in terms of poverty reduction, inequality in poverty reduction is very high - there are districts where poverty was becoming worse in India. Labour productivity had gone down in around half of the districts which was an indicator of food insecurity of sub-regional levels for

different social groups. He complimented the SDC-AFPRO partnership for having worked in remote regions for the benefit of marginalized communities towards improving their livelihoods.

Speaking on the impact of climate change, he said there was a need to look at new challenges that have come up, restructure interventions and go over policy framework. Government of India has taken the challenge by asserting and resisting the pressure of developed countries disagreeing regarding protocol requirements because India's per capita emissions and consumption of energy are very low. However Government of India has promised global community that India is adopting climate resilient development models and low carbon technologies, as stated in the 11th 5 year plan and the National Action Plan on Climate Change.

If one reviews the policy documents, one finds that the major thrust of solutions is not necessarily in agricultural sector or forestry sector, although impact is going to be adverse in these sectors. Serious decline in the total production in wheat is projected, going down by 2% annually over the next 30 years, and 3% in case of rice. It is extremely important to note that most of the solutions are in terms of transport sector, industrial sector, consumption of energy at the urban households, garbage disposal, sewerage disposal, national river action plans – all these focus on the consumptions in urban areas. While it is difficult to assess how much the productivity decline will be in the next 30 years, there is no disagreement that such declines will be regionally differentiated impact. Vulnerability of the backward regions is going to increase significantly during this period and there will be regions where agricultural productivity will go down.

Reflecting on the energy consumption levels, he reflected that 83% of total energy consumption is in the urban sector i.e. outside agricultural sector. This means that solutions will have to come from outside agriculture in terms of quality of life and standard of living in urban areas. Presenting a map of vulnerability which demonstrated the social, technological and biophysical conditions in India, he stated that it was clear that the areas low in groundwater and surface water, as well as coastal areas, would be affected by climate change, and are the regions where agriculture would be under tremendous pressure.

Prof. Kundu spoke on absorption of the future workforce on based on trends of population growth in rural and urban locations, stating that agriculture cannot absorb any more workforce. Dr. Montek Singh Ahluwalia has said that even if agriculture is able to maintain a 3% growth rate, which would be very difficult over the next 20 years, India will have to shift workforce out of agriculture to non-agricultural activities. There is a need to create small and medium towns, and to create non-agricultural employment within the rural areas.

With only attempts to improve the productivity level or take measures to ensure that the adverse impacts of Climatic change on agricultural productivity is minimized, is it possible to find solutions of the agricultural sector and water within agriculture itself, unless livelihoods are created? The problem of increasing agricultural production is not over and we have to keep on growing in terms of agricultural production, but the important question is who is going to do it. Are we going to place purchasing power in the hands of marginalized sections of the population? Even today we produce enough, but the problem is of distribution, of purchasing power in the hands of the people, and of giving people livelihoods outside agriculture.

Population growth has declined in urban centers while projections are that in another 40 years the present workforce of 480 million will be doubled. Agriculture presently takes 210 million of the labour force only, and with climatic change factors coming up, agriculture will not be able to absorb more than another 10 million of the additional 480 million. This means that India has to create more jobs, and if seen in terms of increasing food security and food production, it also means identifying who is producing this food, what technology is being used, what region are we producing in. Are we creating purchasing power in the hands of marginal sections of agricultural population? Are we able to create diversification in their livelihoods? Can we shift workers from agriculture to non-agricultural occupations? This should be a major query and a micro perspective for designing future activities in development sector partnerships like AFPRO- SDC collaboration.

Chairperson comments: Dr. Jaitly reflected that the reality of food security at the macro picture vs food insecurity at the micro level was true of water as well. We should compare the issues of adequate availability of water as a whole, considering factors of inequality, regionally as well as between different communities and groups.

Mr. Sanjeev Sanyal

Economist & Environmental Specialist, Founder- Sustainable Planet Insititute

Mr. Sanyal began by saying that there was a difference between producing more food and having more food security. By keeping on increasing food production in the short run by essentially pumping up groundwater, increasing more and more chemicals, running down forests and other ecological systems, would result in gravely reducing future production, but more importantly, dramatically increasing the variability of this food production in the medium term. This is important because it is a common mistake made by human beings: the same error on the part of banks resulted in the recent global financial crisis. In the short run they pumped up profitability, but in the long run they ran up the risk in the system and it blew up on them. We cannot allow food production to go through the same cycle and need to very careful that in our pursuit of higher amounts of food production, we do not jeopardize the long term sustainability, particularly ecological sustainability of food production.

Again, food security is not just about food grains, but includes other food that we get through the wider ecosystem, fisheries for e.g. both coastal and riverine fisheries. In our great rush to create irrigation projects, we are poisoning our river systems, which are a major source of fish in eastern India. There is need to look at long term sustainability of environmental systems.

