

**Minutes of the 6<sup>th</sup> the Meeting of the  
WORKING GROUP ON SUSTAINABLE DEVELOPMENT OF TIDAL AREAS (WG-SDTA)**

10 November 2016: 09:00-10:30 hours (Session-I)

10 November 2016: 11:00-12:30 hours (Session-II)

Chiang Mai, Thailand

**Strategy Theme: Basin**

**Presented by the Chairman**

**Year of Establishment: 2011**

**Completion of the Mandate: 2016**

**Mandate:** (i) Identify sustainable management options of lowland, watershed, as well as sustainable development and management of water and land resources in tidal areas; (ii) To raise awareness of the increasing risk on tidal areas due to global climate change, stimulate discussion on impacts and mitigation, and find a balance between the preservation and development of tidal areas; (iii) 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; (iv) To review the progression of natural wetland conservation and constructed wetland development in tidal areas; (v) To join the international dialogue and organize international conferences to promote land and water management in tidal areas as well as evaluate the feasibility of tidal energy exploitation under global climate change; and (vi) 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) Dr. Hajime Tanji, Secretary (Japan); (3) Dr. Hsiao-Wen Wang (Chinese Taipei) represented by Ir. Ming Jen Kao; (4) Prof. Budi Santoso Wignyosukarto (Indonesia) represented by VPH Hafied Gany; (5) Dr. Jeongryeol Jang (Korea); (5) Prof. Zhang Zhanyu (China) represented by VP Dr. Ding Kunlun; (6) Ir. Hj. Nor Hisham bin Mohd Ghazali (Malaysia); and (7) Dr. Vijay K. Labhsetwar, Director, ICID represented Er. Avinash C. Tyagi, Secretary General.

**Observers :** (i) VP Bong Hoon Lee (Korea) (ii) Mr. Robiyanto Hendro Susanto (Indonesia); (iii) Dr. Shinsuke Ota (Japan); (iv) Dr. Daesu EO (Korea), (v) Ir. Jakia Akter (Bangladesh); (vi) Ir. Kun Chuan Chang (Chinese Taipei); (vii) Ir. Li Ruoxi (China); (viii) Dr. Ismail Widadi (Indonesia); (ix) Mohd Azmi Ismail (Malaysia); and (x) Dr. Anuj Kanwal (India).

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

**WG-SDTA Minutes Item 1: Action Taken Report by Chair**

1. The Chairman Dr. Ruey-Chy Kao presented the report of actions taken during the period since last meeting of the WG at Montpellier (2015). The Chairman informed that he actively communicated with WG members, contributors and ICID Central Office on activities such as Special Issue on SDTA, organization of the International Short Course during 1-6 August 2016 at National Cheng Kung University (NCKU) at Tainan City in Chinese Taipei and MoU with Rural Research Institute (RRI) of Korea Rural Community Corporation (KRC) etc.

2. WG Chair informed that participation of two participants from Korea i.e. (a) Dr. Joengryeol Jang (a member of WG-SDTA) and Mr. Byong Jun Park of the Rural Research Institute (RRI) of Korea Rural Community Corporation (KRC), Republic of Korea connected R.R.I., Korea with the organizer, Prof. Kao, Chairman of WG-SDTA, Tainan Hydraulic Laboratory (THL), National Cheng Kung University (NCKU) and Water Resources Agency (WRA, MOEA), Chinese Taipei, paving way for signing of the MoU for future cooperation. The MOU was signed during the WG meeting in Chiang Mai.

3. Prof. Henk P. Ritzema and Prof. Hsiao-Wen Wang have worked for the publication of Special Issues of ICID Journal on SDTA in 2016. The response was good and the review process is also ongoing as planned. The whole process is expected to be completed in early 2017.

