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International Commission on Irrigation and Drainage (ICID)

African Regional Working Group (AFRWG)

Capacity Building Strategy 2015

**A proposal presented at the
African Regional Working Group Meeting on
in Kwanju, Korea 2014**

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TABLE OF CONTENTS

	Page
1. Background	4
2. African Regional Working Group	4
2.1 Introduction	4
2.2 Mandate	5
2.3 Membership	5
3. Intensification of Irrigation and Drainage Research to Achieve Global Food Security	5
4. Capacity Building Strategy for Africa	6
4.1 Introduction	6
4.2 Objectives	7
4.3 Target Groups	7
4.4 Regional Nodes	7
5. Part 1 focuses on Eastern and Southern Africa	7
5.1 Regional Focus Areas	7
5.1.1 Focus Areas for Eastern and Southern Africa	7
5.1.2 Homestead Garden Water Use	8
5.1.3 Rainfed Crop Production	9
5.1.4 Irrigated Crop Production	9
5.1.5 Rural Freshwater Aquaculture	10
6. Overview	12
6.1 Part 2 focuses on Western and Central Africa	12
6.1.1 General countries background	12
6.1.2 Countries potential of natural resources	13
6.1.3 Objectives of AWM in ARID	13
6.1.4 Constraints of AWM	14
6.1.5 Strengths of AWM	15
6.1.6 Means of AWM	16

Capacity Building Strategy 2015

6.1.7	Strategies of international organizations	17
6.1.8	Logical framework for ARID	19
6.1.9	ARID action plan	22
6.1.10	Work plan framework for ARID	23
7.	Conclusion	25
8.	References	25

List of table

Table 1:	Work plan framework for Eastern and Southern Africa	11
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1. Background

The International Commission on Irrigation and Drainage (ICID) was established on 24 June, 1950 as a Scientific, Technical and Voluntary Not-for-profit Non-Governmental International Organization (NGO) with headquarters in New Delhi, India. The Commission is dedicated to enhancing the worldwide supply of food and fibre for all people by improving water and land management and the productivity of irrigated and drained lands through appropriate management of water, environment and application of irrigation, drainage and flood management techniques. The activities of the Commission are pursued in accordance with the ICID Constitution and By-Laws (www.icid.org).

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, flood management and river training applications, including research and development and capacity building for achieving sustainable irrigated agriculture. Starting with 11 founding member countries in 1950, 104 countries have so far joined ICID to pool their efforts.

It is the aim of the Commission that National Committees should be broad-based and multidisciplinary and collaborate with other organizations having related aims in their countries. The National Committees invite and host the Commission's annual International Executive Committee (IEC) meetings, World Congresses held triennially and Regional Conferences held by rotation in the various regions. They also organize activities in their countries to implement various action programs developed, promoted or sponsored by the Commission.

The International Commission on Irrigation and Drainage (ICID) previously dealt with African irrigation under an Afro-Asian Working Group. However, recognition of the significant differences in the nature of African and Asian irrigation led to the establishment of a more focused African Working Group.

2. African Regional Working Group

2.1 Introduction

Africa's nations share the same natural resources and face similar social and economic challenges. Among the most important priorities in many countries in Africa is the urgent need to reduce the scourge of poverty, food insecurity and malnutrition among a significant proportion of the continent's population. These problems are arguably more prevalent on the African continent than any other continent of the world. In 1990, the Brazilian Rio de Janeiro ICID Congress witnessed the initial cornerstone of an Africa Focus Group when it was first founded during the 41st IEC meeting. Such a working group was generally recognized as a necessity to promote strong communications and networking among African countries in order to enhance mutual coordination and cooperation.

Nine years later, in the 50th IEC meeting held in Granada, Spain, a formal declaration was announced on the African Group as a regional working group with refined methodology and clearly formulated work plan. This work body earned the designation of the African Regional Working Group (AFRWG).

2.2 Mandate

The mandate of the AFRWG is:

- To promote links and networking among the African countries as well as regional and international institutions for enhancing cooperation and coordination, and
- To support integrated river basin development, training and research issues and information systems for African needs.

2.3 Membership

The AFRWG represents the national committees on irrigation and drainage of Africa in ICID. The two regional bodies that form part of the AFRWG are the Southern African Regional Association (SARIA) and Association Régionale pour l'Irrigation et le Drainage en Afrique de l'Ouest et du Centre (ARID) [or Regional Association on Irrigation and Drainage for West and Central Africa (RAID)].

On 24-26 October 2000, the Southern African Regional Irrigation Association (SARIA) was launched during the ICID's 51st International Executive Committee (IEC) meeting and the 6th International Micro-Irrigation Congress (Micro 2000) held in Cape Town, South Africa. SARIA was established as a Developmental, Professional, Educational and Voluntary (not-for-profit) Regional Organization, dedicated to enhance SADC regional food security by improving water and land management. On 28-29 November 2000, the SARIA interim steering committee first met in Pretoria, South Africa. SARIA comprises 13 of the 15 Southern African Development Community (SADC) countries.

