

**MINUTES OF THE 1<sup>ST</sup> MEETING OF THE  
WORKING GROUP ON SUSTAINABLE DEVELOPMENT OF TIDAL AREAS (WG-SDTA)**

15 August 2018: 09:00-10:30 hours (Session-I)  
15 August 2018: 11:00-12:30 hours (Session-II)  
Saskatoon, Saskatchewan, Canada  
Strategy Theme: Basin  
Presented by the Chairman

**Year of Establishment: 2017**

**Extended the completion of the Mandate: 2023**

**New Mandate of the WG:**

- (a) To understand the existing and potential challenges and opportunities of tidal areas for now and the future by figuring out underlying issues;
- (b) To raise awareness of the increasing risk on tidal areas due to global climate change and stimulate interdisciplinary discussions on impacts, mitigation, and adaptation
- (c) To enhance survey, design techniques, and monitoring and management programs for the irrigation and drainage facilities, and apply to collect information about the tidal area environment around the world;
- (d) To identify sustainable development and management options in tidal areas, and find a balance between the conservation and development of tidal areas with acknowledgement of ecosystem services;
- (e) To join the international dialogues and organize international conferences and short courses to promote interdisciplinary and participatory land and water planning and management in tidal areas;
- (f) To collaborate with other related working groups actively, and to exchange relevant experiences amongst NCs and support for developing, and least developed countries.

**Members Present:** (1) Dr. Ruey-Chy Kao, Chairman (Chinese Taipei); (2) Mr. Henk P. Ritzema, Vice-Chairman (The Netherlands); (3) Dr. (Ms.) Hsiao-Weng (Chinese Taipei) represented by Ir. Chang Ching Ju; (4) Dr. Jeongryeol Jang (Korea); (5) Ir. Hj. Nor Hisham Bin Mohd Ghazali (Malaysia); (6) Mr. Anuj Kanwal (India); and (7) Dr. Vijay K. Labhsetwar represented Er. A.B. Pandya, Secretary General, ICID Central Office.

**Observers:** (i) PH Bart Schultz (The Netherlands); (ii) Ir. Ming-Kai Hsieh (Taiwan); (iii) Ir. Chou Chin (Taiwan); (iv) VPH Hafied Gany (Indonesia); (v) Ir. Arthon Suttigarn (Thailand); (vi) Ir. Surat Thanusin (Thailand); (vii) Ir. Cheng-Feng Ding (Taiwan); (viii) VPH Chaiwat Prechawit (Thailand); (ix) Ir. M. Arsyadi (Indonesia); (x) Mr. Iwan Nursyirwan (Indonesia); (xi) VP Prof. Dr. Charlotte de Fraiture (The Netherlands); (xii) Miss. Saowanit Prabnakorn (The Netherlands); (xiii) Ir. Em. Myung-Chul (South Africa); (xiv) Ir. Su, Mei-Yuan (Taiwan); (xv) Ir. Apiruks Srikoolwong (Thailand); and (xvi) Ir. Chang, Ching-Ju (Taiwan).

**Website:** <http://wg-sdta.icidonline.org>

**WG-SDTA Minutes Item 1: Introduction of new Working Group**

1. The WG Chair Dr. Ruey-Chy Kao (Chinese Taipei) welcomed all the members and briefed them on the new mandate of the WG (as above) and various activities of the Group.
2. The Chair of the WG informed that the new nominations were accepted/provisionally admitted as below:
  - (a) Eng. Elaraby Mohamed Gomaa Elkashawy and Prof. Dr. Hossam Refaat from Egypt were provisionally accepted as they were not available at the meeting.
  - (b) Dr. Ikuo Yoshinaga (Japan) was accepted as a WG member and he will undertake the MTD terms related to scope and mandate of the WG.
  - (c) Dr. Arthon Suttigarn (THACID) introduced Dr. Surat Thanusin (Director, Bureau of Project Management, RID, Thailand) during the meeting. Dr. Surat expressed his desire in joining the WG-SDTA. The WG welcomed Dr. Surat and the Chair accepted his membership for the WG subject to receiving his formal nomination from the NC along with a brief CV.
  - (d) Dr. Vijay K. Labhsetwar (India) was nominated by INCSW and is accepted as a WG member.
  - (e) The Chair proposed Ir. Hj. Nor Hisham Bin Mohd Ghazali from Malaysia to be the Secretary of WG-SDTA with the concurrence of the members present. Ir Ghazali accepted to be the new Secretary of the WG.

**WG-SDTA Minutes Item 1.1: A brief report of Online/WebEx Meeting of the Group, 29 January 2018**

3. The Chair briefly informed the members on discussions held during the WebEx meeting and reviewed the activities of the group such as Side Event on 'Integrated Development of Tidal Areas' (2019); International Workshop (2019); and Short Course / Training Workshop on SDTA (2019) .

4. As the Chair promised during the WebEx meeting, he shared the experiences from Taiwan again during the meeting under Goal B: Be a catalyst for change in policies and practices (1.1 Promoting sophisticated water-saving irrigation development with IOT and water-saving irrigation model techniques of Action Plan 2030).

