

Preface to the Special Issue on “Communities and Livelihood Strategies in Developing Countries”

Sustainable development has been a focal issue in development discourse, more so after the Rio Declaration, especially in the context of developing countries. Most of these countries are resource constrained and are facing the dilemma of fairly allocating their scarce resources such that the needs of majority of their population living under poverty and hunger are met. It is not therefore uncommon to observe in these countries that a sizeable proportion of their population lives on an earning of less than US\$1.25 a day (regarded as the poverty line), an amount so small to motivate individuals to engage in meaningful economic activities for a living. Economic opportunities fly in their faces and they cannot take advantage of them. They become the marginalized and the vulnerable in society and susceptible to all manner of shocks, be it global (climate change, economic crises and international contestations) or local (heavy rains, flood, drought, crop failure, pest attacks, diseases, political conflicts and other governance challenges). These shocks alter the governance, production and livelihood systems around the world. Agriculture including crop, livestock, forestry and fishery sub-sectors in rural communities of developing countries is more vulnerable because of their higher exposure and dependence on climate sensitive options of production and livelihood systems, and limited adaptive capacities. This, in turn, adversely affects their production and livelihood strategies, thereby making it harder to attain the millennium development goals (MDGs).

Governments of developing countries do support farmers to use modern farm inputs, “high input high yield agriculture”, in order to improve crop yield and combat malnutrition and hunger around the world. The increased use of modern inputs imposes danger by emitting high volumes of greenhouse gases (GHGs) into the atmosphere, resulting in high temperature and uncertain rainfall patterns thereby impacting negatively on crop yields. That is, the agriculture sector seems to be heading towards vicious cycle of becoming more vulnerable to climate variability by its current production systems. It is therefore essential to improve upon current production systems through methods which make them reduce emissions of GHGs but at the same time enhances food production to fight malnutrition and hunger around the world more effectively. It is not misplaced to adopt farming methods which enhance sustainable management of the natural resources and improve the adaptive capacity of rural communities, thereby making them more resilient to various forms of vulnerability. A well planned and coordinated participatory local governance and development programs could make a big difference in this regard.

In order to deal with the above mentioned issues, different aspects of agriculture, livelihood systems and local governance will be discussed in this special issue of the *Journal of International Development and Cooperation*. This interdisciplinary approach to identifying problems and proffering strategic policy solutions will greatly increase livelihood sustainability thereby improving general quality of life without compromising the health of the ecosystem and contribute in designing a “low carbon society”. After a rigorous review of the manuscripts submitted, nine refereed papers, comprising five articles and four research notes, are accommodated in this issue with due consideration of the objective of this publication.

The first article analyzes the impact of climate variables on revenues of five major food crops in Ghana using 2005 national survey data. Using a multinomial logit model to correct crop selection bias in estimating net revenue per hectare, it was found that farmers can raise their revenue if they adapt to warming and drying by switching crops. Public investment in research on high yielding, heat and drought tolerant varieties of food crops is suggested in order to make crop switching a beneficial exercise for farmers.

The second article analyzes the socioeconomic determinants of improved rice varieties adoption in Nepal, where rice is the most important cereal crop from the perspective of food security and livelihood of its people. Using a binary logistic regression to

analyze survey data covering 180 households in three Tarai districts (Siriha, Chitwan and Kailali), it was found that availability of irrigation facility, membership in community based organization (CBOs) and price of rice seed are the most important factors influencing the decisions of farmers to adopt improved varieties of rice.

The third paper analyzes the effects of seasonal changes and forage availability on milk yield of cows among smallholder households in Kyrgyzstan. Wood's Gamma model was used to estimate parameters of lactation curve and effect of seasonal variations on these parameters, based on a sample of 89 indigenous and crossbred cows owned by smallholder households in Ala-Buka. The results show that peak milk yield and lactation persistence are higher among cows calving in winter and autumn. Milk yield is also highly influenced by seasonal availability of forage and fodder, whereas calving seasons are largely dependent on the availability of pasture forage. Protecting cows from adverse weather conditions during late spring and summer can increase milk yield.