In July 1996 a constitutive meeting was held in Ouagadougou when the Association Régionale pour l'Irrigation et le Drainage (ARID) was established comprising seven participating countries (Burkina Faso, Cameroon, Chad, Côte d'Ivoire, Guinea, Niger and Senegal). The association has since expanded to include more countries in western and central Africa. The objectives of the network are to: 1) Promote the sustainable development of irrigation and drainage in West and Central Africa; 2) Promote the establishment of national Committees of the International Commission for Irrigation and Drainage (ICID) in the Region; and 3) Develop South-South and North-South exchanges of technical knowledge and information.

3. Intensification of Irrigation and Drainage Research to Achieve Global Food Security: Research Programme Proposed at the 61st IEC Meeting of ICID held 10-16 October 2010 in Yogyakarta, Indonesia

In order to meet the growing demand for food, and to reduce the impact of food insecurity in various countries, it is essential to intensify research, development and technology transfer efforts in ICID member countries. It is therefore proposed that ICID, through its National Committees and executive structure, lead a global effort to intensify research, development, technology transfer, capacity building and knowledge dissemination related to water management for food production. An ICID governed and managed programme is proposed.

Using the National Committees, a series of regional nodes are proposed to cover the following regions: West Africa, East and Sub-Saharan Africa, Central Asia, Southeast Asia, South and Central America, the Middle East. The National Committees in conjunction with ICID work bodies will develop research themes for each regional node. SARIA has

developed the workplan, see page 11& 12. Possible research topics, depending on region, may include the following topics: Drought and water scarcity; Groundwater protection and management; Low quality waters and wastewater reuse for irrigation; Water harvesting and storage; Drainage, and water logging and salinity control; On-farm water management and water use efficiency; Energy and sedimentation control.

The new programme will be a virtual network of irrigation professionals and institutions that addresses the research and technology transfer needs of ICID National Committees in regional and thematic contexts where commonalities of irrigation and drainage issues occur. The focus of the new programme will be more along regional lines where National Committees within a region have common needs and interests. Regions such as West Africa, East and Sub-Saharan Africa, Central Asia, Southeast Asia, South and Central America, the Middle East will be able to collaborate on the research and development of emerging issues. These issues reflect the rapidly changing and increasingly complex situation of agricultural water management, and require the earlier focus to be broadened.

The programme has two cross-cutting themes, since these are applicable to the entire programme and all regional nodes. These are: (1) *Capacity building*: Building capacity to address issues of water for food security is critical. SARIA had a workshop on this issue in 2013 in Zimbabwe, Victoria falls. Professional organizations and networks can play a significant role in providing technical assistance projects, short field courses, ecourses, training and workshops to accompany implementation of new technologies. (2) *Dissemination of knowledge*: The gap in uptake of technologies in developing countries will be addressed by twinning developed and developing NCs to network and share knowledge and technologies appropriate to local and small scales. Websites and ebulletins, text messaging, social networks, and podcasting are useful mechanisms to deliver knowledge to the field. ICID envisages that the programme agenda is client driven and reflective of the research and development, technical transfer and networking needs and goals of its National Committees.

An ICID IEC appointed Board of Governors will guide the functioning of the programme. It is proposed to invite observers from the FAO, World Bank, and IFAD to sit on the Board of Governors. It is envisaged that the Board would meet at least annually to develop work programmes, solicit donor funding, and guide the technical activities of the Programme. The Board of Governors will be chaired by the ICID President. The IEC will receive annual reports and financial statements of the Programme, and approve the annual Operational and financial plans on the advice of the Board of Governors.

In the ICID News Update of April 2012, the Secretary General of ICID stated that, *'in Adelaide (the 63rd International Executive Council (IEC) Meeting and 7th Asian Regional Conference, 24-29 June 2012), the IEC will consider appointment of the Board of Governors to guide the programme, develop the detailed work programme for the next five years and lay down the course of action for the future. The National Committees have been invited to contribute to this programme and offer to host various nodes'*.

4. Capacity Building Strategy for Africa

4.1 Introduction

In his letter in the ICID News Update of February 2012 entitled 'ICID to strengthen its efforts to support those who missed the first Green Revolution', the Secretary General of ICID stated that:

'Africa is the only continent which does not grow enough food to feed itself. According to one UNEP estimate food production will reduce to the extent of 25% by the year 2050 due to land degradation and water scarcity accentuated by climate change. At the same time FAO forecasts that global food production needs to increase by 70% by 2050.... Even if there might not be a threat to global food security, the affordability factor can threaten food security in many parts of Africa unless local production is increased and sustained.... Africa holds around 60 per cent of the world's uncultivated arable land and could grow enough food, not only to meet its own needs, but to export surpluses. As Kofi Annan, Ex-UN Secretary General and the current Chair of the Alliance for Green Revolution in Africa (<http://www.agra-alliance.org>) said at COP 17, "Africa has enormous potential if the right agricultural policies are adopted and funded"'. The Secretary General further mentioned that, 'the national irrigation and water management authorities in Africa have an important role to play. Our National Committees in Africa have the opportunity to take the required lead and bring together various players involved in providing water for use in agriculture'.

