Article Id
AL04297

REAL WATER SAVINGS IN AGRICULTURAL SYSTEMS (REWAS)

Diana Monsang

Email
diana.monsang@gmail.com

Department of Genetics and Plant Breeding, School of Crop Improvement, CPGS-AS, CAU (Imphal), Umiam, Meghalaya – 793103, India

In agriculture, water is acrucial input that nurturescrops from seed to harvest. The issue of water shortage is becoming worse due to climate change, as well as the expanding global population and economy. It is becoming a crisis affecting millions of people around the world. Agriculture must use water-saving techniques to ensure access to accessible water as it is the most impacted sector. The REWAS project, which stands for Real Water Savings in Agricultural Systems, is an initiative that aims to address this issue.

REWAS

Real Water Saving in Agricultural Systems (REWAS) is a project of the Food and Agriculture Organization of the United Nations (FAO) and Future Water that aims to introduce tools and approaches to enhance water accounting, allocation, and productivity while offering farmers helpful guidance on how to conserve water in agriculture.Through the integration of technological, organizational, and social solutions, the project advances comprehensive environmental policy grounded in empirical facts.

In addition to addressing water scarcity, the project will improve water management, dispel common misconceptions about water conservation in agriculture, and promote sustainable agriculture. It also helps to educate those involved in water management, such as stakeholders, field program officers, and technical advisors in the water, food, irrigation, and agriculture sectors.

Water Scarcity: Types and Causes

Water scarcity occurs when demand exceeds supply due to poor planning, insufficient infrastructure, or physical scarcity. It is categorized into four categories primarily based on these factors. They are:

1. Physical water scarcity results from low natural rainfall and runoff, which limits the amount of water available to meet demand, including environmental flows.
2. Economic water scarcity is brought on by inadequate infrastructure planning.
3. Drought incidence and highly fluctuating water supply are related to seasonal water scarcity.
4. Constructed water scarcity is created when the water supply is less than water use.

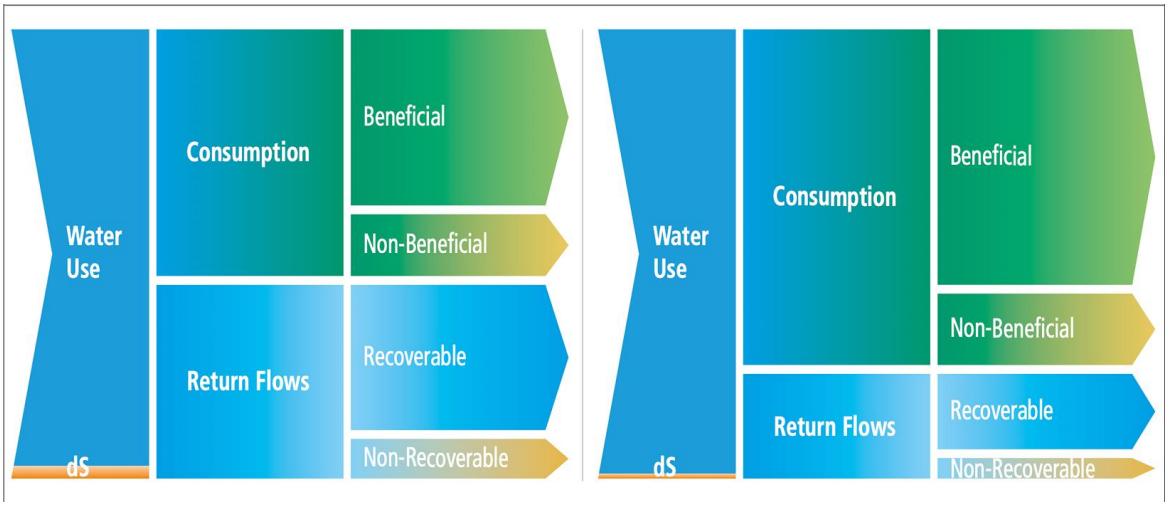
Economic and population expansion are the primary causes of water scarcity.As a result of fast urbanization, which severely strains nearby water resources and increases water consumption when combined with industrialization, population growth raises the requirement for food consumption and also modifies the dynamics of population distribution. The need for water is also increased by expanding and rival economic sectors.Water shortage is made worse by climate change, which alters temperature and precipitation patterns. This is demonstrated by the rise in the frequency and intensity of droughts during the dry season and the rise in the frequency of dry spells during the rainy season. The scarcity of water can also be caused by pollution of the water.

Water Management Through REWAS

Water accounting, the water approach, and water productivity are some of the methods that REWAS uses to improve water management. The e-learning course also helps.

Water accounting is the process of determining, measuring, reporting, and confirming the movement and storage of water in a system. It offers a comprehensive view of where and how water is lost, making it easier to spot possible areas for water conservation.

An efficient method of managing and conserving water is called "Follow the Water," which centers on tracking and comprehending the water's journey from its source to all of its destinations, including back into the environment. The method begins with water use, which is the volume of water used for a specific use, such as agricultural irrigation. There are two categories of water use: return and consumption. Consumption can have positive effects, like crop transpiration, or negative effects, such as soil evaporation. In a similar vein, return flow may be non-recoverable—that is, returned to saltwater sources—or recoverable—that is, returned to the river.



Source: www.fao.org

Reducing water consumption and non-recoverable return flows leads to an "actual water saving," whereas reducing water source consumption leads to an "apparent water saving." Thus, by using the Follow the Water strategy, sustainable measures might result in actual water savings.

One REWAS tool for calculating production or benefit from water use is water productivity. It's typically expressed in terms of yield, income, or some other metric related to a crop. Increasing water production entails using less water to accomplish more.

The FAO launched the REWAS project's eLearning course, which covers the principles and practices of actual water savings and the possible effects and remedies of water-saving actions. Field program officers and advisers in the irrigation, agriculture, and water sectors are the primary audiences for this e-learning course.

Common Misconceptions in Real Water-Saving

Some popular myths regarding water conservation in agriculture are debunked by the REWAS project, including

- It is untrue to say that conserving water at the field level will conserve water at the catchment level because the water may be utilized again as runoff or be available for use by the environment or other people.
- It is a myth that water-saving techniques make water more readily available because they can harm the ecosystem, downstream consumers, and water quality.

- Water conservation cannot be achieved by merely cutting back on withdrawals or installing water-efficient technologies; rather, it requires a thorough evaluation of water resources, their productivity, and how they are allocated among various users for various uses.

Benefits of REWAS

By encouraging actual water savings, the REWAS project advances the sustainability of agricultural methods. Some of the benefits of REWAS are:

- increases the productivity and efficiency of water
- increases the availability and security of water
- lessens water stress and scarcity and promotes livelihoods and food security
- keeps ecosystems and the environment safe

Conclusion

As water becomes less available, conserving water supplies becomes ever more crucial. As the industry most impacted by water scarcity, agriculture can use tools, approaches, and preventive measures like productivity, efficiency, and water assessment and accounting. It can also adhere to water terminologies and concepts and implement sustainable interventions along with sustainable interventions to deal with water scarcity and dispel myths about water conservation through REWAS. Policies and implementations of REWAS are grounded in reality and supported by data. Water conservation with REWAS is very effective since the water conservation and accounting guide describes the procedures and logs the flow and usage of water.

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