

**WORKING GROUP ON
INSTITUTIONAL AND ORGANISATIONAL ASPECTS OF
IRRIGATION/ DRAINAGE SYSTEM MANAGEMENT (WG-IOA)**

DRAFT SCOPING DOCUMENT

(Prepared by Dr Hafied Gany and Prof Bart Schultz with contributions by Prof Satoh)

1. Preamble

- 1.1 There are at least five integrated aspects that must be properly maintained in order to secure the functional sustainability of irrigation/drainage in particular and development functions of infrastructures in general. These are: (1). Human resources; (2). Institution and Organization (3). Technology for sustainable O&M; (4). Sustainable O&M budget; and (5). Effective Regulatory Instrument and enforcement. The absence or unbalance of an integrated relationship among any of the five aspects would bring about ineffectiveness of infrastructural functions. Therefore, the five aspects cannot be seen in isolation.
- 1.2 Particularly after the completion of irrigation/drainage infrastructure, the subsequent aspect that must be scrutinized in the follow up sequences is human resources as the subject of activities in conjunction with appropriate Institutional setting.
- 1.3 In relation with ICID's mission, there are a number of Workbodies, Working Groups and Task Forces that have been established and operated to scrutinize a variety of related aspects that cannot be implemented simultaneously. Most recently some workbodies and working groups have been considered as parts of the totality. Among others, these are workbodies under Strategy Theme "Schemes", in which "Irrigation Management Transfer" has been specially intended to be established through expert working groups by means of "Scoping Documents" which will be forwarded to the PCTA and eventually approved by IEC (in this respect 65th IEC in Gwangju, Korea).
- 1.4 Irrigation Management Transfer in this respect is considered to be very specific, while the policies of governments, particularly countries with a high, medium and low Human Development Index¹, are not always transferring irrigation management to the local authority, nor to the Water User Association (WUA). Some countries are still implementing irrigation Management under the government authority, fully or partially.
- 1.5 On the other hand, some government policies are attached to the term Participatory Irrigation Management (PIM). Most recently, the term PIM has been facing questions on the participatory policy. To what extent does the term participatory relate with the subject of participation? Who is participating on what? Whether the government participates to the farmers program or the farmers participate to the government program? The next question is to what extent would the participation have to be obligated by whom? These questions are highly dependent upon a number of situations and conditions of governments and farmers as well as the related stakeholders and communities.
- 1.6 In these regards, the New Working Group is suggested to be categorized with institutional and organisational relationships in terms of: "Institutional and Organisational Aspects of Irrigation / Drainage System Management - WG - IOIDM". This term has been proposed in relation with the scope of inter relationship with the five aspects mentioned above, with a rather flexible and wider scope of working spectrum. Institutional and organisational aspects are closely related with the management subjects, which are human resources, effective operation, management and maintenance policy as well as regulatory instruments and enforcement. In addition it could also accommodate Participatory Irrigation Management (PIM) and Irrigation Management Transfer (WG - IMT). Most significant, is that institutional and organisational aspects are relatively similar in terms of structural and substantial arrangements between irrigation and drainage and hence the working group is proposed to be termed as "Institutional and Organisational Aspects of Irrigation/Drainage System Management or WG - IOIDM" or in short Working Group on Institutional and Organisational Aspects (WG-IOA) with the following elaboration:

¹ Low Human Development Index. Most of the countries in Africa, several countries in Asia, one country in Central America and most of the smaller countries in Oceania;

Medium and High Human Development Index. Most of the Eastern European countries (including Russia), most of the countries in Central and South America and in Asia (including China, India, Indonesia and Pakistan) and several countries in Africa;

Very High Human Development Index. Most of the countries in Western and Central Europe, North America and some countries in Central and South America and in Asia, the larger countries in Oceania and one country in Africa.

2. Introduction

2.1 With transfer of responsibility for water management to a local level, more attention has to be given to cost recovery of the service provided for water distribution. At the same time it is important to balance the budget, requiring detailed analysis of the source and application of funds. In turn this makes user-based performance assessments essential in order to identify irrigation performance indicators (Small and Svendsen, 1990)². In this Scoping Document the relevant aspects of each of these items will be reviewed and the objectives, state of knowledge on the topic and the Workplan will be presented.

