

Agenda for the Thirteenth Meeting of the  
**WORKING GROUP ON ON-FARM IRRIGATION SYSTEMS (WG-ON-FARM)**  
 Yogyakarta, Indonesia  
 13 October 2010 : 09.00-12.30 hours  
*Strategy Theme: On-Farm*

**Year of Establishment: 1998**

**Completion of the Mandate: 2014**

**Mandate:**

- To promote on-farm irrigation as part of integrated water resources management, and
- To promote sustainable efficient approaches for on-farm irrigation.

**Members:** (1) VPH Felix B. Reinders, Chairman, 2004 (South Africa, 1998); (2) VP Prof. Peter Kovalenko, Vice Chairman, 2005 (Ukraine, 2001); (3) Dr. A.K. Randev, Secretary, 2009 (India 2005); (4) VPH Prof. F. Ligetvari (Hungary, 1998); (5) Dr. H. Sourell (Germany, 1999); (6) Dr. Kim Sun-Joo (Korea, 1999); (7) Mr. Yeh Shu-Shr (Chinese Taipei, 1999); (8) Mr. P. Ruelle (France, 1999); (9) Mr. J. Dunn (UK, 2002); (10) Mr. Yan Guanyu (China, 2002); (11) VPH Dr. J.A. Ortiz (Spain, 2003); (12) Mr. Graziano Ghinassi (Italy, 2004); (13) Mr. Hassan Shantia (Iran, 2006); (14) Mr. Mohan Reddy Junna (USA, 2007); (15) Dr. Abraham Mehari Haile (The Netherlands, 2008); (16) Dr. Makoto Yokozawa (Japan, 2009); (17) Prof. Dr. Rai Niaz Ahmed (Pakistan, 2009); (18) Mrs. Mira Edelbeher (Slovenia, 2009); and (19) Secretary General, ICID.

**Permanent Observers:** (i) Mr. Bruno Molle (ISO) and (ii) FAO Representative.

**Website:** <<http://www.wg-on-farm.icidonline.org>>

**Item 1 : Confirmation of the minutes of the 12<sup>th</sup> meeting of the Working Group held at New Delhi**

The minutes of the 12<sup>th</sup> meeting of the group held at New Delhi in December 2009 will be confirmed.

**Item 2 : Review of membership of the Working Group**

The Canadian National Committee (CANCID) has nominated François Chrétien for the membership of the Working Group. CV of the nominee will be tabled at the meeting for consideration.

Attendance of members at the meetings held in 2008 and 2009 will be tabled at the meeting.

**A. CONTINUING ITEMS**

**Item 3 : To review the progress in preparation of documents**

**3.1 Paper on “Improvement of the On-Farm Irrigation Systems Using Simple Water Control, Measuring and Application Devices”**

At its Kuala Lumpur meeting held in 2006, the Group had proposed to prepare a paper on “Improvement of the On-Farm Irrigation Systems using Simple Water Control, Measuring and Application Devices”. There has been no action on this item since then. As this topic is of interest to most developing countries, it would be useful if some member(s) could volunteer to prepare a draft paper.

The WG will deliberate and decide further course of action.

### **3.2 Paper on “Micro irrigation for Smallholders and Greenhouses”**

At the New Delhi meeting in December 2009, VPH Felix Reinders volunteered to review the final version of the paper “Micro irrigation for smallholders and greenhouses” prepared by Prof. Y. Nakano (Japan) before being published by ICID.

The Chairman will provide his review comments so as to finalize the paper. The WG may also suggest the ways and means to publish the paper by ICID.

#### **Item 4 : Liaison with the ISO/TC23/SC18**

The 28th meeting of ISO/TC23/SC18 was held from 26-31 October 2009 in Mexico. The 29<sup>th</sup> meeting of the TC23/SC18 will be held in Adelaide, Australia on 18-23 October, 2010 succeeding the 61<sup>st</sup> IEC and 6<sup>th</sup> ARC meeting from 10-16 October 2010 at Yogyakarta. Chairman Reinders has requested ANCID to nominate a professional to participate in the meeting. This opportunity can be used to discuss issues in preparation of the joint ISO-ICID publication “Irrigation Equipment Standards”, which has been pending for quite some time.

Chairman will provide further updates at the meeting. The Group may like to take a view in bringing out the ISO-ICID document.

