# MINUTES OF THE 1<sup>ST</sup> VIRTUAL MEETING OF THE WORKING GROUP ON USE OF NON-CONVENTIONAL WATER RESOURCES FOR IRRIGATION (WG-NCWRI) 16 JANUARY 2023, 14:30-16:00 HOURS

Strategy Theme: On-Farm Presented by the Chair

Year of Establishment: 2018 Completion of the Mandate: 2024

**Mandate:** To exchanging knowledge, experience and data as well as networking on the topic in order to be up to date with new developments, methods and approaches; to preparing comprehensive reviews and prospects with respect to different aspects of NCWR. Producing technical manuals, guidelines or standards with respect to all NCWR including waste water, drainage water and saline/brackish water; to organizing international workshops, seminars and meetings on the NCWR topic, to producing documents on successful case studies with the new developments with respect to NCWR presented by the members from different countries; to enlarging the membership of the WG by encouraging more member countries where the use of non-conventional waters is a common practice for irrigation management.

Members present: (1) Dr. Wenyong Wu, Chair (China); (2) Prof. Tapas Kumar Biswas, Vice Chair (Australia); (3) Prof. Qi Xuebin (China); (4) Dr. Mohamed Shaban M. Abu Salama (Egypt); (5) Dr. Sunil D. Gorantiwar (India); (6) Dr. (Ms.) Anna Tedeschi (Italy); (7) Dr. Tasuku Kato (Japan); (8) Ms. Jigyasha Rai Yangkhurung (Nepal); (9) President Dr. R. Ragab (UK); (10) Er. B.A. Chivate, Director (Technical), ICID Central Office (India).

Website: http://icid-ciid.org/inner\_page/123

### WG-NCWRI Minutes Item 1: Action taken report by Chair

- 1. Chair reported the acceptance of new members of Dr. Sheng-Wei Wang and Dr. Usman Khalid Awan in 2022.
- 2. As Dr. (Ms.) Bilge OMAR and (Ms.) Senem Yildirim (Turkey) were absent in the first virtual meeting they were admitted as Provisional Member.
- 3. Chair of the WG and the Central Office have updated the membership of the WG as given in **Annex 1** (*refer electronic version for the latest list*). New nominations, if any, for the membership received will be dealt with suitably after the meeting.

### WG-NCWRI Minutes Item 2: Brief of the virtual meetings organized in February, April, and July 2023

4. Four virtual zoom meetings of WG-NCWRI will be organized viz. January, May, August, and November in 2023. Activities of organizing workshops on NCWR, Capacity Building Training, etc. have been launched as part of the Road Map to ICID Vision 2030.

### WG-NCWRI Minutes Item 3: Road Map to ICID Vision 2030 – Activities on non-conventional water resources for irrigation

- 5. Case study document the use of non-conventional waters in different countries. The Chair invited Dr. Qi to help Dr. Tasuku Kato for promoting the document at the Adelaide meeting.
- 6. The draft document of reclaimed water irrigation guidelines Dr. Wu Wenyong was responsible. The draft version has been finished.
- 7. The workshop on "Non-conventional Irrigation in High-Value Agriculture Application of Modern Technology" Dr. Tapas was responsible for the workshop, which has been held successfully.
- 8. Capacity building training on "Digital application in the use of non-conventional water resources" Dr. Tapas Biswas (Australia), Dr. Ashish Pandey (India), Dr. Qi Xuebin (China), and Dr. Tasuku Kato (Japan) were volunteers.

WG-NCWRI Minutes Item 4: Discuss and develop a work plan based on new mandate

### WG-NCWRI Minutes Item 4.1: Prepare a state-of-the-art document on the use of NCWR

- 9. Dr. Qi reported the outline of the case study document (Annex 2) and reported edition progress based on the files proposed by some members. Dr. Qi invited more members to participate in the case study document or provide cases.
- 10. Dr. Tasuku Kato volunteered to provide a Japanese case in the English version. Dr. Mohamed Salama was interested in the document and volunteered to provide Egyptian cases.

#### WG-NCWRI Minutes Item 4.2: Developing manuals/ standards on the use of NCWR

11. Chair Dr. Wu reported the document draft of the reclaimed water irrigation guideline, and the document draft has been finalized. This guideline would have more progress in risk evaluation, risk prevention, and water quality. Dr. Wu has finished the final checking of the draft document which has been sent to all members.

### WG-NCWRI Minutes Item 4.3: Organization of International workshop on nonconventional water use

- 12. The workshop on "Non-conventional water resource Irrigation in High-Value Agriculture Application of Modern technology" has been held successfully at the Adelaide meeting.
- 13. Vice chair Dr. Tapas Biswas gave a brief summary of the workshop. Chair Dr. Wu appreciated Dr. Tapas for the excellent organization of the workshop.