4.2 Objectives

A series of capacity building and training workshops will be organised and conducted over the next 3 years under the theme of "Water for food". The aim of the workshops is to support/capacitate different participants to strengthen/enhance capabilities to systematically increase household food security (see SARIA workplan on page 11& 12).

4.3 Target Groups

The target groups are mainly: (a) officials in government departments ;(b) lecturers/trainers, advisors and extension officers; (c) and farmers.

4.4 Regional Nodes

The capacity building and training workshops for Africa will be conducted in three regions of the continent: In Western and Central Africa (mainly French speaking countries); Eastern and Southern Africa (mainly English speaking countries) and in North Africa (mainly Arabic speaking countries). The proposed ICID regional node for Eastern and Southern Africa is **South Africa**, that for Western and Central Africa is **Mali** and that for North Africa is **Egypt**. All three countries have very active ICID National Committees.

5. Part 1. Focuses on Eastern and Southern Africa focus areas

5.1 Regional Focus Areas

5.1.1 Focus Areas for Eastern and Southern Africa

Since 2012 the chairperson of the African Regional Working Group presented the strategy with aims and the plan of action for Eastern and Southern Africa. Workshops will be organized and presented over the next three years under the theme of "Improving water use productivity for increased food production". The aim is to support/capacitate different participants to strengthen/enhance capabilities to systematically increase household food security. Target groups are mainly: (a) officials in government departments and management of private companies (b) lecturers/trainers, advisors and extension officers; (c) farmers, mainly women, who are responsible for crop cultivation. The priority focus

areas are: (i) homestead food garden water use; (ii) rainfed crop water use; (iii) irrigation crop water use; and (iv) aquaculture, all of which are sources of income for livelihoods in agriculture.

5.1.2 Homestead Food Garden Water Use

Often village agricultural extension and advisory assistance has been targeted at group projects, rather than at individual or household initiatives. This approach has been adopted to reach more people simultaneously, but has meant that assistance was not targeted at households who wanted to develop independently as a household rather than form part of a group project (such as communal gardens, chicken projects, irrigation schemes and land reform projects).

Several shifts in thinking have since taken place, including the following: An increased realization of the reality of malnutrition and food insecurity in rural households in Africa, exacerbated by the rapid food and fuel price increases globally in 2007/08; better understanding of the challenges inherent in group-based projects – especially the typical conflicts around the handling of group finances; an appreciation of the potential for food production in the homestead yards and the need for water to enable production at the homesteads; and an awareness of the potential of a range of water access options, or ‘multiple-use-systems (MUS)’, over and above the conventional bulk supply and piped distribution systems – and especially rainwater harvesting in its various forms. A new focus on the household has emerged that aims to encourage people to produce food (and increase their income) in their own homesteads and improve their food security situation.

The comprehensive resource material on homestead garden water use was developed in South Africa following a four year project that aimed to improve food security through homestead gardening. This was done by developing and evaluating the appropriateness and acceptability of training material for agricultural water use, training the trainers and training of household members in selected areas. Particular attention was given to the development of the 800 page publication “Agricultural Water Use in Homestead Gardening Systems: Resource Material for Facilitators and Food Gardeners”. The publication has seven chapters and a set of handouts that deal with production potential, environmental degradation, water supply and management, poverty alleviation, human ecology, participatory rural appraisal and applicable adult educational methodology, and rural social structures, in addition to the specific techniques and infrastructure required to harvest and exploit rain and manage soils and produce crops that will impact on the essential dietary needs of people living with limited means and opportunities. The process of ‘participatory development’ of the material entailed two main aspects; drawing widely on the material and know-how of practitioners in the field of household food security, homestead farming, farmer training, rainwater harvesting and homestead water management, thereby achieving a collation on existing expertise and material; and field testing and refinement of the collated material with food secure and insecure households in rural villages. The learning package also includes a collection of illustrated handouts (Homestead Food Gardeners’ Resource Packs) which the facilitator can copy and hand out to gardening households during the learning processes.

The resource material succeeded in drawing widely from local and international materials and experience. Its usefulness in practice has been acknowledged by facilitators who were not part of its development. A significant range of technologies were selected and field-tested, based on their affordability for cash-strapped households and environmental

benefits. The resource material also looks at psychological aspects of poor households to motivate them to achieve food security. The material is particularly useful to countries in Africa as it focuses on low external input sustainable agriculture.

5.1.3 Rainfed Crop Production

The comprehensive learning package for water harvesting and conservation (WH&C) was developed in South Africa within a 'training of trainers' framework. The various parts of the learning package are targeted at three user groups who will use the different parts of the package in different ways: 1) facilitators at training institutions, 2) learners at training institutions (who will later work with gardeners and farmers) 3) resource-poor gardeners and farmers.

The materials were developed in close consultation with key stakeholders to ensure relevance of materials to likely organisations of learning, and to end-user needs. Throughout a consultation process, it was established that there was consensus on the need and usefulness of the water harvesting and conservation learning materials package. The two WH&C facilitation and technical courses were written as an integrated package and are ideally run as a single course, which fits in well with the short course structure.