We supposedly produce enough food to feed the Indian population (ignoring the distribution issue). With Indian population growing at 1.5% pa (this rate is declining), if we want food security, we need keep food production growing at 1.5% growth pa. Any targets higher than that should not be met by drawing on

groundwater and other ecological services. If we do that, all we are doing is that we borrow from future generations. Producing ever more food to export is equivalent to exporting water. Except in some areas like tea or coffee, or cash crops, generally speaking, should we be forcing food production to grow at an exceptionally high rate for export?

Finally, regarding the interface between agriculture and the government, rationalization of government policies needs to be undertaken. At present, the government encourages food production by using food procurement prices; then it subsidizes the same food prices through PDS; it encourages farmers to grow more food by subsidizing fertilizers, electricity and so on; and then it counteracts the whole thing by introducing programmes like NREGA which actually messes up local labour markets.

Each of these schemes makes sense in its own space, but together makes a complicated system. Lots of funds are being spent; apart from the corruption issue, even if the spending is efficient, the net result of all these interventions would in fact be zero. In summary, a large amount of efforts and policies to achieve nothing, and very often negative results because we mess up the natural incentive structure.

The world will go through some kind of climate change, we don't know yet its impact on farming ecological systems. Evidence from the past regarding climate change, show that events such as the drying up of the Sarawati river due to climate change, though not human induced, resulted in the collapse of the Indus Valley/Harrappan civilization. It led to huge migration of people into the Gangetic valley. We have nowhere else to run, so we really have to get this right.

Chairperson's Comments: The Chairperson highlighted two points on sustainability rasied by Mr. Sanyal. First, a controversial issue, where Mr. Sanyal spoke about the appropriate rate of agriculture – while policy makers are saying 2% is not adequate but need 4%, Mr. Sanyal is advocating a reduced rate. Second, rationalization of policies required on account of the contradictions that exist in policies. The Chairperson endorsed this viewpoint, especially on policies regarding agriculture and water, such as subsidizing agriculture at the cost of water extraction, a matter of concern which is not being paid sufficient attention.

Dr. Sudhirendar Sharma

Expert, Environmental Sciences

Speaking on the plans of the Government to expand the green revolution to Eastern India, Dr. Sharma referred to the ill impacts of broad scale adoption of the practice in Punjab. Increased incidence of cancer, kindey failure, poisioning of groundwater has been reported in Punjab on account of groundwater extraction overdraft. Poisoning of all available water resources, groundwater and surface water included, has had dire impacts – a 'cancer express' leaves from Bhatinda to Ganganagar where cancer patients from effluent Punjab go for treatment. The issue is that in spite of what has happened in Punjab, is there a

rationale in replicating Punjab in eastern India? We are thinking in terms of increasing food production while half of the food is rotting in the godowns.

Plans are afoot to transfer green revolution technologies which have played havoc in last 30 years in Punjab to Eastern India: Chief Ministers in Orissa, West Bengal, Bihar and Jharkhand have declared the arrival of Green Revolution in Eastern India. The Central ministry is likely to extend support to them and subsidize inputs so that farmers can take it up. The issue is that we need to produce more food, but not at the cost of making farmers more vulnerable in Eastern India as we have done in the west. Are we democratizing vulnerability, so that we can govern better? In eastern India, the total withdrawal of Groundwater for producing food grains has been 20%: does it mean that there is enough of groundwater in eastern India to be exploited for food production. This has already happened in the northern belt and we are planning to repeat it in the east.

Majority of Green Revolution agriculture has been contributed by groundwater, to the tune of at least 50%. Groundwater is likely to be stressed in the event of Climate Change. We are passing through climate change and our vulnerability due to groundwater withdrawal is likely to increase manifold in the years ahead. Yet the State is going through the fallacy of letting people know that achieving food security is more crucial than being vulnerable. The people of eastern India who are not as vulnerable now, would be made more vulnerable in the years ahead.

Now some farmers in Punjab say that there is a problem with groundwater recharge itself - water is not infiltrating the soil today. This is because the soil structure and soil organic matter play a very critical role in groundwater recharge. How much of rainfall received percolates in the soil today? If we have to face climate change in years ahead, it is not by making farmers vulnerable by State interventions, but by securing fixed assets that nature has given us in the form of groundwater. These issues - groundwater, climate change, vulnerability of population, extension of green revolution across the country - all need to be publicly debated if we want to secure water and food for large population today and greater population tomorrow.

