

**FIRST VIRTUAL MEETING OF
WORKING GROUP ON WATER FOOD ENERGY NEXUS (WG-WFE-N)**

MINUTES OF THE MEETING

30 June 2022: 13:00 – 15:00 Hrs (Indian Standard Time)

Year of Establishment: 2021

Completion of the Mandate: 2027

New mandate of the WG:

- (a) to exchange information, knowledge, and experience, as well as networking on the Water-Food-Energy Nexus topic in order to be up to date with new developments, methods and approaches. This can be the basis for a possible position paper on key issues on the nexus.
- (b) to prepare an overview document on the state of the art on improving water use efficiency and productivity within the nexus.
- (c) to produce a document of impact of climate change and possible use of non-conventional less water consuming crops
- (d) to prepare an overview document on the state of the art on model applications as useful management tools for water, crops, field and energy management within the nexus
- (e) to prepare and present reports on case studies on recent developments in the countries that are represented in the WG; and from presented cases of the workshops
- (f) to organize international workshops, seminars or symposia on the Nexus topic.
- (g) to implement ICID 2030 vision

Members Present: (1) President Dr. Ragab Ragab (UK), Chairman; (2) VPH Dr. K. Yella Reddy (India), Vice-Chairman; (3) VPH Dr. Marc Arcieri (Italy); (4) Ir. Adang Saf Ahmad (Indonesia); (5) Dr. P. Soman (Direct Member); (6) Prof. Won-Ho- Nam (Korea); (7) Dr. Chung-Feng, Ding (Chinese Taipei Committee); (8) Prof. Dr. Zeinab Hussein Behairy (Egypt); (9) Eng. Karshiyev Rustum Jurayevih (Uzbekistan); (10) Mr. Felipe Dantas (Australia); (11) Mr. Watchara Suiadee (Thailand); (12) Mr. Chaisri Suksaroj (Thailand); (13) Prof. Cheh-Shy Ting (Chinese Taipei Committee); (14) Dr. Peng-Jui Wang (Chinese Taipei Committee); (15) Mr. Carl Walers (Australia); (16) Mr. John William O'Connor (Australia); (17) Dr. Vishnu Prasad Pandey (Nepal); (18) Dr. Deepak Khare (India); (19) Dr. Man Singh (India); (20) Mrs. Narges Zohari (Iran); (21) Mr. Lu Hui (China); (22) Mr. Liangsheng Shi (YP); (23) Dr. Amani Alfarra (Canada); (24) Ir. Liu Dongzhe (China); (25) Mr. Yukiya Saika (Japan); (26) Dr. Mahdi Sarai Tabrizi (Iran); and (27) Er. B.A. Chivate, Director (Technical), ICID Central Office, New Delhi.

WG-WFE_N Minutes Item 1: Welcome by Chair

1. Chairman welcomed the members present during the 1st Virtual meeting of the WG.

Item 2: Actions taken report based on minutes for the 1st meeting of the working group on water food energy nexus (WG-WFE_N) held in November 2021, Marrakesh, Morocco

2. The Chairman presented the report of the actions taken on the decisions and proposals made at its last meeting held on 27 November 2021 at Marrakesh, Morocco.

Item 3: Review of the membership of the WG-WFE-N and Introduction by new member

3. In April 2022, ICID Central Office has received the nominations of **Ir. LIU Dongzhe (China)** and **Dr. Amani Alfarra (Canada)** for the membership of WG. The group considered these nominations of Ir. LIU Dongzhe & Dr. Amani Alfarra and invited them for introduction during the meeting. The group selected them as members of the group.

Item 3.1: Select new Vice-Chair of the WG

4. The Working Group unanimously elected Dr K Yella Reddy VPH as a new Vice-Chairman based on mandate of the WG and having experienced in the Nexus area.