The draft materials were successfully piloted in a formal learning environment and were reviewed by agricultural colleges. The piloting of the materials was conducted over six months at a Centre for Adult Education. The piloting process was designed to maximise feedback by setting up a review process with feedback from: 14 learners/ students; the facilitator/ trainer; and external examination of the learning programme. The piloting involved theoretical work, fieldwork and practicals. Detailed weekly assessments from the facilitator provided a substantiated basis on which to finalise the guides. The materials were found to be interesting, relevant and useful and there is significant interest.

The package comprises three main parts: 1) A Technical Module covering water, soils and WH&C methods 2) A Facilitation Module covering facilitation techniques within a Participatory Innovation Development approach 3) A set of Farmer's Handouts with illustrated steps on how to implement the methods. Each of the technical and facilitation modules comprised two volumes. There is a detailed, annotated and illustrated manual for learners, and a Facilitation and Assessment Guide for course facilitators. The set of farmers handouts are designed for people with low literacy and are illustrated 'how-to' instructions for the water harvesting and conservation methods. The comprehensive learning package on water harvesting and conservation was developed in South Africa and is relevant for rainfed crop production in African countries.

5.1.4 Irrigated Crop Production

The guidelines for the revitalization of smallholder irrigation schemes document best South African and international practice and are intended for government decision-makers, technical and extension staff, consultants, development practitioners and scheme leadership.

The 'Rough Guide' (Volume 1) is a quick reference guide that covers policy implications and revitalization objectives, as well as recommended principles, approaches and methodologies for scheme diagnosis, participative planning, feasibility evaluation and formulation of farmer support programmes.

'Concepts and Cases' (Volume 2) contains the theoretical rationale for the guidelines. Four major revitalization initiatives are compared with international initiatives and success factors are identified. Eight farmer support approaches are documented, providing lessons of best practice, as well as alternatives for programming design, and new approaches are presented. These are a tailored consultative planning approach, a land-leasing strategy for irrigation schemes and the formulation of four basic farming styles to guide planning.

The guidelines present alternative pathways to constructive change on schemes, with full appreciation of the complexity and diversity on and between schemes. They are based on meaningful involvement and information exchange between farmers, ploholders and technical experts and thus ensure co-constructed plans for land tenure, agricultural, technical, institutional, marketing and financial aspects. Best practice shows that major investment in human capital development is critical and land-market stimulation can, in many cases, unlock potential. Interventions need to address all aspects of irrigation scheme operation and farm system planning, and avoid single-sector interventions such as infrastructure up-grading, mechanization or institutional development alone. The guidelines present ways forward to achieve greater success.

5.1.5 Rural Freshwater Aquaculture

Existing training manuals on rural freshwater aquaculture developed in Asia and elsewhere were not completely relevant to certain African conditions and environmental diversity. Hence, the need to develop a training manual for training extension officers suitable for South Africa and other countries in Africa was identified.

The manual had to fulfill the following parameters:

1. Easy to read, though technically strong.
2. Relevant to training of extension officers, used as a reference for the extension officers and also accessible for literate farmers.
3. Relevant to rural development.
4. Include appropriate technology for rural farmers to use.

The development of a multi-purpose training manual is an essential part of the process of training the extension officers. The manual should be used for training and the participants should be able to use it after training as a reference document. The training manual on rural freshwater aquaculture comprehensively covers basic aspects of freshwater aquaculture including fish biology, aquaculture species, types of aquaculture systems, water quality, pond management, transporting live fish, size sorting, feeds and feeding, harvesting and preserving fish, health and disease management, fish breeding, cage culture, polyculture and integrated aquaculture, and business and financial planning. The project team who developed the manual adopted a systematic approach to develop and "test" the manual, to ensure that it was technically correct and relevant.

Capacity Building Strategy 2015

Table 1. Work plan framework for SARIA

SARIA activities in 2013	SARIA activities in 2014	SARIA activities in 2015	SARIA activities in 2016	SARIA activities in 2017	Start implementing SARIA new focus areas in 2018
Topic: Homestead Food Garden Water Use. SARIA workshop was held in Victoria falls in Zimbabwe on the above topic	Topic: Extension for Management of Agricultural Water". SARIA workshop was held in Pretoria, South Africa for a period of about three days.	Topic: Rainwater harvesting and conservation on croplands	Topic: Rural Freshwater Aquaculture	SARIA Symposium / Forum / Workshop to review all the thematic areas identified by member states since 2013. This event is open to the public and other relevant stakeholders. During this event member states will also have opportunities to identify new thematic areas based on the needs and priorities from member states. SARIA is planning to have a training workshop and Steering Committee Meeting in Malawi in 2016. The theme for the 2016 SARIA workshop will be on "Rural Freshwater Aquaculture".	New thematic areas implemented
Products	Products	Products			
Guidelines and technical reports have been shared with SARIA members	Guidelines and technical reports have been shared with SARIA members	Guidelines and technical reports have been shared with SARIA members			
Other activities					
Local irrigation schemes have been visited in Zimbabwe	Local commercial farmers were visited in Roodepoort as part of information sharing and knowledge exchange	Local commercial farmers were visited in Loskop Irrigation Scheme in Limpopo Province as part of information sharing and knowledge exchange			