The fourth article analyzes the prospects of farmers in generating additional income through organic vegetable farming in Nepal while curbing the undesirable consequences of deteriorating environmental services from irrational and long-term use of chemical fertilizers and pesticides. The study was carried out in Kathmandu valley with a vibrant organic market and Chitwan district with a momentum of organic farming through group conversion. The study shows that organic market which is largely based on community trust and product certification seems to play minor role in ensuring premium price for the organic vegetables. In order to maximize earnings from organic farming, it is important to keep up the pace of group conversion while scaling-up research and awareness creation in organic farming among the consumers.

The fifth article analyzes the capacity of rural institutions to implement decentralized programs in Indonesia. It focuses on four rural government institutions: village officers, neighborhood groups, village parliament and village development committee with case studies conducted in Purbalingga district, central Java. The study finds that these institutions have enough capacity to implement their respective functions, but limited budget and poor coordination among these institutions have conspired to undermine their delivery in terms of addressing local problems. District governments are, thus, encouraged to conduct capacity building programs relating to how coordination can be improved among these implementing institutions charged with the responsibility of executing government projects and programs.

Of the four research notes, the first one examines the trends of climate variability and local environmental changes and their implications on livelihood of the people in two coastal districts in the state of Odisha in India. The analysis of time series meteorological data shows that there is moderate change in climate variables. Interestingly, the analysis of community perception at local level based on survey of 210 households in 3 villages, found some conformity between the local perceptions and the scientific claims about the trends of climate variables and local environmental changes. The results show that climatic variation impacts the livelihood systems of rural communities. Local people also have considerable knowledge about the changes happening in the natural resources around them and are trying to adapt to the change to meet their livelihood needs.

The second research note discusses the cooperation of local communities in Kyrgyzstan to enhance rural development immediately after the attainment of independence from Soviet Union. This cooperation in rural development was necessitated by the change in the system of government and the sheer lack of financial resources to subsidize all rural development activities. This paper presents the case studies of current rural development situation in two remote villages of Issyk-Kul oblast, and states that the efforts of local communities to solve their problems are not enough since it will help them meet only their food security needs. Developing the broader rural economy requires deepening participatory rural development with systematic government support in terms of crafting farmer-oriented strategies.

The third research note ascertains the role of local people and their participatory initiatives toward their own development, through an action research project, "kitchen gardening practices through people's participation" in the *bagdi* villages in Bangladesh.

It explains how the marginalized and less privileged *bagdi* community actively participated and collaboratively worked together to learn kitchen gardening technology. Results in this paper show that the *bagdi* people have significantly increased their vegetables and fruits production, consumption and family income through kitchen gardening.

The fourth research note dwells on the profiles of groups of smallholder dairy farmers after the volcanic eruption of Mt. Merapi in Sleman Regency of Daerah Istimewa Yogyakarta in Indonesia. The smallholder dairy farmer groups manage a colony housing their cows together in a large shed with individual responsibility of feeding and maintaining their cattle. These farmers have formed cooperatives to facilitate purchase of feed (concentrates) and sale of fresh milk. But, in order to recover from the effects of the disaster, the smallholder dairy farmer groups join the union of smallholder dairy farmers group (GAPOKTAN: Gabungan Kelompok Tani) through which they become eligible to get assistance or funding from government recovery program. This study shows that GAPOKTAN has helped the group in maintaining their cattle population, strengthening their linkages with other institutions that support their farming activities and improving milk production value chain.

The contents of this volume are evidences from developing countries of Asia and Africa, on issues of communities and livelihood strategies in these countries, but the issues addressed are not peculiar to those countries alone. The research output is applicable to countries and/or regions elsewhere with similar biophysical and socioeconomic conditions and would be useful to all researchers pursuing similar issues anywhere.

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