

Knowledge management pays dividends

Climate change and its consequences are at the forefront of current development discourse, particularly in relation to water and agriculture. Numerous studies and commentaries on water and climate change emphasise the key position of water as a resource in adapting farming to climate change. Systematic knowledge management should now be employed to harness past and up to date knowledge as efficiently as possible.



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Many studies and papers conclude that, in view of the anticipated impacts of climate change, adaptation measures are urgently needed in the agricultural sectors of developing countries. These include:

- Increasing water storage capacity: dams, reservoirs, small retaining basins, measures to improve the water retention capacity of agricultural soils;
- Reducing water runoff that causes soil erosion through
 - afforestation, including agroforestry
 - soil and water conservation measures such as contour dams and ditches, contour strip cropping, appropriate tillage, application of organic fertilisers;
- Rainwater harvesting;
- Enhancing the efficiency of water use on irrigated land through both technical measures and organisational and institutional approaches.

Mobilising best practice

It cannot escape notice that these and similar approaches were already devised in the 1980s in the context of rural development activities, and proved successful in many places. Site-appropriate technologies and methods for water and soil conservation and for efficient irrigation were tested on agricultural research stations and in pilot projects. Integrated resource-saving activities were implemented as part of regional rural development programmes.

Over time many of these initiatives and their achievements faded into the background or were forgotten entirely. Few irrigation projects continued to receive funding from development decision-makers, since in the past they had seldom achieved the anticipated results, owing amongst other things to their large size, their alignment to governmental irrigation organisations and their predominantly technical rather than participatory orientation.

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In recent years the subject of “water in agriculture” and with it “water for food” has gradually reappeared on the development agenda, not least because the alarming adverse effects of climate change for food production are becoming ever more apparent. There is no longer any question that water shortages – caused by lack of rainfall or by rainfall occurring at the wrong times during the vegetation period – will have a devastating impact on food production in the Middle and Near East, North Africa and sub-Saharan Africa. In contrast, in many regions of Asia heavier and more frequent rainstorms together with the melting of glaciers caused by rising temperatures will lead to high water levels and flooding, and have disastrous effects for people, infrastructure and land in agricultural production. The need for action is becoming ever more urgent and increases the pressure to implement water-related adaptation measures.

Knowledge from the past in support of today's work

Today a number of water-saving approaches and technologies, which were already good practice in the past even without climate change, are being implemented as adaptation measures in agriculture. This underscores the facilitating function of knowledge management.

Many documents recording proven experience that could still be applicable today are now no longer available. Those that have survived can however provide helpful expertise and advice, and be effective in supporting and hastening the planning and implementation of adaptation measures. Systematic knowledge management at the time would have ensured that information and experience from the past would be retrievable today and could be promptly put to use.

The information storage capabilities available today are ideal for compiling positive experience and knowledge as well as cutting-edge science, and for sharing them rapidly. Using them supports the learning process, technical networking, the exchange of knowledge and experience and the development of skills, all of which are important factors in view of the long-term challenges of adaptation to climate change.