Our target audiences are: extension officers, policy makers, irrigation managers, scientists, academics,

6. Overview

6.1 Part 2 focuses on Western and Central Africa

In order to make its modest contribution to food security in West and Central Africa, new ARID legislation has been adopted in May 2008. The implementation of these texts helped to set up the different work bodies like the COS (Monitoring and Orientation Committee) and the Executive Board. After installation of the Executive Board, it became necessary to consider very quickly the conclusions of the evaluation report and the existing ARID action plan. The new board, since its establishment started to work to identify the major activities, which cover the period of his mandate 2014 - 2019. This section summarizes these activities, defines responsibilities, and specifies the deadline and the means required to implement the plan.

6.1.1 General countries background

Country	Land tenure	% of population living below the poverty threshold	Agricultural share to the BNP (in %)	National irrigation strategy document	% of population living in rural areas
Burkina Faso	Principle of state ownership; But also existence of customary law	46	34	Adopted in 2004	85
Mali	Principle of state ownership; But also existence of customary law	64	45	Adopted in 1999 and revision in preparation	80
Niger	Principle of state ownership; But also existence of customary law	63	40	In process of adoption. Validated in June 2005 during a national workshop	83
Senegal	Principle of state ownership; But also existence of customary law	54	18	Validated in November 1999	NA
Ivory Coast	Traditional ownership and customary law recognized	NA	NA	Elaborated in 2004	NA
Togo	NA	NA	NA	NA	NA
Mauritania	NA	NA	NA	NA	NA
Chad	NA	54	NA	NA	NA

NA : No Available

6.1.2 Countries potential of natural resources

Pays	Superficies (ha)	Argo-climatic zones and % of national territory			Irrigation potential (ha)	Irrigated land (ha)	Tradition in irrigated crops
		Sudanian (P > 600 mm)	Sahelian (300 <P< 600 mm)	Saharan P < 300 mm			
Burkina Faso	274 200	75	25	0	500 000	32 000	No
Mali	1 240 000	23	26	51	2 200 000	420 000	Yes
Niger	1 267 000	11	23	66	270 000	100 000	Yes
Senegal	192 700	25	69	6			
Ivory Coast							
Togo							
Mauritania							Yes in oasis
Chad							

Over these eight country, the developed lands account for 36% of the irrigable potential. For Burkina Faso, Mali, Niger and Senegal, the sudano- sahelian area accounts for 22% of the territory.

6.1.3 Objectives of AWM in ARID

The general objectives of AWM in ARID area, are to ensure food security, poverty alleviation, and sustainable management of natural resources.

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The specific objectives are presented in the table below:

Country	Pro-motion of agro-industry	Exploitation of existing schemes	In-crease of revenues	Promotion of small scale irrigation	Increase of agricultural performance	Supply of local and regional markets	Crop diversification	Implication of women
Burkina Faso	X	X	X			X		
Mali	X	X	X		X	XX	X	X
Niger		X	X	X	X	X	X	X
Senegal		X	X	X	X		X	X
Ivory Coast	X	X	X			X	X	X
Togo*								
Mauritania*								
Chad*								

* Absence of validated national strategy

6.1.4 Constraints of AWM

The constraints of AWM are institutional, legal, economic, financial, technical, management, exploitation and environmental. The most important specific constraints are:

- Difficulties in mobilizing capital for investments
- Design of schemes
- Land tenure
- Weak technical capacity of actors
- Organizational weaknesses of actors
- Conservation, transformation and marketing of products
- Insufficient technical and counseling support
- Water management
- Input supply

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Detail of each constraint is describing bellow.

Country	Difficulties in mobilizing capital for investments	Design of schemes	Land tenure	Weak technical capacity of actors	Organizational weaknesses of actors	Conservation, transformation and marketing of products	Insufficient technical and counseling support	Water management	Input supply
Burkina Faso Mali Niger Senegal Ivory Coast Togo Mauritania Chad	Insufficient proper resources; Weakness in donor support; Difficult access to credit	Absence of referential technical framework Weak expertise level. Lack of innovation High investment costs for irrigation construction Weak participation of beneficiaries.	Inapt land tenure legislation (Jurisdictional conflicts between official and customary rights) No land tenure market	Weak technical knowledge of actors Analphabetism	Weak training level of actors Problem of leadership	Lack of organization along the value chain; Access to production zones; Insufficient knowledge of markets; High energy costs; absence of transformation industries;	Weak financial systems (structures) Specific agricultural advisory services are inapte. Lack of competitive capacity of suppliers Lack of competent private advisory services	Weak scheme operation capacity Insufficient maintenance of irrigation infrastructure Weak governance and definition of roles and responsibilities	Lack of professionalism of suppliers. Lack of organization along the value chain. Inferior or highly variable quality of products