3. Objectives

3.1 *Relevance of the Working Group*

3.3.1 The relevance of the WG can be specified as follows:

- (a) the topic of institutional and organisational aspects of irrigation/drainage system management is relevant to the vision and mission of ICID and of interest for its members, especially in countries with a high, medium or low Human Development Index;
- (b) the WG is expected to contribute to effective implementation of the Strategy Theme Schemes and to other strategy themes for that matter;
- (c) most of the activities in irrigation/drainage will be in the field of modernisation of existing schemes. For most of the schemes, especially in countries with a high, medium or low Human Development Index, institutional and organisational changes will play an important role.

3.2 *Relevance of the Working Group to the scope of the Thematic Area*

3.2.1 For the relevance the same argumentation is applicable as shown under the relevance of the Working Group.

3.3 *Existing gap that the Working Group is expected to fill*

3.3.1 Other ICID WGs or Task Forces (TF) that have a related scope of work are: WG-ENV, WG-DROUGHT, WG-CLIMATE, WG-ON-FARM. The new WG has taken good note of the activities of these Workbodies when preparing this Scoping Document.

4. State of knowledge on the topic

4.1 *Other International Organisations that are working on the subject*

4.1.1 There is a limited number of other International Organisations that have programs and activities on this topic. These concerns the:

- (a) Food and Agriculture Organisation of the United Nations (FAO);
- (b) IWMI;
- (c) International Fund for Agricultural Development (IFAD);
- (d) multilateral development banks: ADB, AFDB, IADB, WB;
- (e) of the international partnerships only the WWC by organising the World Water Forums (WWF);
- (f) universities and institutes for international education: AIT, McGill University, UNESCO-IHE, University of Nebraska.

4.2 *The niche that ICID is expected to fill in this area*

4.2.1 In spite of huge resources put on this topic, we can point out three aspects still missing;

- (a) The past discussions are still individualistic and fragmented, and the generalization of experiences is not yet satisfactory.
- (b) Discussions on the generalization of methodology for implementing PIM are still weak.
- (c) Separation of common principles and indigenous conditions in successful cases are not satisfactory.

² Reference Small and Svendsen, 1990

- 4.2.2 At the same time, we have to say that general/common understandings in this field are still not established systematically or in an integrated way; we discuss the importance of "Irrigation Management Transfer", "Water User Association" and "Transferring decision-making power to farmers". However, are they the final targets of PIM? What is the final target and what are necessary conditions for successful PIM?
- 4.2.3 How should we think of professionally oriented farmers versus small scale (or subsistent) farmers, large scale irrigation system versus small scale system, land owners versus tenant farmers, cost recovery versus government subsidy, volumetric charging versus land area charging, water supply company versus association of farmers, and efficiency versus equity? All discussion points will be emerging in considering policy and methodology for PIM.
- 4.2.4 Therefore, it is a big challenge that ICID organizes all the past experiences together to construct an integrated system of methodology for implementing PIM under various regional conditions. It will be possible through locating past experiences in the right position in the logical or theoretical framework, for which many serious discussions will be needed. The specific niche that this WG can fill in this area can be formulated as follows:
- (a) to exchange of information and networking on the topic in order to be up to date with new developments, methods and approaches. This can be the basis to present recommendations and if mature a position paper on key issues on institutional and organisational aspects of modernization of irrigation/drainage schemes;
 - (b) to review and prepare a condensed overview of existing key books, manuals, guidelines and other relevant publications on the topic;
 - (c) to prepare and present reports and/or case studies on recent development in the countries that are represented in the WG;
 - (d) to collect and review experiences and approaches with institutional and organisational aspects of irrigation/drainage system management in the countries that are represented in the WG;
 - (e) to organise international workshops, seminars or symposia on the topic;
 - (f) to prepare an overview paper on the state of the art on the topic for publication in *Irrigation and Drainage (IRD)*.

4.3 *How is the Working Group expected to collaborate with the other International Organisations*

- 4.3.1 Other International Organisations can contribute to the activities of the WG by nominating Permanent Observers (PO). On the other hand presentations of the work and achievements of the WG can be presented at the occasion of events organized by International Organisations.

