

WORKING GROUP ON HISTORY OF IRRIGATION, DRAINAGE AND FLOOD CONTROL (WG-HIST)

UPDATED SCOPING DOCUMENT

1. Introduction

- 1.1 As we entered the 21st century, humanity was confronted with three fundamental problems that were interrelated in a complex system: water crisis, sustainability and flood mitigation. Coping with the water-related challenges in the 21st century requires major technical jumps and innovations in all related fields.
- 1.2 In knowledge management sphere, it is often pointed out that it is important to distinguish between data, information, knowledge and wisdom. The generally accepted view is to see data as simple facts that become information as it is combined with meaningful structures, which subsequently become knowledge as meaningful information is used to make predictions. This view looks at data as a prerequisite for information, information as a prerequisite for knowledge and knowledge as a prerequisite for wisdom. When facts are put into a context, and combined within a structure, information emerges. When information is given a meaning by interpreting it, information becomes knowledge. At this point, facts exist within a mental structure that consciousness can process, for example, to predict future consequences, or to make inferences. As the human mind uses this knowledge to choose between alternatives, behavior becomes intelligent. Finally, when values and commitment guide intelligent behavior, behavior may be said to be based on wisdom.
- 1.3 In the era of super computers today, the process of a typical data to become wisdom may take a day or a week or a month in some industrial cases. But in the context of water engineering, the time span may be a year or a decade or a century. Consequently, the water wisdom of the past which was achieved in a period of hundreds of years can be regarded as a unique and irreplaceable gift from our ancestors to contemporary water engineers. Hopefully, the water wisdom of our ancestors would play a key role in our adaptation with the water related challenges in the 21st century. It is, therefore, necessary that we look back at the ancient creation of the fertile human brains that used the synergy of science and art at that moment of time to provide us with abundant food for thought. It should be remembered that foundation of the future rests on the achievements of the past.
- 1.4 The water engineering is a vital part of the story of civilization. Reservoirs for water supply were undoubtedly, among the earliest structures, devised by mankind. The role that water management structures have played over the ages is documented in many records of historical lands. These structures have been linked closely to the rise and fall of civilizations, especially to those cultures highly dependent upon water/ irrigation.
- 1.5 The mission of ICID is to stimulate and promote the development and application of the arts, sciences and techniques of engineering, agriculture, economics, ecological and social sciences in managing water and land resources for irrigation, drainage and flood management for achieving sustainable agriculture water management and water history can be used for achieving this mission.

2. Objectives

The objectives/ relevance of the WG can be specified as follows:

- (a) Water History aims to foster historical understanding of the relationship between water and humankind. Lessons learned from water history can be used to enhance our strategies for sustainable irrigated agriculture.
- (b) The WG is expected to contribute to effective implementation of the Strategy Theme Schemes and to other strategy themes;
- (c) The water engineers will be facing greater challenges in the coming decades. Water history can be used to inspire them and promote the stakeholders participation, creativity and innovations.

3. State of knowledge on the topic

3.1 *International Organizations that are working on the subject*

There are very few other International Organizations that have programs and activities on this topic. This especially concerns with the:

- (a) **International Water History Association (IWHA):** The International Water History Association (IWHA) aims to encourage, promote, and foster historical understanding of, and research in, the relationship between water and humankind. IWHA fosters a stronger relationship between those engaged in water history and water administrators, engineers, scientists, planners and other practitioners. Creating public awareness of the role of water in world history and to promote public participation in resolving water resource issues is the main activity.

- (b) **World Water Council (WWC):** ICID brought forward the idea of recognizing World Water System Heritage (WSH) at the 50th Board of Governors (BoG) meeting of World Water Council (WWC) in Budapest, Hungary in October 2013. During the 58th BoG meeting of WWC held in March 2016 in Jodhpur, India, the program was approved in principle. The World Water System Heritage (WSH) Program, a member-driven initiative by ICID in collaboration with various water-related international organizations and WWC, aims to identify and preserve the people-centered water management systems, organizations, regimes and rules as intangible water heritage considered to be of outstanding value to humanity that created coexistent social systems for humanity and sound environment and giving them recognition. ICID Central Office currently functions as Secretariat for the WSH Program.
- (c) **International Commission on Irrigation and Drainage (ICID):** At the 63rd meeting of International Executive Council (IEC) held at Adelaide, Australia on 28 June 2012, President Gao Zhanyi suggested that a process for recognition of the historical irrigation structures on the lines of World Heritage Sites as recognized by UNESCO shall be initiated. A historical irrigation and drainage structure fulfilling the criterion, and based on the recommendation of the Jury and approved by the International Executive Council will be included in the "ICID Register of Heritage Irrigation Structures" and presenting a "Heritage Irrigation Structure (HIS)" Plaque citing the salient features of the HIS. The ICID Register of HIS would be publicized through ICID media channels and can be accessed at http://www.icid.org/his_award.html.

3.2 Mandate of the Working Group

Mandate of the Working Group is based on the specific niche that this WG can fill in this area and can be formulated as follows:

- (a) To motivate ICID National Committees in various countries to set up their National Working Groups on History;
- (b) To provide guidance to compile, publish, update and/or translate documents on history of irrigation, drainage, and flood management;
- (c) To promote inter—disciplinary exchange of information, knowledge and experience, as well as networking on the topic (agricultural, political, socio-economic, climatologically and geographical, aspects) for proper understanding of the technological developments on the subject;
- (d) To organize seminars at ICID Congresses to enhance awareness of Water history;
- (e) To prepare a paper on "Historical Water Sustainability" for publication in *Irrigation and Drainage (IRD) Journal*;
- (f) To finalize a book on "Historical Water Sustainability".
- (g) To encourage member countries to produce documentaries on Water History.

3.3 How is the Working Group expected to collaborate with the other International Organizations?

WG-HIST would promote synergy with all International Organizations active in water history. Perhaps, collaboration through Memorandum of Understanding (MoU) for mutual knowledge sharing and co-hosting events could promote lessons learned from water history.

4. Work Plan

4.1 Scope

The WG is expected to investigate, analyse, and disseminate information on different aspects of water history and to formulate recommendations with respect to:

- (a) Ensuring sustainability of irrigation and flood projects;
- (b) Combining old methods and modern technologies for enhanced creativity and innovation;
- (c) Recognition of the historical structures.

4.2 Target audience

The target audience for this working group will be managers of irrigation schemes, researchers, consultants, manufacturers, government officials, farmer's representatives and staff of International Organizations working on the topic and anybody interested in "A water secure world, free of poverty and hunger through sustainable rural development".

4.3 Outputs

The following outputs can be expected from this WG:

- (a) Proceeding of the seminars and workshops;
- (b) A book on "Historical Water Sustainability";
- (c) WG website – dissemination of knowledge;
- (d) Overview paper on "Historical Water Sustainability" for publication in *Irrigation and Drainage (IRD)*.

4.4 Timelines

A six-year tenure is requested for this phase of WG activities.