6.1.5 Strengths of AWM

Country	Land and water potential – climate	Local and regional markets	Favorable politics	Human resources and social demand	Traditional irrigation knowledge and expertise	Presence of national policies for irrigation development	Presence of national competences	Communication network in process of development	Sea harbors
Burkina Faso	17 billion de m3 renewable	X	X	X		X	X	X	
Mali	80 billion de m3 renewable	X	X	X	X	X	X	X	
Niger	30 billion de m3 renewable	X	X	X	X	X	X	X	
Senegal		X	X	X	X	X * strategy in the process of adoption	X	X	X
Ivory Coast								X	X
Togo								X	X
Mauritania								X	

Capacity Building Strategy 2015

6.1.6 Means of AWM

Country	Promotion of agro industry	Exploitation of existing irrigation schemes	Increase of revenues	Promotion of small scale irrigation	Improvement of agricultural performance	Supply of local and regional markets	Crop diversification	Women participation
Burkina Faso Mali Niger Senegal Ivory Coast Togo Mauritania Chad	Access to energy Organization of value chain Technology transfer Legal and fiscal framework	Implementation of adequate management structures Rehabilitation and adaptation of irrigation infrastructure Transparent management (passive) Strengthening and intensification of agricultural credit.	Increase of productivity Securing the markets	Promotion of small equipment for irrigation Facilitate access to credit	Increase of productivity Integration of irrigated crops in small holder production systems Capacity building of key actors.	Improvement of communication network. Strengthening of the market information systems Adequation between demand and offer (production)	Introduction of new varieties and species. Access to apt inputs Securing the markets Modernization of irrigation schemes	Facilitate access to land and credit Development of tailored training Women participation in the whole project cycle and project management

Capacity Building Strategy 2015

6.1.7 Strategies of international organizations

Organization	Strategic axes	Synthesis of partners strategies	Synthesis of country strategies	ARID
World Bank	<ul style="list-style-type: none"> • Development of shallow sites ('Bas-Fonds') • Promotion of small-scale irrigation and accessible technologies • Reforms, rehabilitation and modernization of large-scale irrigation • Promotion of private - public partnership • Increase of crop yield • Equity in access for the poor to land and water. • Promotion multidisciplinary approaches. 	<ul style="list-style-type: none"> • Development of shallow sites ('Bas-Fonds') • Promotion of small-scale irrigation and accessible technologies • Reforms, rehabilitation and modernization of large-scale irrigation • Promotion of private - public partnership • Increase of crop yield • Equity in access for the poor to land and water. • Promotion multidisciplinary approaches. • Exploitation of accessible water resources • Capitalization of national and regional best practices in small-scale irrigation. • Stakeholder capacity building • Capitalization of irrigation research results (techniques and technologies) • Implementation of regional training program. • Support of specific studies and harmonization of policies and strategies in small-scale irrigation. • Harmonization of production norms • Promotion of market information systems. • Integration of irrigation in the development of the value chain • Secure access to production factors (land water, fertilizers, credit, equipment, etc.) 	<ul style="list-style-type: none"> • Promotion of agro industry • Exploitation of existing irrigation schemes; • Increase of revenues; • Promotion of small scale irrigation • Increase of agricultural performance • Access to local and regional markets. • Crop diversification • Participation of women. 	<p>Capitalization and dissemination of information on the techniques and technologies of the irrigation sector through the website: www.arid-afrique.org</p> <ul style="list-style-type: none"> • Workshops • Training courses • Irrigation exhibitions • Reviews and publications • Audio and video conferences • Links to other relevant web sites (FAO, ICID, etc.) • Support to the definition of small-scale irrigation typology at regional level • Setting up of a data bases on: Irrigation professionals and equipment • Data-processing tools • Irrigation schemes • Certification of professionals and equipment • A framework for technical references and specifications • A framework of competences of professionals • Validation of the certification structures • Test and homologation center for irrigation equipment • Consulting for management of regional projects training • Support and counseling • Capacity building • Development of new tools and concepts • Volumetric water fee systems • Management transfer to users • Participatory diagnosis • Support to the realization of specific studies and the harmonization of policies and strategies • Creation of a regional observatory of the irrigation systems • Organization of the African irrigation and drainage exhibition • Reorganization of the ARID network

Capacity Building Strategy 2015

Organization	Strategic axes	Synthesis of partners strategies	Synthesis of country strategies	ARID
CILSS (40% of the population living daily food insecurity)	<ul style="list-style-type: none"> • Exploitation of accessible water resources • Dissemination of low cost equipment • Development of shallow sites • Capitalization of national and regional best practices in small-scale irrigation. • Stakeholder capacity building • Capitalization of irrigation research results (techniques and technologies) • Implementation of regional training program • Promotion of small-scale irrigation. • Support of specific studies and harmonization of policies and strategies in small-scale irrigation. 			