Item 4. International Workshop on 'The Water-Energy-Food-Nexus: Implementation and Examples of Application', Adelaide, Australia, October 2022

5. The Working Group is organizing the International Workshop on the **theme** 'The Water-Energy-Food-Nexus: Implementation and Examples of Applications' and **sub-themes** – (i) Water-energy-food-Nexus at field, regional and country scales. Examples of applications; (ii) How the environment and ecosystem services benefit from the Nexus; (iii) Economic analysis of food production within the Nexus; (iv) Management practices that promote the Nexus; and (v) Institutional and Governance issues in implementing the Nexus on **04 October 2022 from 08:45-10:30 hrs & 11:15-13:00 hrs** during the 24th ICID Congress in October 2022 at Adelaide, Australia. ICID CO has circulated the 'Call for papers' of International Workshop of the WG to National Committees, WG Chairs & Members, International organizations and all stakeholders of ICID from time to time. The last date for submission of the abstracts for the workshop was **30 May 2022**. In response, 23 Abstracts of the WG workshop have been received, in which 6 Abstracts of the Authors were rejected due to not focused on WFE Nexus. While remaining Abstracts of the authors have requested to prepare and submit full length papers for the WG international workshop by **30th July 2022**. Response from Authors for sharing the full length papers of the WG workshop are still awaited.

Item 5. Preparation for next WG physical meeting in October 2022, Adelaide, Australia

6. Chair discussed this item with the members during the virtual meeting of the group and agreed to conduct the WG meeting in physical mode. The chair encouraged the members to physically present and make the group activities more visible and fruitful.

Item 6: Three-year rolling plan based on the scoping document for a new WG-WFE-N

7. The Working Group has already requested the members of the group to select the area of interest as shown in the 3-year rolling plan based on the Scoping Document for a new Working Group on Nexus. During the Marrakesh meeting of the WG, Chair briefed about the importance of the WG and explained the details of Work Plan preparation of three-year rolling plan from 2021 to 2023. In this regard, Chair thanked the members of the WG for volunteering to be part of the various activities of the WG to achieve the desired outputs. As President of ICID, Chair has also indicated that the other WGs of ICID will be encouraged to develop similar Rolling Plans of the WG. The updated activity table on 3-year rolling plan of the WG as **Annex**. Central Office has requested the members who have not shared their name for taking the responsibility of 3-year rolling plan of the WG as contribution.

8. Chairman provided the latest status of the 3-year rolling plan of the WG during the meeting.

Item 7: Multi-functionality of water use in paddy (Rice) cultivation

9. WG decided to bring out a 'Technical Report' based on papers contributed by its members in areas such as – (i) efficient use of water in crop production; (ii) crop water models; (iii) multifunctional water use in paddy; and (iv) rain water harvesting and energy crops. Further, it was noted that the report would be a consolidation of contributions and collection of information from members on these topics under the mandate of the group. In this regard, NCs of China, Indonesia, Philippines and Italy have already made their papers for the technical report of the group. While Prof. Zeinab Hussein Behairy (Egypt); Dr. P. Soman (India), and Ir. Felipe Dantas (Australia) members of the WG have also shared their papers titled 'Rice Story in Egypt', 'Drip irrigation and fertigation technology for rice production leading to higher water productivity' and 'Australian Rice Market' as contribution based on the experience as 'multi-functionality of water use in paddy rice cultivation' for inclusion in the Technical Report of the WG.

10. In January 2022, VPH Dr. Reddy, Secretary of the WG, has shared the draft report on 'Water Use in Paddy Rice Cultivation in India' to Chair and copy to ICID Central Office. VPH Dr. Marco Arcieri has informed that his report is at final stages of completion and agreed to submit by the end of July 2022.

11. Chair informed that he would forward all the reports after proper editing to the central office for bringing out a comprehensive report, useful to the member countries.

Item 8: Updating Multilingual Technical Dictionary (MTD)

12. Dr. P. Soman (India), member of the group, who was coordinator for undertaking the task of reviewing and updating the terms of MTD of the WG, to be replaced as decided in the last meeting of the WG. In this regard, The Chair informed the importance of the Multilingual Technical Dictionary (MTD) and efforts made so far. The new terminology like Nexus and related terms shall find the place in the MTD for use of the members for better understanding the concepts. In this regard, Chair has requested the members to volunteer to take up this task or otherwise he will choose someone from the group. Since, No response has been received from the members of the WG in this regard, the chair once again requested the members present to volunteer to take up the responsibility. Mrs. Narges Zohari (Iran), member of the WG, has agreed to take the responsibility as Coordinator of the MTD of the WG during the meeting.

Item 9: Publication of the Working Group

13. The WG considered to publish a few selected papers from the past International Workshops (2013, 2015 & 2019) with the support from IWRA. These selected papers of the past International Workshops of the WG could be considered for publication in the ICID Journal and/or Technical Report of the WG. It was noted that the Bali meeting (2019), the Australian representatives presented their papers in the international workshop of the WG where these papers were considered for the publication in the Special Issue of I&D.