5. Work Plan

5.1 Scope

- 5.1.1 The WG is expected to investigate, analyse, and disseminate information on new developments and to formulate recommendations with respect to:
- 5.1.2 Legal Framework, Organizational Structures of Water User Association for Water Supply Services
- (a) institutional and organisational requirements for sustainable operation and maintenance of irrigation/drainage systems;
 - (b) possibilities for improvement of organisational arrangements for management, operation and maintenance of irrigation/drainage systems;
 - (c) approaches and requirements for water regulatory authorities, land property questions, water rights and financing of operation and maintenance of irrigation/drainage schemes;
 - (d) roles, responsibilities and requirements for sustainable Water Users Associations (WUA);
- 5.1.3 Participatory Irrigation Management, Irrigation Management Transfer, and approaches for Accounting and Auditing of Water Supply
- (a) approaches and systems of water accounting and auditing at various levels of irrigation/drainage systems,
 - (b) approaches and conditions for successful irrigation/drainage management transfers (IDMT), including legislation and institutional requirements for transfer of responsibilities and/or ownership of irrigation and drainage systems to water users associations;
 - (c) approaches and conditions for successful Participatory Irrigation/Drainage Management (PIDM);

5.1.4 Public Private Partnership, and Charging Mechanism for Cost Recovery

- (a) possibilities of and requirements for successful Public Private Partnerships (PPP) in irrigation/drainage;
- (b) methods and mechanisms for charging of irrigation/drainage services and determination of level of cost recovery.

5.2 Target audience

5.2.1 The target audience for this working group will be managers of irrigation/drainage schemes, leaders of water users associations, researchers, consultants, government officials, farmers' representatives and staff of International Organisations working on the topic.

5.3 Outputs

5.3.1 The following outputs can be expected from this WG:

- (a) although it is an indirect output sharing of knowledge and experience by representatives of NCs will also enable them to disseminate this knowledge within their country;
- (b) condensed overview of existing key books, manuals, guidelines and other relevant publications on the topic
- (c) the WG is expected to organise a series of workshops, seminars or symposia in three years at occasion of an international ICID meeting;
- (d) to prepare an overview paper on the state of the art on the topic for publication in *Irrigation and Drainage (IRD)*.

5.4 Timelines

5.4.1 While institutional aspects of management, operation and maintenance of irrigation/drainage schemes is a very important topic in light of its role in support of global food production it is recommended that the initial term of this WG will be set at six years. The timeline would have to be based on the scope of work and the expected output. Details of the timeline would have to be formulated and refined during the inaugural meeting of the WG. (See **Annexure II**, Draft program time lines and activities of institutional and organizational working group – WG-IOA for discussion at the Inaugural Meeting)

5.5 Collaborators and dissemination strategy

5.5.1 The WG would have to base its activities on an open attitude with a clear scope for invitation of outsiders that are interested in the topic on a PO, or ad hoc basis. The dissemination strategy would have to be based of reaching those who can apply the findings and recommendations of the WG in their practice of management, operation and maintenance of irrigation/drainage schemes.

6. Core Group

6.1 This draft will be circulated among the National Committees with the request whether they can nominate members. In the meantime it will be further elaborated by a Core Group that initially consists of:

Convenor:

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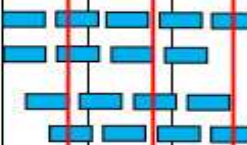
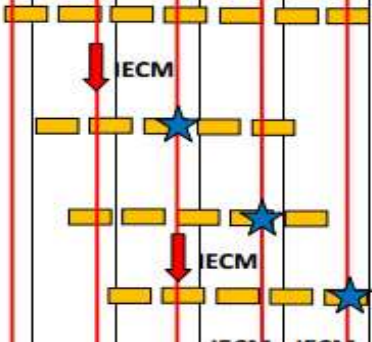

