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REPUBLIC OF INDIA COUNTRY PROGRAMME EVALUATION

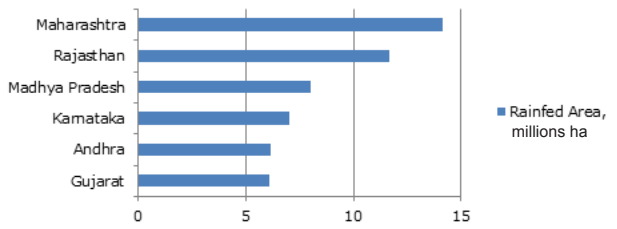
Innovative solutions to improve productivity of rainfed agriculture in India

India has the largest area of rainfed farming in the world. About 42 per cent of the areas where paddy is grown are rainfed, 77 per cent for pulses, 66 for oilseeds and 85 per cent for coarse cereals. Climate change threatens to add further to uncertainty and variability of agricultural production. However, in the past, policies to address productivity in rainfed agriculture have received less attention than deserved.

The continued low productivity of rainfed agriculture dampens the overall growth rate of agriculture in India. It also causes high variability in annual food production, which adversely affects the poor and vulnerable population in particular. Meanwhile, the Government has to maintain huge stocks of food grains to compensate during periods of erratic monsoon rains. As of January 2015, the Government was carrying a huge food stock of 61.6 million tonnes, as against the stipulated norm of 21.4 million tonnes.

The share of Indian states accounting for more than 75 per cent of the total rainfed area is shown in the figure below.

States with large rainfed areas (million ha)



Source: India Country Programme Evaluation Mission Team, based on data of the Government of India (2015)

Recognizing this problem, and the importance of rainfed agriculture in ensuring food supply, the National Rainfed Area Authority was established in November 2006 and the current Government is renewing efforts to rejuvenate the organization and make it functional. Bridging the productivity differentials between the irrigated and rainfed areas could help address a number of other sectoral and national development issues simultaneously, in addition to relieving stress on irrigation systems, groundwater levels, electricity consumption and public subsidies.

The deteriorating quality of soil and water is seriously challenging the agriculture sector's long-term prospects, especially in the context of oncoming climate change. Groundwater irrigation accounts for 70 per cent of the irrigation needs of the country. This has led to the severe depletion of groundwater reserves and related issues, such as increased soil salinity. Land degradation affects wide swathes of land. As per estimates of the Indian Council of Agricultural Research (2010), out of a total geographical area of 328.73 million ha, about 120.40 million ha of land are affected by various types of land degradation, resulting in annual soil loss of about 5.3 billion tonnes through erosion.

The 2016 India Country Programme Evaluation found that a considerable portion of portfolio investment went into agricultural activities. Most of the IFAD target groups comprise small and marginal farmers engaged in rainfed agriculture and workers earning their livelihood as casual agriculture labour. However, the technical content of agricultural interventions was not always sharply conceptualized. Traditionally, IFAD-funded projects were geared to support subsistence agriculture in

very poor areas and were mostly demand-based. Non-governmental organizations (national and international) and state or district departments were in charge of providing improved varieties of seeds or livestock breeds and extension support. This was relevant to simple (although necessary) interventions in the subsistence sphere. However, as the needs of communities evolve and as the Government and IFAD move towards supporting smallholder commercial agriculture and addressing the broader challenges of developing rainfed areas, the traditional approach needs to further emphasize:

- The importance of sound technical analysis of constraints and opportunities in rainfed agriculture development (e.g. the priority to reduce productivity differentials within a state or a district, address cropping patterns, water usage efficiency);
- A strategy to organize interventions around territorial and product clusters (e.g. fruit trees, or goats or dairy products) so as to build a critical mass of inter-connected investments, which would also facilitate connectivity to markets and, when possible, value chains;
- The potential of partnering with state and local agricultural research and extension centres, very numerous in India. Local agricultural centres work on varieties adapted to a given farming system and can further contribute to enhance agricultural productivity.

Farmer from a tribal community in West Rajasthan. Mitigating Poverty in Western Rajasthan Project.

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Designs of some projects of more recent generations have acknowledged some of the above gaps.

The 2016 Country Programme Evaluation recommends, inter alia, that agricultural development components of IFAD-funded projects need to more prominently focus on technical solutions for rainfed agriculture, especially in light of climate change, support local and national applied research and extension, and the commercialization of smallholder agriculture. From a technical perspective, interventions need clearer emphasis on reducing the large intra-district yield differentials, as well as risk factors, and to better analyse constraints and opportunities of farming systems. There is also a need for more systematic partnerships with state and local public research and extension organizations.

Canal lining in Assam. North Eastern Region Community Resource Management Project for Upland Areas, Phase II.

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Investments in agriculture need to be crafted more strategically by organizing them around territorial and commodity clusters, to better coordinate interventions and concentrate a critical mass of initiatives. This will also place projects in a better position to support linkages to markets and opportunities for value addition. To improve farmers' information on markets and reduce risks, attention needs to be paid to information technology, and insurance products. Many of the problems experienced by farmers in certain regions can be reduced through these inputs.

Emphasis on market access and value chains also implies renewed efforts to engage private sector operators at the design stage. There have been attempts made through one of the projects to cooperate with private sector companies (Tata, Tesco, East West Seeds, FieldFresh, Unilever and Better Cotton Initiatives). Cofinancing and technical support opportunities with the private foundation Sir Ratan Tata Trust have materialized for two projects and the experiences are still to be analysed and systematized. Recent legislation on reinvesting a percentage (2 per cent) of corporate profits in corporate social responsibility provides renewed opportunities for collaboration with private companies.

Further information:

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