



ICID Young Professionals e-Forum (IYPeF)

<https://www.linkedin.com/groups/6990321>

Role of New Technologies for Irrigation and Drainage

Background Note for Discussion

17 August 2016 to 2 September 2016

Introduction

Efficient management of resources and development of the irrigation sector including all its components such as infrastructure, efficient water management is the primary concern for the sustainable development of the agricultural sector as well as food production. Irrigation is one of the most important inputs for an efficient and sustainable agricultural production.

According to FAO 2012, the irrigated agriculture represents 20% of the total cultivable land, contributing to 40% of the total food produced worldwide. The process of irrigation involves the use of resources like land, soil and water. There is an urgent need for better management and utilization of these resources.

The world has made progress towards its goal of bringing millions of people in digital arena and providing them better opportunities. The need of the hour now is productivity- and technology-led transformation. **Geospatial** technology opens opportunities to raise productivity, improve efficiency across major sectors of the irrigation and drainage like water use efficiency, crop production and land reclamation.

Agriculture sector has high potential for use of technologies and tools like satellite imageries, aerial imageries, GIS, GNSS/GPS, automated sensors, UAV/Drones, LIDAR and machineries. The ultimate aim of these technologies is to bring optimization, precision and efficiently in use of natural resources and enhance crop yields. The "**empowering**" technology has the potential to bring a revolutionary change globally and achieving the goal of sustainable development.

Keeping the above in view we are starting a discussion on ICID Young Professionals' e-Forum (IYPeF) on the topic 'Role of New Technologies for Irrigation and Drainage with focus on Geospatial Technologies'.

Objective

The broad objectives of the discussion in IYPeF are to:

- (i). understand the various Geospatial Technologies available for operational use in managing modern irrigation system, water management and supply systems;
- (ii). understand the limitations of these technologies;
- (iii). identify the obstacles in use of these technologies under various socio-economic and administrative set ups;
- (iv). get an insight into the legal aspects of Geospatial Technologies; and
- (v). understand the need for putting in place policies, schemes and programmes that would help in bridging the knowledge and technology gap between developed and developing countries.



Outcome

It is intended that discussion in IYPeF will explore answers to the following questions:

- (i). What are the major geospatial technologies used worldwide in Irrigation and Drainage Sector?
- (ii). What are the application areas where technology is being used/ can be used in the whole process of Irrigation and Drainage?
- (iii). How geospatial technology can support enhanced decision making, effective management of resources and assets, enhancing the efficiency of workflows, and improving the accessibility of information?
- (iv). What are the legal and policy impediments in using geospatial technologies which needs attention?
- (v). What are market trends, opportunities and prospects with the use of Geospatial Technologies in the sector including future tools, technologies and the upcoming market and growth drivers?