Dr. Ashok Jaitly, IAS (Retd)

Distinguished Fellow & Director, Water Resources Division, TERI

Chairperson of the Panel

Dr. Jaitly began by saying that the panel members had made very pointed comments about contradictions in situation that we face today. In spite of melting of glaciers, rising of sea levels, variability of monsoons, at present, there was not enough robust information to come to conclusions about impacts of climate change on the water regime. TERI is very clear that Climate Change is a major threat in terms of sustainable development. At the same time one of the challenges and opportunities is a major research

effort that needs to be taken up to study the impact of climate change on water resources. India has a great deal of traditional wisdom in management of climate change, but don't have adequate research put in. This requires organizations such as AFPRO, TERI and others to contribute.

Climate Change Adaptation programme under the AFPRO-SDC partnership highlights that farmers need meteorological information, and how such information can be made available. Today access to information, particularly on water resources is missing in society. Such information is treated extremely difficult to access - information about groundwater, surface water, flows, met data. This is an area of advocacy and the Prime Minister has stated that one objective of the water mission is to make information accessible in the public domain.

Referring once again to traditional water resource management approaches, Dr. Jaitly stated that great deal of adaptation and coping mechanisms were available in traditional systems, that were being ignored while planning large reservoirs, large storages and interlinking of rivers, which have their own impact on ecology and environmental flows, particularly water. Huge resources are being spent on large structures without referring to traditional information and technology. Plenty of examples were available from drier areas of Rajasthan, Gujarat, Maharashtra and the Deccan Plateau. We need to integrate traditional wisdom with modern scientific techniques such as satellite imagery, GIS mapping and artificial recharge for groundwater. Such integration is a great challenge which needs to be addressed at scientific and technological levels.

As far as water resources are concerned, the whole system of governance and institutions are at such dire situations that unless drastic steps are taken, water management won't become rational or

sustainable, whether in terms of irrigation, urban drinking water, rural drinking water, or water for industry. The entire governance system, multiplicity of authorities, complexity and greyness of laws, make management of water resources a very complicated matter. Absence of groundwater regulation with many model bills that have not been implemented mean that groundwater is legally still a private commodity and not in the public sphere. All these issues are very fundamental and there is a need for debate at the national level. (TERI is hosting the India Water Forum in November which will provide platform for raising these issues.)

Governance, institutions and legal framework for sustainable management of water resources have become critical and need to be addressed both at the central and state levels, because water is a state subject and not a federal subject. States have a greater responsibility and role to play in water management; all of us in water sector need to be working with state governments, district governments, local self governments, Panchayats and urban elected bodies, because they are the ones responsible for management of water.

OPEN DISCUSSION

Dr M. M. Verma, President, Inter Faith Foundation, raised the issue that providing food to people who were in need in other countries was a human duty, and should not be considered as improper use of the country's water resources.

Mr. D. K. Manavalan, Executive Director, AFPRO, raised the issue that in spite of a lot of discussions on the importance of water resource management, hydrogeological issues and other detailed technical aspects were not being addressed in actual planning of water resource management in the country.

Mr. Gopal Krishna, Toxics Watch Alliance, spoke about the importance of land as well as water in addressing food security, and the adoption of a river-basin approach as the basis for policy. In addition to rationalization of polices, adoption of this approach would help in developing a coherent approach.

Dr. M. Moitra, Independent Consultant and former AFPRO employee, shared his observation that the approaches recommended for addressing climate change and natural resource management issues included promotion of adaptive capacities and empowering people with knowledge and access to information, which were areas where NGOs had sufficient exposure. He recommended a method for identifying credible NGOs whom the government could approach in order to bridge the gap of programme implementation at the grassroots level.

Mr. Pattabiraman Subramanian, European Union raised three points. First, regarding the targeted levels of food production, agreeing with the Panel Member, Mr. Sanyal, he said that the present food production targets were very high. Population statistics needed to be revisited: present levels of population dependent on agriculture (those living in rural areas) would be nearer 62% than the frequently used figure of 70%. People are shifting out of agriculture already and this would continue over the next 30 years. Secondly, speaking on politicization of food security in India, where vote bank politics and free

distribution of food would draw votes, he called for delinking issues of food security, natural resource management and water conservation from politics. Lastly, speaking on NGO collaboration with the government, he spoke of the need for NGOs to challenge existing schemes of the government in order to make them more efficient, especially when dealing with water conservation and agricultural production.

Dr. Ashok Jaitly, Panel Chairperson agreed with the point on hydrogeological aspects not being considered in water management approaches in the country. He stated that state governments lacked capacity in this area and this was an opportunity in terms of capacity building initiatives.

Mr. Sanjiv Sanyal, Panel Member, responding to the issue of providing food to needy countries as a cause of human duty stated that his emphasis was more on planning food production with export as an objective while underground water reservoirs of the country were being depleted. India, which has a poverty issue, needs to conserve its water for future generations. Speaking on the figures being estimated for population dependent on agriculture for livelihoods, he agreed that there was shift in rural population to livelihood avenues outside agriculture. According to him the present figures for population in rural areas would be about 65%, given the fact that the 2001 census pointed to the figure of 78%. Again not more than half of this population in villages depended on agriculture, indicating a major shift of people away from agriculture, which leads to the issue of providing employment for this shifting population and managing increased urbanization.