#### **Item 5 : World-wide Usage of Micro and Sprinkler Irrigation**

##### **5.1 Datasheet on Sprinkler and Micro Irrigated Areas in ICID Network Countries**

As per the latest statistical information compiled by the Central Office pertaining to 42 ICID member countries, 34.6 million ha are under sprinkler irrigation and 9.4 million ha are under micro irrigation. The data sheet of the micro and sprinkler irrigated areas in ICID member countries is shown in **Annex 1**.

All members are requested to go through the data sheet and offer their observations or amendments, if any.

##### **5.2 Survey of ‘World-wide Usage of Sprinkler and Micro irrigation’**

At the New Delhi meeting, the Group suggested including an item on the sources of energy and energy consumption levels in the survey questionnaire. It was also suggested to get statistics on low pressure irrigation and energy requirements. The WG requested Mr. Enayatollah Farahani from Iran to prepare a presentation for the next meeting in Indonesia on low pressure irrigation systems.

An updated/ revised version of the questionnaire will be circulated in the meeting.

Chairman has encouraged all members to prepare success stories on irrigation and present at the Yogyakarta meeting. In response, Mr. Graziano Ghinassi (Italy) has volunteered to present a paper ‘Advanced Technologies Applied to Hose Reel Rain-Gun Machines: New Perspectives towards Sustainable Sprinkler Irrigation’.

All members are encouraged to prepare success stories for their presentation and inform the Chairman well in advance of the Yogyakarta meeting.

#### **Item 6 : Webpage of the Workbody**

The WG webpage <http://www.wg-on-farm.icidonline.org/> has been active and updated. All members are requested to visit the webpage and provide additional information viz. books, manuals, technical papers, interesting pictures, new software, useful links etc. to the Chairman/ Central Office for posting on the webpage.

#### **Item 7 : 8<sup>th</sup> International Micro Irrigation Congress (8IMIC), Tehran, 2011**

The 8<sup>th</sup> International Micro Irrigation Congress (8IMIC) will be held in Tehran, Iran on 18-19 October 2011 along with the 21<sup>st</sup> International Congress on Irrigation and Drainage. The theme of the 8IMIC is “*Innovation in Technology and Management of Micro-irrigation for crop Production Enhancement*”. The Central Office in consultation with Iranian National Committee (IRNCID) has prepared a ‘call for papers’ (along with the Call for

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papers of the 21<sup>st</sup> ICID Congress) for the 8IMIC. The call for papers has been widely circulated among all National Committees/ Office Bearers and also posted on the websites <http://www.icid2011.org>.

IRNCID representative will distribute the 'Call for papers' at the meeting and will also make presentation on the latest developments and preparation towards hosting of the 8IMIC.

**Item 8 : Work plan of the Group**

The key activities of the WG work plan for the year 2010 and 2011 as proposed during the New Delhi meeting are shown in **Annex 2**.

The Group will update/ add the activities to the work plan as appropriate.

**Item 9 : Special Session on Micro irrigation**

A half-day Special Session on 'Micro Irrigation' was held on 8 December 2009 in New Delhi, India on the sidelines of the 60<sup>th</sup> IEC and 5<sup>th</sup> ARC. The main objective of the special session was to highlight the recent developments in micro irrigation in major irrigation countries, particularly in India and to share and learn from each other's experiences for sustainable expansion of the technology. The session was chaired by VPH Felix Reinders. During the session, presentations were made by the professionals from Italy, Germany, China, USA, and Israel besides India.

Some key conclusions emerged from the special session were as follows:

- Application and standardization of sensor technologies and automation not only in orchards but also in field crops; measurement of soil properties, soil moisture dynamics and capacitance measurement have to be taken up at field level along with micro irrigation,
- Efforts should be made to develop of low cost automation in micro irrigation system for resource poor farmers of various countries, and
- Micro irrigation is a complex combination of technology and science and thus awareness creation and capacity building are critical at various hierarchical level i.e., from farmers to the top policy planners.

Presentations made during the special session have been posted on the WG webpage. All members are requested to access the webpage.

**Item 10 : Upgrading/ modernization of surface irrigation systems**

At the New Delhi meeting, Prof. Mohan Reddy Junna (USA) volunteered to prepare a comprehensive book on "Soil and Water Management in Surface Irrigation Systems". Modernization could be one of the components of the book. During the meeting, it was proposed to prepare the draft chapters/ papers for the book by 2010. Representatives from USCID and ANCID/IAL already had volunteered at Sacramento meeting to supply some information on upgrading/ modernization of surface irrigation systems for possible inclusion in the proposed book.

Dr. Reddy will appraise the development in preparation of the document at the meeting.