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

4. The Chairman Dr. Ruey-Chy Kao briefly presented the draft Action Plan 2030 to the members for discussion. The Working Group discussed and finalized the draft Action Plan 2030 as given in **Annex 1** for onward submission to PCTA towards finalizing the ICID Action Plan for Vision 2030. The Action Plan 2030 includes activities such as workshop proceedings, Special Issue of IRD, Short Course/Training, e-Discussion on Sustainable Development of Tidal Areas etc.

**WG-SDTA Minutes Item 3: Report on International Short Course on SDTA, 1-6 August 2016 at Chinese Taipei**

5. The Chairman informed that the International short course on “Resilience and Adaptations to Climate Change for Sustainable Management of Tidal Areas” was successfully held during 1-6 August 2016 at National Cheng Kung University (NCKU) at Tainan City in Chinese Taipei. The course provided a good opportunity for the participants for face to face discussions, sharing experiences and learning from field trips and observations. The contents of the course were made rich by the presentations from experts and guest speakers on the subject. The participants learned a lot from each other, enriched their knowledge and got inspired in their professional duties. All the participants were satisfied with the course and gave good feedback afterwards.

6. The Chairman held an interim meeting of the WG members present after the course and discussed the preparation of Scoping Document for continuing the activities of the WG for another 6 years besides discussing issues emerging from the Montpellier meeting in 2015.

7. The Chairman informed that the short course resulted in landing two nominations, one each from Sri Lanka (Eng. L.S. Sooriyabandara) and India (Mr. Anuj Kanwal) for the membership of WG-SDTA by their NCs (See Item 9).

**WG-SDTA Minutes Item 4: e-Discussion on ‘Sustainable Development of Tidal Areas’ launched during the Short Course on SDTA at Chinese Taipei**

8. The Chairman informed the members during the meeting that the idea of launching an e-Discussion on ‘Sustainable Development of Tidal Areas’ was developed during the short course, discussed with the members of the WG during the interim meeting at Chinese Taipei and launched soon after the short course. All the participants in the course were invited to join and contribute to the e-discussion.

9. The Chairman brought the attention of the members to the “ICID-Young Professional's e-Forum (IYPeF)” which has been established in LinkedIn (<https://www.linkedin.com/groups/6990321/profile>). The e-Discussion was a great way to share and discuss knowledge and experience, not only among the Young Professionals but also among the members.

**WG-SDTA Minutes Item 5: Publications of the Working Group: A Special Issue of ICID Journal on SDTA in 2016**

10. The WG decided to publish a Special Issue of ICID Journal titled “Sustainable Development of Tidal Areas: Climate Change and Environmental Impacts” in early 2017. The Chairman informed that the ‘Review Committee’ has been continuously reviewing the papers for publication. About 10 papers are under consideration. Prof. Ruey-Chy Kao, and Prof. Hsiao-Wen Wang will develop the editorial in due course of time. The Chairman informed that the whole process may take some more time and the Special Issue can be expected to be published in early 2017.

**WG-SDTA Minutes Item 6: Updating Multilingual Technical Dictionary (MTD)**

11. WG discussed about the updating of MTD. Though at the Montpellier meeting (2015), Chair of the WG discussed the issue and Prof. Hajime Tanji (Japan), Secretary of the WG volunteered to take up the task. However, due to Prof. Tanji's illness, the task has been paused for a while. The JNC-ICID will continue to take the task. The Chair will contact with JNC-CID for future information.

**WG-SDTA Minutes Item 7: Summary of activities, Closure report and Scoping Document for a new WG**

12. The activities of 2011-2016 were discussed in the meeting of the WG. After deliberations, WG agreed that in future emphasis will have to be on collaborations among WGs and NCs and on the interdisciplinary and participatory concept on planning and management in tidal areas. WG discussed the scoping document of the new WG and agreed to the following ‘scoping plan and mandate’ for 2016-2022 (**Annex 2**):

- (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.