Organization	Strategic axes	Synthesis of partners strategies	Synthesis of country strategies	ARID
FIDA	<ul style="list-style-type: none"> • Strengthening of capacities of rural poor and their organizations • Increase productivity and efficient use of natural resources. • Increase of revenues of the rural population through capital and market access. • -Increase realliances capacity of the rural population 			
UEMOA	<ul style="list-style-type: none"> • Adequation of production systems • Harmonization of production norms • Promotion of market information systems. 			
FRANCE	<ul style="list-style-type: none"> • Integration of irrigation in the development of the value chain • Secure access to production factors (land water, fertilizers, credit, equipment, etc.) • Improve the competitiveness of production system that are competing on the international market. 			

Capacity Building Strategy 2015

6.1.8 Logical framework for ARID

Intervention axes	Objectives	Results	Activities	Stake-holders	Indicators	Important hypotheses	Deadlines
Information on technics and technologies	Capitalize and dissemination among stakeholders useful information	Useful information is available to stakeholders	Improve the ARID web site	ARID NC-ICID 2IE	Number of website visitors	Funds available for sustainable continuation	Continuous activity (2014-2019)
			Organize workshops and general assemblies	ARID NC-ICID Donors	Report and minutes of meetings	Funds available	
			Publish ARID newsletter	ARID NC-ICID	Number of publications during the year	Contributions of NC-ICID and ARID	Half years
			Institutionalize the irrigation exhibition (SAFID)	ARID NC-ICID ETATS Regional Institutions	Legislation operational for irrigation exhibitions Number of exhibitions	Country and donor contribution	June 2016
Small scale irrigation	Definition of small scale irrigation	Definition is adopted and utilized at regional level.	Regional workshop	ARID NC-ICID Countries PROJECTS / PROGRAMS Regional organizations	Report of workshop	Funds available	June 2016
Agro-economical aspects of farms	Taking into account the farm size	Farmers receive advise for decision making	Adapt and disseminate the tools	CIRAD IAMM ARID NC-ICID	Availability of tools	Funds available	June 2017
Database	Identify and inventory of professionals	The professional are networking	Validate and update existing information	ARID NC-ICID	Updated database is available	Contribution of NC-ICID	Continuous activity (2014-2019)
	Inventory of irrigation equipment	The irrigation equipment is registered	Collect information with suppliers	ARID NC-ICID Suppliers	Database of suppliers available	Involvement of suppliers	Continuous activity (2014-2019)
	Inventory of IT tools	Database on tools	Inventory and evaluation of existing tools	ARID NC-ICID 2IE	Online access	Contribution of stakeholders	Continuous activity (2014-2019)

Capacity Building Strategy 2015

Intervention axes	Objectives	Results	Activities	Stake-holders	Indicators	Important hypotheses	Deadlines
	Inventory of irrigation schemes	Information on irrigation schemes is available	Develop tools for data collection	ARID NC-ICID 2IE FAO	Online access	Contribution of NC-ICID	Continuous activity (2014-2019)
	Identify agro-climatic data sources	Easy access to agro-climatic data	Inventory of agro-climatic data sources	ARID NC-ICID CILSS FAO SCAC Ouaga	Online access	Contribution of CILSS and FAO	Continuous activity (2014-2019)
Certification of professionals and equipment	Implement quality procedures	Design, construction and operating of irrigation schemes are improved	Create a technical and referential repository for trades (professions)	ARID NC-ICID UEMOA 2IE AFEID	Certification report	Contribution of donors Contribution of countries	Continuous activity (2014-2019)
			Repository of skills				
			Authorization for certificate institute				
			Test center and homologation of equipment				
Contractor of regional projects and programs	Develop regional activities	Regional activities are realized	Prepare a new project IPIA 2 (Improvement of Performance of Irrigation in Africa) with multiple water use as central topic.	ARID NC-ICID MAE / Fr Donors	Number of projects financed	Partnerships	Continuous activity (2014-2019)
			Elaborate bids at international level. (for example : Water Facility of EU and AfDB)				
Innovation and technology transfer	Develop new tools and concepts	Improved water management	Promote volumetric water fee systems	ARID NC-ICID	Tools and concepts available	Funds available	Continuous activity (2014-2019)
			Management transfer to users				
			Participatory diagnosis				

Capacity Building Strategy 2015

Intervention axes	Objectives	Results	Activities	Stake-holders	Indicators	Important hypotheses	Deadlines
Policies and strategies	Stimulate countries to elaborate and implement irrigation strategies	Available country strategies and policies	To support country strategies and policies elaboration and reviews	ARID NC-ICID Countries	Number of countries supported by ARID	Funds available	Continuous activity (2014-2019)
Observatory of irrigation systems	Supply monitoring tools	Available data on scheme performance	Define performance indicators	ARID NC-ICID Countries	Observatory operational	Funds available	2015
			Define typologies of irrigation systems				2015
			Site selection				2016
			Establish a data collection and analysis system				2016
			Disseminate data				2018
African irrigation exhibition (SAFID)	Create a concertation and exchange framework at regional & international level.	International recognition of irrigation exhibition	Institutionalize the SAFID	ARID NC-ICID Countries Regional organizations	Legislation of the SAFID organization	Contribution of countries and donors	2016 & 2018
			Organize the SAFID every two years		Two exhibitions realized		
NC-ICID	Consolidate the ARID network	NC-ICID recognized as usefully public organizations by the governments	Advocacy towards countries	ARID NC-ICID	Legislation of the NC-ICID creation	Country and donor support	Immediately