14. Based on the status of the 'Technical Report' of the group, Chair of the WG has suggested the contributors to submit their papers for compilation. In this regard, the contributors might have submitted their paper to Chair for inclusion in the 'Technical Report' of the group. However, ICID CO has not received paper from the contributor.

15. Chair will provide further updates of the WG at the meeting.

Item 10: Date of next meeting of the WG

16. The Chair and members present have agreed to conduct the next meeting physically in Adelaide during the 24th ICID congress in October 3-10 October 2022.

Item 11: Presentations by WG members

17. As suggested by Chair, ICID Central Office has requested the members to volunteer share their presentation based on the mandate of the WG during the virtual meeting. In response, the following three presentations were made during the virtual meeting:

- (a) "Water-Food-Energy-Nexus in Iran" by Dr. Mahdi Sarai Tabrizi (Iran)
- (b) "Assessment of the water, energy, and food security nexus for Thai agricultural water management system via dynamic modelling approach" by Dr. Noppadon Kowsuvon (Thailand)
- (c) "Inter-Basin Water Transfer for sustainable agricultural Production systems-A case Study of Pattiseema Lift Irrigation Scheme (PLIS) of Andhra Pradesh, India" by Dr Vishnuvardhan, ANGRAU, India

18. The Chair appreciated the three presenters for their excellent work done and good presentations they made. He complimented Dr Vishnuvardhan, India for comprehensively presenting the Nexus aspects and also highlighting the impact on Green House Gas emissions as part of nexus.

Item 12: Any other business

19. The Chair informed the members about the need to elect a new Secretary of the WG due to the vacancy arises as the present Secretary Dr K Yella Reddy, VPH has become Vice Chairman of the WG. He invited any member to volunteer to take up the responsibility and Dr. Mahdi Sarai Tabrizi agreed to be the New Secretary of the WG. The chair and members congratulated Dr Mehdi for taking up the position of the Secretary of WG.



UPDATED ACTIVITY TABLE ON THREE YEAR ROLLING PLAN OF THE WG CONTRIBUTION BY MEMBERS

Sl. No.	Activity	Contributors	Output type	Completion date (approx.) mm/yyyy	Remarks
01.	To prepare an overview document on the state of the art on improving water use efficiency and productivity within the nexus	Zeinab Behairy John O'Connor Ragab Man Singh Mahdi Sarai Tabrizi	Document/Report		Dr. Vishnu can help with some of the review work together with other colleagues who will be associated with this activity
02.	To produce a document of impact of climate change and possible use of non-conventional less water consuming crops	Ragab Hui LU Marco Arcieri	Document/Report		
03.	To prepare an overview document on the state of the art on model applications as useful management tools for water, crops, field and energy management within the nexus	John O'Connor Ragab Man Singh Liangsheng Shi Mahdi Sarai Tabrizi Marco Arcieri	Document/Report		To prepare an overview document on the state of the art on agricultural intelligence and mobile APP for water, crops and field
04.	To prepare and present reports on case studies on recent developments in the countries that are represented in the WG; and from presented cases of the workshops	Chung-Feng Ding Peng-Jui Wang Zeinab Behairy Carl Walters (and colleagues) Won-Ho Nam Peng-Jui Wang Mahdi Sarai Tabrizi	Document/Report		Carl - Will be pursuing the App Development to support energy, water use decisions and look forward to arranging the presentation and reporting on this at the Workshop with my colleagues
05.	To organize international workshops, seminars or symposia on the Nexus topic. Adelaide, Australia	Ragab & All Carl Walters	Proceedings	October 2022	Carl - Happy to arrange and ensure we have a workshop on this topic in Adelaide, I will be on organizing committee for the Congress. Dr. Vishnu can help to design the program in consultation with the team
06.	Internal Presentations: WG meeting, Marrakesh, Morocco	Chung-Feng Ding Peng-Jui Wang Man Singh P. Soman	PPT presentations	November 2021	
07.	International Workshop Presentation Adelaide, Australia	Chung-Feng Ding Peng-Jui Wang Man Singh Won-Ho Nam Peng-Jui Wang P. Soman Hui LU	PPT & Proceedings	October 2022	
08.	WG output publication close to the end of its mandate. Compilation of the different outputs presented in the above activities.	Ragab, KY Reddy and others	ICID Book	June 2023	