5. The Chair further presented the contents of the forward-looking Infrastructure development program on 'Water environments in Taiwan': Application Industry - concept to be applied in the Intelligent Operation and Management techniques of multi-purpose reservoirs, Dynamic groundwater operation technology, Construction/Test of Intelligent Flood Protection Net, Sophisticated Water-Saving Irrigation Management Technology, and Intelligent Management Mode and Equipment R&D.

**WG-SDTA Minutes Item 2: ICID Action Plan 2030: Activities on Sustainable Development of Tidal Areas**

6. The Chairman presented the finalised the Action Plan 2030 (*Road Map to ICID Vision 2030*) of the WG-SDTA based on the new mandate by updating the activities on Sustainable Development of Tidal Areas as given in **Annex 1**. The Action Plan 2030 includes activities such as workshop proceedings, Side Events/Short Course/Training, e-Discussion on Sustainable Development of Tidal Areas and much more.

**WG-SDTA Minutes Item 3: Publications of the Working Group: A Special Issue of ICID Journal on SDTA**

7. The Chair of the WG thanked the Guest Editors Dr. Henk P. Ritzema (The Netherlands), Dr. Hsiao-Weng Wang (Chinese Taipei) and the reviewers for their hard work as well as Japanese, Korean and Chinese Taipei Committees for their support. *The Special Issue of ICID Journal titled "Sustainable Development of Tidal Areas: Climate Change and Environmental Impacts" (Volume 67, Issue 3)* has been published in July 2018. The Chair also thanked Dr. Vijay K Labhsetwar of ICID Central Office and Dr. Hsiao-Weng Wang for their continuous and untiring support towards bringing out this Special Issue.

**WG-SDTA Minutes Item 4: Upcoming WG Events**

8. The Chair reminded the members of the upcoming WG Events as below:

**WG-SDTA Minutes Item 4.1: Side Event on 'Integrated Development of Tidal Areas' (2019)**

9. The WG will organize a Side Event on 'Integrated Development of Tidal Areas' during the 3<sup>rd</sup> World Irrigation Forum (WIF3) at Bali, Indonesia in 2019. The 'Concept Note' on 'Global Challenges of land Subsidence in Tidal Areas and the Integrated Solutions' prepared by Dr. Hsiao-Wen Wang and as given in **Annex 2** was discussed during the meeting and adopted for the Side Event.

**WG-SDTA Minutes Item 4.2: International Workshop (2019)**

10. The WG also proposes to organize an International Workshop during the 3<sup>rd</sup> World Irrigation Forum (WIF3) at Bali, Indonesia in 2019. The 'Concept Note' on 'Integrated Development of Tidal Areas' prepared by Dr. Hsiao-Wen Wang and as given in **Annex 3** was discussed during the meeting and adopted for the workshop.

**WG-SDTA Minutes Item 4.3: Short Course / Training Workshop on SDTA (2019)**

11. The WG agreed to arrange a Short Course to be held in December 2019 in Taiwan after the WIF3. The Chair proposed the theme of the course to be "*Tidal Prediction & Typhoon Wave Model*".

**WG-SDTA Minutes Item 4.4: Web-based seminars and e-Discussions (2019)**

12. The Chair proposed 'Discussion on Drainage Capacity and Flood Disaster in Tidal Areas under a Variable and Changing Climate' to be the topic for web-based seminar and 'Integration of Drainage tail, Land subsidence, Ground water and Management in Tidal Areas' to be the topic for the e-Discussion. In cooperation with members, the Chair proposes them to be held in January and April 2019, respectively.

13. To facilitate planning above activities, the WG Chair will establish a team of members to firm up the programs for the activities under **Item 4** by October 2018 and organize a WebEx meeting of the WG in December 2018 to firm up the same and report to the ICID Central Office for inclusion in the WIF3 program. The Chair requested all the WG members to actively participate in these activities.

**WG-SDTA Minutes Item 5: Ground Water and the Land Subsidence on the Coastal Areas**

14. After discussion with the WG members, issues related with '*Ground Water and the Land Subsidence on the Coastal Area*' have been included in the Road Map to ICID Vision 2020. Issues such as integration of upstream drainage and drainage tail, flood, ground water and land subsidence problems on coastal areas, analyse the potential problems and set up ways for prevention, and information dissemination among members' countries etc. may be studied under this activity.

**WG-SDTA Minutes Item 6: Dissemination of activities of WG**

15. All the WG members agreed to provide at least one-page of materials/articles/papers/presentations/reports to Tainan Hydraulic Laboratory (THL, NCKU) at <SDTA-THL@thl.ncku.edu.tw> for review and uploading on the website.

**WG-SDTA Minutes Item 7: Updating Multilingual Technical Dictionary (MTD)**

16. Dr. Ikuo Yoshinaga (Japan), nominated by the JNC-ICID, agreed to continue the work of Prof. Hajime Tanji who could not provide his services due to his illness.

**WG-SDTA Minutes Item 8: Cooperation between Institutions from Taiwan and Korea**

17. The Chairman reported that RRI of KRC and THL of NCKU organised a Joint Seminar on 21-22 March 2018 at THL, NCKU which focused on issues of coastal erosion, tidal areas, renewable energy, and water resources disaster prevention.