**Item 11 : Nomination of WG for the 3<sup>rd</sup> Best Performing Workbody Award (BPWA)**

At Lahore, members discussed about the possibility of submitting the WG's candidature for the 3<sup>rd</sup> 'Best Performing Workbody Award' (BPWA) to be presented at the time of 21<sup>st</sup> ICID Congress in October 2011 in Tehran, Iran. For submitting the nomination for BPWA, the WGs achievements during the period 2008-11 are compiled and submitted to the Central Office for its evaluation by the international 'Panel of Judges'.

WG may like to consider the submission of its nomination for the BPWA and if so, chalk out a strategy plan.

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**B. NEW ITEMS****Item 12 : Workshop on “New Hose Reel Machines”, Florence, Italy, 3 June 2010**

A Workshop on “The New Hose Reel Machines for the Reduction of Economic Water and Energy Costs” was held on 3 June 2010 at the University of Florence, Italy. The objective of the workshop was to know the latest developments in the Italian irrigation technology with a special focus on the new hose reel sprinkler irrigation machines. The workshop was organized by the Italian National Committee (ITAL-ICID) in collaboration with the Association of Manufacturers of Irrigation Machines (AMIS) of Italy.

Secretary General, ICID proposed that such a workshop involving nominees of NCs, particularly from Asia and Africa for the training would be useful with the joining of the Chair, WG-ON-FARM. NCs of China (CNCID), Mali (AMID), Pakistan (PANCID) and India (INCID) were invited to participate.

Procedural constraints however, came in the way of their joining the workshop.

The workshop was inaugurated by Dr. Gabriella Zanferrari, President, ITAL-ICID. Delegates from South Africa, Nigeria and India, besides Italy, participated in the workshop. Presentations were made by Dr. Graziano Ghinassi (Italy), Professors from the Universities of Florence and Pisa; besides the participants from India, Nigeria, and South Africa who presented the scenario of sprinkler and micro irrigation in their respective countries.

Preceding the workshop, a 3 day field tour around Bologna was organized. The participants in the tour were Chairman Felix Reinders, Dr. S.A. Kulkarni, Executive Secretary, Central Office and Engrs. Kehinde Afolabi and Musa Baba of the Federal Ministry of Agriculture and Water Resources, Nigeria. During the visit participants could see the actual operation of the new hose reel machines and interact with the manufacturers/ system suppliers and farmers to understand the advantages of the new hose reel machines over other mechanized sprinkler systems. The participants also visited the manufacturing facilities of the respective companies.

It was told that Italy exports the hose reel machines to over 60 countries. The new generation machines not only save water but also require less labor due to high level of automation. The size of these machines varies covering an area from 2 to 50 ha. The technology could be very useful for even small land holdings in developing countries. The new version of the hose reel machine use spray booms which requires relatively low pressure (about 2.5 bar) and found to be quite advantageous for close growing crops like potatoes, tomatoes, fodder etc. The field visit and the workshop were sponsored by ITAL-ICID and the AMIS.

The study tour was hosted and organized by six major hose reel manufacturing companies of Italy, viz. OCMIS, IRTEC, SIME, RM Irrigation, GIAMPI, and FERBO/ IDROFOGLIA. ICID appreciate the initiative of ITAL-ICID and also the efforts of Dr. Graziano Ghinassi, Member, who was instrumental in conceptualizing and organizing the entire program.

Chairman Reinders may like to apprise further about this unique joint initiative of the ITAL-ICID and Private Sector in promoting the irrigation technology.

**Item 13 : Any other business**

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**WORKING GROUP ON ON-FARM IRRIGATION SYSTEMS (WG-ON-FARM)****Sprinkler and micro irrigated area in member countries***(Arranged in descending order of the total sprinkler and micro irrigated area)**(Data provided by National Committees)*