Capacity Building Strategy 2015

6.1.9 ARID action plan

Specific objective	Tasks	Responsibilities	Deadline	Cost (US \$)	Identified partner
1.Elaborate communication plan	Elaborate ToR; Contract a consultant; Realize studies; Validate results through a regional workshop	ARID board	2015	20 000	Unidentified
2.Elaboration of long term strategy	Organization of exchange meetings / visits. Elaboration of strategy report	Working group (ARID chairman)	March - June 2015	5.000	ARID resources
3. Capacity building	Identification of topics, exchange visits, definition of norms and standards, identification of best practices, dissemination of techniques and technologies, training of staff	Board of ARID NC-ICID (Executive Director)	2015	30 000	ARID resources
4. Strengthening of net-work	Identification of new member countries; Installation of new country committees. Strengthening of existing national committees.	Board ARID NC-ICID (1er Vice chairman)	Continuous	50 000	ARID resources
5.Organizarion of African water management exhibitions	Identification of actors; elaboration of documents; identification of participants; elaboration of the budget; creation and animation of working groups	Board ARID	2016 & 2018	200 000	Various sponsors
6. Elaboration and implementation of agricultural water management projects	Identification and preparation of documents; mobilize financing; implementation.	Board ARID NC-ICID	2014-2019	30.000	ARID resources
7.Participation in international meetings and conferences on irrigation and drainage	CIID meetings; Water conferences	Board of ARID NC-ICID	2015 - 2019	40.000	Various sponsors
8. Financial support of ARID Board (permanent secretary)	Staff salaries; equipment & supplies	Board ARID	2015	25 000	ARID resources
9.Elaboration of financing strategy	Meeting with bilateral donors, identification of project with a major irrigation component, identification of synergies with other partners.	Board ARID	2015	10 000	ARID resources

Capacity Building Strategy 2015

Strategy of capital mobilization for mentioned ARID activities:

- Creating of partnership with international and sub-regional organizations
- Identify key interlocutors of organizations, having a decision-making power
- To formalize relevant contacts
- Identification of shared points of interest
- Design of partnerships with programs and actors
- Prepare and submit project proposals for investment
- Development of specific tools
- Organization of a round table
- Financial contributions of the members through regular annual fees / payments

6.1.10 Work plan framework: Capacity Building strategy for Africa (ARID)

Past activities since 2013	Current activities	Future activities	Duration of the activities (3 to 5 years)
<p>Capitalization and dissemination of information on techniques and technologies in irrigation and drainage:</p> <ul style="list-style-type: none"> • Website ari-afrique.org • Database Implementation • Training workshops and international meetings • Study tours and exchange • African Irrigation Exhibition (SAFID) 			
<p>Support to the Permanent Secretariat: staff salaries, supplies and equipment</p>			
<p>Creation or revitalization of National Committee:</p> <ul style="list-style-type: none"> • Participation in irrigation techniques Days organized by Burkina Faso National committee • Support for establishment of Cameroon National Committee • Support for the revitalization National Committee of Senegal, Côte d'Ivoire, Togo, Benin, Ghana and Chad. 			
	<p>Strengthening the funding strategy:</p> <ul style="list-style-type: none"> • Driving projects with high components of irrigation and drainage in the countries, • Seek synergies with other partners 		

Capacity Building Strategy 2015

Past activities since 2013	Current activities	Future activities	Duration of the activities (3 to 5 years)
	<p>Exchanges of practices and experiences Dissemination of techniques and technologies, Training courses on technology, transfer and innovation</p> <ul style="list-style-type: none"> • Updating the website • Strengthening databases • participation in training workshops and international meetings • Organization of study tours and exchange 		
		<p>Certification of actors and equipment:</p> <ul style="list-style-type: none"> • Identify and inventory of professionals • Inventory of irrigation equipment • Inventory of IT tools • Identification of themes and definition of the standards • Create a technical and referential repository for trades (professions) • Repository of skills • Authorization for certificate institute • Test center and homologation of equipment • Approval of certification structures and of test and technical equipment center 	<p><u>2014-2019</u></p>

NB: Please note that no inputs received from the North African Region so far.

7. Conclusion

The capacity building strategy for Africa will enable African countries to be able to manage their natural resources in effective and efficient manners. It is well documented that Africa faces multi stress including food insecurity, malnutrition, poverty, extreme climatic events, climate variability and change. Africa needs to develop its own strategies that address challenges and constraints faced by people on the ground including the farming community. It has been highlighted in different international forums that Africa has low adaptive capacity, lack of human, financial and technological resources, therefore any strategies or plans that address Africa's needs and challenges would be welcome across the regions.

8. Reference

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