**WG-SDTA Minutes Item 9: Any other business**

18. Dr. Jeongryeol Jang (Korea), member of the WG, announced that the Rural Research Institute (RRI) will host the International Conference together with the Opening Ceremony of HIGH-Center on 22<sup>nd</sup> November 2018 at Ansan City, Korea.





## Annex 1 [Appendix XV, Item 2]

## ROAD MAP TO ICID VISION 2030 – ACTIVITIES OF WG-SDTA

	Activity	Outcomes/ Outputs	Milestone for Year 2017	Milestone for Year 2018	Milestone for Year 2019	Milestone for Year 2020	Milestone for Year 2021	Milestone for Year 2022
<b>Goal B: Be a catalyst for change in policies and practices</b>								
<b>Strategy B1 :</b> Supporting Development of Appropriate Policies	1.1 Promoting Sophisticated water-saving irrigation development with IOT and water-saving irrigation model techniques exchanges	Technical report, workshop proceedings and water industry web site	Preparing: Promoting demonstrative plan	Site tests demonstration: Hardware construction and software tests	Site tests demonstration: Hardware, software and system control integrating process	Site tests plan: Workshop observation	Examination Plan results & improvement	Examination Plan results & improvement
	1.2 Promoting up-to-date water-saving experience exchange	As above	As above	As above	As above	As above	As above	As above
	1.10 Sustainable drainage management experience exchange	Internet of Things Water industry workshop						
<b>Goal C: Facilitate exchange of information, knowledge and technology</b>								
<b>Strategy C4 :</b> Compile, Collate and Share Knowledge and Experiences	4.26 Special Issue of ICID Journal on SDTA	Special issue of IRD	Announcement of special issue, inviting authors etc.	Setup Review Committee for selected papers based on the workshops	Submission of final drafts		Publishing Special Issue of IRD	
<b>Strategy C5 :</b> Dissemination of Data, Information, Tools, Knowledge and Know How	5.8 Develop and maintain the ICID web site as a knowledge hub	On-line						
<b>Goal E: Encourage research and support development of tools to extend innovation into field practices</b>								
<b>Strategy E3 :</b> Develop and Promoting Tools for AWM	3.2 The application for output of development tools from academic institutions			Prepare tidal prediction and typhoon wave model				
<b>Goal F: Facilitate capacity development</b>								
<b>Strategy F3:</b> Technical Training of Young Professionals from Member Countries	3.7 worksh/Training Workshop on Sustainable Development of Tidal Areas	Technical transfer and internet information short course /training workshop	Scope, theme and announcement		Short Course/Training Workshop on SDTA		Short Course / Training Workshop on SDTA	Short Course/ Training Workshop on SDTA
	3.8 To launch e-Discussion on Sustainable Development	E-discussion	E-discussion on Sustainable Development of Tidal Areas		e-Discussion on SDTA		e-Discussion on SDTA	

(Source: Consultative Group (CG) Report: A Water Secure World Free of Poverty &amp; Hunger: A Road Map to ICID Vision 2030)

**Annex 2** [Appendix XV, Item 4.1]**SIDE EVENT ON ‘INTEGRATED DEVELOPMENT OF TIDAL AREAS’ (2019)****Theme: ‘Global Challenges of Land Subsidence in Tidal Areas and the Integrated Solutions’**

Land subsidence is one of critical problems and challenges in tidal areas. Subsidence could damage buildings, aqueducts, well casings, bridges and highways. Subtle changes in land gradient can adversely impact sewer lines and storm drainage. As the land sinks, flooding problems are aggravated. Subsidence started to become a widespread problem when pumping technologies had developed enough to increase production, but before surface water systems were developed to meet growing water demand. Long-term overdraft or excessive pumping of a groundwater aquifer is one main cause among the others. And drought conditions had caused groundwater pumping to increase and groundwater levels to be lower, leading to more concerns about subsidence.

The side event will highlight the underlying causes and facts of land subsidence problems and issues around the world. The importance of using sound science, monitoring, and technology to inform management strategies and enhance environmental values to society will be emphasized. This event will also be a prime opportunity to engage the professionals with panels and discussions that will focus on integrated solutions to the current and future challenges.



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**Annex 3** [Appendix XV, Item 4.2]**INTERNATIONAL WORKSHOP ON  
‘INTEGRATING RESEARCH, PRACTICE, AND POLICY – AN EXCHANGE OF  
EXPERTISE FROM BASIN PERSPECTIVE’**

Tidal areas, with abundant ecosystems, are important interactive water-land environments. However, tidal areas are threatened by rising sea levels, extreme flood and drought events, land subsidence and so on. There is a pressing need to accelerate efforts for resilience and adaptation to the different challenges. As collaboration is essential to furthering the understanding of conservation, management, and sustainable use of tidal areas throughout the world, dialogues and partnerships among researchers, practitioners, managers, and policy-makers, with the overall goal of improving sustainable management of tidal areas are encouraged.