Sl. No.	Country	Total irrigated area	Sprinkler irrigation	Micro Irrigation	Total sprinkler and micro irrigation	Percentage of total irrigated area	Year of reporting
		Hectares					
1	USA	22.4	12,602,880	1,533,116	14,135,996	63.1	2008
2	India	60.85	3,044,940	1,897,280	4,942,220	8.1	2010
3	China	57.8	3,000,000	1,400,000	4,400,000	7.6	2009
4	Russia	4.5	3,500,000	20,000	3,520,000	78.2	2008
5	Spain	3.8	715,102	1,502,327	2,217,429	58.4	2007
6	Brazil	3.5	1,570,000	340,000	1,910,000	54.6	2004
7	France	2.6	1,379,800	103,300	1,483,100	57	2000
8	Italy	2.75	1,047,680	365,700	1,413,380	51.4	2000
9	South Africa	1.67	920,059	365,342	1,285,401	77	2007
10	Saudi Arabia	1.62	716,000	198,000	914,000	56.4	2004
11	Iran	8.7	460,000	270,000	730,000	8.4	2009
12	Australia	2.545	524,480	190,720	715,200	28.1	2000
13	Canada	0.87	683,029	6,034	689,063	79.2	2004
14	Ukraine	2.18	618,000	48,000	666,000	30.6	2009
15	Korea	1.12	200,000	400,000	600,000	53.6	2006
16	Mexico	6.2	400,000	200,000	600,000	9.7	1999
17	Egypt	3.42	450,000	104,000	554,000	16.2	2000
18	Germany	0.54	525,000	5,000	530,000	98.1	2005
19	Japan	2.53	430,000	60,000	490,000	19.4	2009
20	Romania	1.5	448,000	4,000	452,000	30.1	2008
21	Slovak Rep.	0.313	310,000	2,650	312,650	99.9	2000
22	Israel	0.231	60,000	170,000	230,000	99.6	2000
23	Morocco	1.65	189,750	8,250	198,000	12	2003
24	Hungary	0.22	185,000	7,000	192,000	87.3	2008
25	Syria	1.28	93,000	62,000	155,000	12.1	2000
26	Turkey	5.34	110,000	26,000	136,000	2.5	2009
27	UK	0.11	105,000	6,000	111,000	100.0	2005
28	Finland	086	79,000	1,000	80,000	93	2009
29	Portugal	0.63	40,000	25,000	65,000	10.3	1999

Sl. No.	Country	Total irrigated area	Sprinkler irrigation	Micro Irrigation	Total sprinkler and micro irrigation	Percentage of total irrigated area	Year of reporting
30	Kazakhstan, Rep.	2.13	57,355	-	57,355	2.7	2006
31	Malawi	055	43,193	5,450	48,643	88.4	2000
32	Lithuania	045	44,518	-	44,518	98.9	2004
33	Chile	19	16,000	23,000	39,000	3.6	2006
34	Chinese Taipei	0.37	12,300	13,400	25,700	6.9	2001
35	Bulgaria	0.588	21,000	3,000	24,000	4.1	2008
36	Czech Rep.	0,024	11,000	5,000	16,000	66.6	2008
37	Philippines	1.52	7,175	6,635	13,810	0.9	2004
38	Poland	0.1	5,000	8,000	13,000	13	2008
39	Slovenia	009	8,072	733	8,805	97.8	2009
40	Malaysia	0.38	2,000	5,000	7,000	1.8	2009
41	Macedonia	055	5,000	1,000	6,000	10.9	2008
42	Estonia	001	500	500	1,000	100	2010
	<b>Total</b>	<b>207.298</b>	<b>34,639,833</b>	<b>9,392,437</b>	<b>44,032,270</b>	<b>21.2</b>	

**WORKING GROUP ON ON-FARM IRRIGATION SYSTEMS (WG-ON-FARM)****WORK PLAN**

2010	2011	2012
<ul style="list-style-type: none"> <li>Publish paper on “Micro irrigation for smallholders and greenhouses”</li> </ul>	<ul style="list-style-type: none"> <li>8<sup>th</sup> International Micro irrigation Congress (IMIC) in Tehran, Iran.</li> </ul>	<ul style="list-style-type: none"> <li>Continue updating datasheet on “Sprinkler and micro irrigated areas in ICID member countries”</li> </ul>
<ul style="list-style-type: none"> <li>Finalize the revised questionnaire on “Survey of world-wide usage of sprinkler and micro irrigation” and circulate to NCs</li> </ul>	<ul style="list-style-type: none"> <li>Continue updating datasheet on “Sprinkler and micro irrigated areas in ICID member countries”</li> </ul>	
<ul style="list-style-type: none"> <li>Update datasheet on “Sprinkler and micro irrigated areas in ICID member countries”</li> </ul>	<ul style="list-style-type: none"> <li>Publish Manual “Performance evaluation of sprinkler and drip irrigation systems” in the Persian language by the IRNCID</li> </ul>	
<ul style="list-style-type: none"> <li>Prepare paper on “Field Water Management and Soil water Conservation under Spate Irrigation”</li> </ul>		