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Annexure I to Annex 1

ABBREVIATIONS AND ACRONYMS

ADB	Asian Development Bank		
AFDB	African Development Bank	TF-SED	Agriculture Task Force on Sedimentation of Reservoirs
AIT	Asian Institute of Technology	TF-VE	Task Force on Value Engineering
AWC	Arab Water Council	ToR	Terms of Reference
CGIAR	Consultative Group on International Agricultural Research		
C-PR&P	Committee on Public Relations and Publications	UNDP	United Nations Development Programme
DMT	Management Transfer of Drainage Systems	VP	Vice President
GWP	Global Water Partnership	WAS	Water administration system
IDB	Inter-American Development Bank	WATSAVE	Water Saving
IAH	International Association of Hydrogeologists	WB	The World Bank
IAHR	International Association of Hydro- Environment Engineering and Research	WG	Working Group
ICBA	International Centre for Biosaline Agriculture	WG-CLIMATE	Working Group on Global Climate Change and Agricultural Water Management
ICID	International Commission on Irrigation and Drainage	WG-CROP	Working Group on Water and Crops
ICARDA	International Centre for Agricultural Research in the Dry Areas	WG-DRG	Working Group on Drainage
ICOLD	International Commission on Large Dams	WG-DROUGHT	Working Group on Water Management in Water Stressed Regions
ICRISAT	International Crops Research Institute for the Semi-arid Tropics	WG-ENV	Working Group on Environment
IDE	International Development Enterprises	WG-IAIDM	Working Group on Institutional Aspects of Irrigation and Drainage System Management
IEC	International Executive Council	WG-IDM	Working Group on Irrigation Development and Management
IFAD	International Fund for Agricultural Development	WG-IMT	Working Group on Irrigation Management Transfer
IFPRI	International Food Policy Research Institute	WG-MDG	Working Group on Millennium Development Goals
IHA	International Hydropower Association	WG-M&R	Working Group on Modernization and Revitalisation of Irrigation Systems
INZ	Irrigation New Zealand	WG-MIS	Working Group on Management of Irrigation Systems
IRD	Journal Irrigation and Drainage	WG-ON-FARM	Working Group on On-Farm Irrigation Systems
IWMI	International Water Management Institute	WG-PIM	Working Group on Participatory Irrigation Management
IWA	International Water Association	WG-POVERTY	Working Group on Role of Irrigation in Poverty Alleviation and Livelihoods
IWRA	International Water Resources Association	WG-PQW	Working Group on Use of Poor Quality Water for Irrigation
LEPA	Low Energy Precision Application	WG-RRM	Working Group on Remodelling, Rehabilitation and Modernization
NC	National Committee	WG-SDTA	Working Group on Sustainable Development of Tidal Areas
NZ	New Zealand	WG-WATS	Working Group on Water Saving for Agriculture
OECD	Organisation for Economic Cooperation and Development	WG-WIM	Working Group on Water Management in Irrigation
PCTA	Permanent Committee for Technical Activities	WG-WSI	Working Group on Water Saving in Irrigation
PDM	Participatory Drainage Management	WMO	World Meteorological Organisation
PH	President Honoraire	WUA	Water Users Association
PIM	Participatory Irrigation Management	WWC	World Water Council
PO	Permanent Observer	WWF	World Water Forum
SG-ICID	Secretary-General of the International Commission on Irrigation and Drainage		
SRI	System of Rice Intensification		
TCC	Total Channel Control System		
TF	Task Force		
TF-BIO-ENERGY	Task Force on Water for Bio-Energy and Food		
TF-FIN	Task Force on Financing Water for		

PROGRAM TIME LINES AND ACTIVITIES OF INSTITUTIONAL AND ORGANIZATIONAL WORKING GROUP – WG: IOA

No.	PROGRAM	IMPLEMENTATION SCHEDULE (6 YEARS)							REMARKS	
		2015	2016	2017	2018	2019	2020	2021		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	
I.	ESTABLISHMENT PHASE OF WG-IOA • INAUGURAL MEETING: - Setting up Relevance WG members; - Institutional set up; - Setting up program;		 INAUGURAL MEETING AT MONTPELLIER 							Scope of Works - Investigate; - Analyze,, - Formulate Recommendation; - Disseminate - Legal frame work WUA - Institutional organizational on O&M - Approaches land and water problem; - Roles and responsibilities - Sustainable WUA PIM; - Irrigation management Transfer, - Approaches; I/Drainage transfer IDMT - Transfer of ownership - W-Allocation, accounting & auditing; - Condition for successful PI/DM; PPP: (Public Private Partnership) - Charging Mechanism for Cost Recovery; - Possibility of success of PPP - Method and mechanism for determination of Cost Recovery; TARGET GROUP: Manager of Irrigation scheme; OUTPUTS: Books; Manual; Guidelines and publication;
II.	LITERATURE AND CASE STUDY REVIEW: • Exchange of information, Books and case studies on Institutional and organizational; • Report, manuals, guidelines; • Collect and review up experiences;									
III.	STUDY INVESTIGATE ANALYSES FOR WORKSHOP, SEMINAR, SYMPOSIUM AND PUBLICATION • SEMINAR: • SYMPOSIUM: • WORKSHOP:									
IV.	PREPARATION OF PUBLICATION (WG-IOA)						 PUBLICATION			

Annex 1 [66th IEC Agenda, Appendix XVI, page 151]