Prof. Amitabh Kundu, Panel Member, said that the dilemma on food security could not have been put better than what has been done on the panel. The first challenge was on addressing food security of the population. While we have 17% of the global population, we have 48% of the world's hungry. The recently published Millennium Development Goals report reveals that India may be able halve her poverty but is failing in addressing hunger and malnutrition. The second challenge is groundwater extraction and pollution and the question of how to produce food to feed this large number. Again, with economic growth, income elasticity also grows, and if the population grows by 1.5%, food requirements will grow at a higher rate. While we should not be misusing our water resources, there is no question that our food production targets for addressing large scale hunger and malnutrition be kept below 2.5%. We also have to think of diversification of our economy to ensure livelihoods for the growing population as 450 million people will

have to be absorbed outside agriculture. Thus they need to be taken out of agriculture, and provided alternate employment opportunities and thus the need to create alternate employment centers.

VOTE OF THANKS

Mr. S. C. Jain

Programme Coordinator, AFPRO

Mr. S. C. Jain, Programme Coordinator, extended a vote of thanks on behalf of AFPRO.

The Guest of Honour, Prof. K. V. Thomas, took out time of his hectic Ministerial schedule to participate in the commemorative event, providing very important inputs. Even his office responded very well and cooperated with AFPRO during the entire process. This reflects his sense of purpose and commitment to food security of rural communities.

H. E. Mr. Phillipe Welti, Ambassador of Switzerland to India, participated in this important occasion in the history of SDC-AFPRO Partnership and released the partnership document. AFPRO was deeply touched by his words of appreciation on the service which AFPRO has extended to people of different parts of the country.

SDC has always been AFPRO's friend, guide and philosopher, supporting AFPRO to adopt contextually relevant approaches for addressing problems of marginalized communities including women and landless. Continuing in the same spirit, Ms. Sybille Suter, Country Director, SDC welcomed the idea of holding this event and supported AFPRO whole-heartedly.

Chairperson for the Panel Discussion, Dr. Ashok Jaitly, facilitated this discussion, keeping the issue in focus and enabling specific outcomes. Prof. Amitabh Kundu, Mr. Sanjiv Sanyal (Member of AFPRO Governing Body) and Dr. Sudhirendar Sharma sharing their perspectives on the subject, raised critical issues that resulted in a qualitative participation during the open session.

Presentations of Chief Functionaries of Sahyog Sansthan, Mr. Heera Lal Sharma, and of Marathwada Sheti Sahayya Mandal, Mr. Vijay "Anna" Borade offered crucial field level options for addressing the issue of water and food security. They came all the way to participate in the event and had kind words on the SDC-AFPRO partnership.

The credit of success of all SDC-AFPRO interventions goes to the community. A representative of the community under the Climate Change Adaptation project has come all the way from the field, and will

take back the experience with him. AFPRO has a deep appreciation for rural communities in its projects which always responded very well whenever interventions were made.

Col. B.L. Verma, has inspired us before, especially at initial discussions for the development of “Winged Seeds”. Today, we found him in the same energy and spirit to talk about AFPRO and share the experiences, and made encouraging remarks on the work that has been done in the past and its relevance in today’s context.

Governing Body members, especially Mr. K. P. Fabian, President, AFPRO Governing Body, and all other members took out time to participate in the event. They have always been the source of inspiration, and motivation. Special mention needs to be made of Executive Director, AFPRO Mr. D. K. Manavalan, who has always been the guiding force behind this event.

Mr. Gerolf Weigel, Deputy Country Director, SDC, and Dr. K. R. Visvanathan, Senior Advisor, SDC, have silently participated in the event. They have seen the work on the field in the Climate Change Adaptation project in Andhra Pradesh and Rajasthan. They have contributed in the designing of this workshop and giving timely inputs and suggestions.

Media representatives who have taken time out and given importance to the subject, covering the Inaugural discussions including the address of the Honorable Minister of State and the Ambassador of Switzerland, as well as in the release of the “Winged Seeds” and the Panel Discussions.

Ms. Shubha Rajan, Director, CII, facilitated the proceedings of this event, and introduced all the speakers with remarkable eloquence.

Invitees have taken out time from their busy schedules and need to be specially appreciated – Monday being a very tight schedule for people in Delhi, especially after a 3-day break.

Special mention needs to be made of the efforts behind the scenes. AFPRO staff put in their heart for conducting this event.

Credit for the success also goes to facilities available at the IIC, which provided the right environment for thoughtful discussions.

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