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## Diversity and Sustainability of Household Income

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### Abstract

Diversity and sustainability of households' income play a central role in rural households' strategies to ensure survival under difficult ecological and economic conditions. Rural households have been observed to follow a multitude of actions and practices to prepare for and cope with different kinds of risks and thus reduce their vulnerability. Those actions may be grouped into four categories: **(i)** adjusting and diversifying on-farm production activities; **(ii)** off-farm activities such as wage- and self-employment; **(iii)** capital formation; **(iv)** access to financial markets.

Actions in these different areas are interlinked in numerous ways, partly complementing and mutually reinforcing, partly competing with each other.

Strategy group **(i)** 'on-farm production diversification': farmers growing crops or raising animals under complex ecological conditions and in fragile environments have developed an amazing array of measures to cope with such vagaries as drought, differences in soil moisture and fertility, irregular rainfall, incidence of pests and diseases etc. Sequencing of planting according to rainfall, plant spacing according to soil moisture, adapting crop planting (even in a single plot) to differences in soil fertility and the selection of plant species often document a long experience and farmers' intimate knowledge of their ecological environment and highly sophisticated mechanisms to cope with its risks. Moreover, mulching, composting, using green and animal manure are other measures to improve soil conservation and fertility. Two contributions to this session, ANJA BLUME'S and AXEL DRESCHER'S papers, discuss these strategies, particularly factors of influence and successes.

Strategy group **(ii)** 'off-farm income': off-farm employment has long been found to be an important and, particularly in fragile ecological environments, an income stabilizing component of household income. STEFAN SCHWARZE'S paper discusses its importance and sources of income and analyses the determinants.

Strategy **(iii)** 'capital formation': to build up assets to provide for unforeseen events is a commonly observed human strategy to prepare for and cope with risks. Capital formation can focus on physical assets, such as trees, animals, machinery, consumer goods and jewellery. A second, important set of actions is directed to human capital formation, such as providing education for family members who, with their expected higher income, can be relied upon in times of crises. A third focus is social capital, i.e. building networks, being a member of different village groups (labour groups, credit and savings groups, women groups, etc.) and integrating oneself into family and clan networks and local organizations. CHARITY IRUNGU'S and MANFRED ZELLER'S paper analyses the factors that determine the targeting policies in poverty alleviation programmes of non-governmental development organizations and shows the importance of physical, human and social types of capital formation in selection.

Strategy (iv) ‘financial market access’: besides income diversification, reliance on assets and social networks, resorting to formal and informal financial services can be important strategies for rural households to address income and food security risks. The more limited the former strategies, the more important becomes the access to savings and credit markets for smoothing income and consumption. Repeated transitory food shortages tend to erode households’ income and productive base and may finally result in chronic food insecurity. Timely access to financial markets can be vital for easing transitory food shortages and can contribute to prevent chronic food insecurity. In most countries, the food insecure in need of consumption loans resort to informal financial intermediaries. The formal financial sector hardly offers this income and consumption stabilization service, in addition, it is often not easily accessible. Unfortunately, none of the papers in this session deal with this issue.

The posters grouped under this session underline the importance of plant diversity and soil fertility for food supply in home gardens (ALEXANDER WEZEL; FLORIAN WICHERN, CHRISTIAN RICHTER, RAINER GEORG JÖRGENSEN; and KATJA KEHLENBECK, NORBERT CLAASSEN, BRIGITTE MAASS).

In summary, the papers and posters, while not covering the entire range of issues, highlight nevertheless important research results concerning rural households’ income diversity and sustainability.