### WG-NCWRI Minutes Item 4.4: Capacity building training and workshop

- 14. During the second virtual meeting on 04 April 2022, the group members discussed the training course on "Digital application in the use of non-conventional water resources".
- 15. Dr. Biswas proposed a training course on "Digital application in the use of non-conventional water resources" and Dr. Qi proposed "Safe use of reclaimed water irrigation" in 2022.
- 16. Chair Dr. Wu contacted the ICID Central Office and noted that for the training, the name of the trainer(s) session-wise along with their photo with a brief CV and tentative date of the webinar is needed (at least 1.5 months in advance for publicity). Dr. Tapas suggested assembling a few presenters (max 5) delivering the context and simple to semi-complex simulation models as a DSS. The whole training is for a day (max 4-5 hours) with a break in between.
- 17. Dr. Tapas Biswas, Dr. Tasuku Kato, and Dr. Sunil volunteered to give training courses. Chair Dr. Wu asked them to provide their photos with a brief CV by the end of February as per the form (**Annex 3**). The training course is preferred to be held at the beginning of July 2023.

### WG-NCWRI Minutes Item 5: Any other business

- 18. President Dr. Ragab made a closing remark at the first virtual meeting.
- 19. On 31 January 2023, Chair Dr. Wu sent two draft documents of guidelines and case studies to WG members, and expected all members to review the document and give revision suggestions. Anyone who contributes to the guideline will be listed in the Acknowledgements part.



Annex 1

### MEMBERS AND THEIR ATTENDANCE AT 2020, 2021, 2022, AND 2023 MEETINGS

	Members	Member from (Year)	2020		2021		2022		2023					
No.			Self	Contributed by mail	Self	Contributed by mail	virtual meeting (July, April, February)	WG meeting	1virtual meeting	2virtual meeting	3virtual meeting	4virtual meeting	WG meeting	Remarks
1.	Dr. Wenyong Wu, Chairman, 2021 (China)	2018	0		0	0	0	0	0					
2.	Prof. Tapas Kumar Biswas, Vice Chair (Australia)	2018	0		0	0	0	0	0					
3.	Dr. (Ms.) Anna Tedeschi (Italy)	2018	0			0	0		0					
4.	VPH Dr. Samia El-Guindy (Egypt)	2018												
5.	Dr. Mohamed Shaban M. Abu Salama (Egypt)	2018							0					
6.	Dr. Hussein Abdel Halim El Gammal (Egypt)	2018												
7.	VPH Dr. Karim Shiati (Iran)	2018					0							
8.	Dr. Tasuku Kato (Japan)	2018	0		0	0	0	0	0					
9.	Dr. Seung Heon Lee (South Korea)	2018												
10.	Dr. Muhammad Munir Ahmad (Pakistan)	2018	0											
11.	Prof. Leon van Rensburg (South Africa)	2018												
12.	President Dr. R. Ragab (UK)	2018	0			0	0	0	0					
13.	Mr Mohamed Ouhssain (Morocco)	2019	0		0	0	0							
14.	Dr Ratan Chand Jain (India)	2019	0				0							
15.	Dr Chihhao Fan (Chinese Taipei Committee)	2019												
16.	Dr. Ashish Pandey (India)	2021				0	<u>I</u>							
17.	Dr. Sunil D. Gorantiwar (India)	2021				0	0		0					
18.	Ms. Jigyasha Rai Yangkhurung (Nepal)	2021			0	0	0	0	0					

No.	Members	Member from (Year)	2020		2021		2022		2023					
			Self	Contributed by mail	Self	Contributed by mail	virtual meeting (July, April, February)	WG meeting	1virtual meeting	2virtual meeting	3virtual meeting	4virtual meeting	WG meeting	Remarks
19.	Dr. Shu-Yuan Pan (Chinese Taipei Committee)	2021				0								
20.	Prof. Qi Xuebin (China)	2021			0		0		0					
21.	Secretary General, ICID		#		#	#	#							
22.	Dr. Usman Khalid Awan (Parkistan)													Accepted
23.	Dr. Sheng-Wei Wang (Chinese Taipei Committee)							0						Accepted
24.	Dr. (Ms.) Bilge OMAR(Turkey)													
25.	Ms. Senem YILDIRIM(Turkey)													
	Permanent Observers												_	
26.	FAO representative												_	
27.	ICBA representative (UAE)						-			_				_

SI. No.	Members	Country	Accepted/ Provisionally admitted
1	Dr. (Ms.) Bilge OMAR	Turkey	Provisionally admitted
2	Ms. Senem YILDIRIM	Turkey	Provisionally admitted

Annex 2

### (DRAFT)

### OUTLINE OF CASE STUDY ON THE USE OF NON-CONVENTIONAL WATER RESOURCES IN AGRICULTURE

## WORKING GROUP ON USE OF NON-CONVENTIONAL WATER RESOURCES FOR IRRIGATION (WG-NCWRI)

2023.1

### **CONTENTS**

- 1. Background
- 2. Current situation of using reclaimed water and Brackish on the world
- 3. Case study on use of reclaimed water in Agriculture
  - 3.1 Case of reclaimed water irrigation for grain crops (China, Australia, USA, India, Japan, Egypt, Israel, etc..)
    - 3.1.1 Experimental site
    - 3.1.2 Irrigation water sources
    - 3.1.3 Irrigation technologies and system
    - 3.1.4 Results
    - 3.1.5 Suggestions
  - 3.2 Case of reclaimed water irrigation for commercial crops (China, Australia, USA, India, Japan, Egypt, Israel, etc..)
    - 3.2.1 Experimental site
    - 3.2.2 Irrigation water sources
    - 3.2.3 Irrigation technologies and system
    - 3.2.4 Results
    - 3.2.5 Suggestions
  - 3.3 Case of reclaimed water irrigation for pasture (Australia, USA, India, Japan, Egypt, Israel, etc..)
    - 3.3.1 Experimental site
    - 3.3.2 Irrigation water sources
    - 3.3.3 Irrigation technologies and system
    - 3.3.4 Results
    - 3.3.5 Suggestions
  - 3.4 Case of reclaimed water irrigation for landscaping (USA, China, Australia, India, , Israel, etc..)
    - 3.4.1 Experimental site
    - 3.4.2 Irrigation water sources
    - 3.4.3 Irrigation technologies and system
    - 3.4.4 Results
    - 3.4.5 Suggestions
- Case study on use of brackish water in Agriculture (China, Australia, USA, India, Japan, Egypt, Israel, etc..)
  - 4.1 Brackish water irrigation for grain crops
    - 4.1.1 Experimental site
    - 4.1.2 Irrigation water sources
    - 4.1.3 Irrigation technologies and system
    - 4.1.4 Results
    - 4.1.5 Suggestions
  - 4.2 Brackish water irrigation for commercial crops

(China, Australia, USA, India, Japan, Egypt, Israel, etc..)

- 4.2.1 Experimental site
- 4.2.2 Irrigation water sources
- 4.2.3 Irrigation technologies and system
- 4.2.4 Results
- 4.2.5 Suggestions
- 5 Challenges and constraints of non-conventional water utilization in agriculture

#### References

#### Annex 3

### **CV AND PHOTO FORM**



### President Hon. Prof. Em. Dr. Bart Schultz, (Netherlands)

The career of Em. Prof. Bart Schultz includes more than 40 years of research, advising and project implementation in the field of land and water development, drainage, irrigation, flood management and environmental engineering.

He worked as Head of the Water Management Division in the IJsselmeerpolders Development Authority, and as Head of the Environmental Engineering Department and Top Advisor in the Civil Engineering Division of Rijkswaterstaat. At IHE Delft he was responsible for education and research in Land and Water Development.

He is author of more than 325 papers and visited about 35 countries to: participate in international research, appraise, evaluate, or advice in projects and to teach.

He was President of ICID and Chairman of the Editorial Board of *Irrigation and Drainage*. He is the winner of the 2<sup>nd</sup> World Irrigation and Drainage Prize.



### VP Ir. Hisham Ghazali (Malaysia)

Dato' Ir. Nor Hisham bin Mohd Ghazali FIEM, P.Eng., ACPE, Hon. FAFEO: Dato' Ir. Nor Hisham Bin Mohd. Ghazali is Chairman of the Malaysian Water Partnership, a not-for-profit organisation that promotes Integrated Water Resources Management through competency building and bridging programs amongst stakeholders. He is a former Director-General of the National Institute of Water Research Malaysia (NAHRIM), and prior to that, he was the Director General of Department of Irrigation & Drainage Malaysia (or DID). He holds a B. Sc. in Civil Engineering from California State University and a Masters' Degree in Coastal and Maritime Engineering from Universiti Teknologi Malaysia. He has over 35 years of service and experience in operational, technical, management and policy positions. Whilst being recognised as a coastal engineer and pioneer of the JPS Integrated Shoreline Management Program, he has spent the last decade in both government and non-government

activities related to water resources management and disaster risk reduction including the monitoring and assessment of progress towards Sustainable Development Goals 6 (water and sanitation).

Dato' Nor Hisham has served as a member of the Malaysian National Committee for Irrigation and Drainage (MANCID) executive committee since 2012 and continues to be active in the Working Groups for Sustainable Development of Tidal Areas and Value Engineering. In 2021, he was elected a Vice-President of the International Commission on Irrigation and Drainage (ICID).