**WG-SDTA Minutes Item 8: Dissemination of activities of WG - Website of the Group**

13. WG Chair encouraged the members to meet more on-line to apprise, share ideas and look for solutions.

**WG-SDTA Minutes Item 9: Review of membership of the working group**

14. The India National Committee on Surface Water (INCSW) nominated Mr. Anuj Kanwal; the Sri Lanka National Committee (SLNICID) nominated Eng. L.S. Sooriyabandara and the Iraqi National Committee of ICID (IRQCID) nominated Eng. Ibrahim Abbas Dawood and Eng. Ghanim Hameed Hassan Alhashimi (Young Professional) for new membership. With the presence of Mr. Anuj Kanwal (India), he was officially accepted as a member of WG-SDTA while Eng. L.S. Sooriyabandara (Sri Lanka), Eng. Ibrahim Abbas Dawood and Eng. Ghanim Hameed Hassan Alhashimi (Iraq) were provisionally accepted as they were not present. The Chair will continuously contact with them. One attendee, Ms. Jakia Akter from Bangladesh, showed her interests to join the WG. She was advised to send her nomination to Central Office through Bangladesh National Committee to follow the official procedure of being a member of WG. Membership status is given in **Annex 5 (page 33)**.

**WG-SDTA Minutes Item 10: Any other business**

15. The participants have shown their keen interest in the WG activities, particularly in the tidal areas (including coastal, river mouth, etc. areas) and hoped to have more experience sharing with the WG. The Chair will include these ideas into the future activities.

**Webinar**

16. WG Chair requested members to suggest few topics along with name of the relevant experts who could be contacted to develop webinars for consideration of the ICID CO. WG decided to discuss this matter further during Web-Ex meeting.





## Annex 1 [Appendix XI, Item 2]

## ICID ACTION PLAN VISION 2030 – ACTIVITIES BY WORKBODIES

**Name of the Chairman and members filling this questionnaire:** Prof. Dr. Ruey-Chy Kao, Dr. Henk P. Ritzema (Vice-Chairman), Dr. Hajime Tanji (Secretary) and Dr. Hsiao-Wen Wang

**Dated: 10 November 2016**

		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 1: Enable higher crop productivity with less water and energy</b>			<b>Milestone 1</b>	<b>Milestone 2</b>	<b>Milestone 3</b>	<b>Milestone 4</b>	<b>Milestone 5</b>	<b>Milestone 6</b>
	<b>Activity 1.1</b> Promoting sophisticated water-saving irrigation development with Internet of Things and water-saving irrigation model techniques exchanges	Technical concept report, Workshop proceeding and Water Industry Web Site	Preparation: 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 and improvement	Examination: Plan results and improvement
	<b>Activity 1.2</b> Promoting up-to-date water-saving experience exchange	As above	As above	As above	As above	As above	As above	As above
<b>Goal 2: Be a catalyst for change in policies and practices</b>	<b>Activity 2.1</b> Experience exchange in policies and practices for sustainable management	Workshop	Workshop	Workshop	Workshop	Workshop	Workshop	Workshop
<b>Goal 3: Facilitate exchange of information, knowledge and technology</b> <b>Providing platform for AWM Professional</b>	<b>3.1</b> Organise internal / International technical Workshop on modernization of Irrigation System with other WG or NCs	Workshop Proceedings	Workshop		Workshop		Workshop	
	<b>3.2</b> Special Issue of ICID Journal on SDTA	Special Issue of Irrigation & Drainage	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>Goal 6: Facilitate capacity development</b>	<b>6.1</b> Short Course/ 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
	<b>6.2</b> To launch e-Discussion on Sustainable Development of Tidal Areas	E-Discussion	e-Discussion on Sustainable Development of Tidal Areas		e-Discussion on SDTA		e-Discussion on SDTA	





**Annex 2** [Appendix XI, Item 7]**SCOPING PLAN AND MANDATE (DRAFT)**

1. Based on the previous mandate and action plan of 2011-2016, the WG achieved the following:
  - (a) There was one handbook published.
  - (b) There were 6 workshops held including 2 International ones and 4 internal ones. Twelve papers from these workshops were selected to be listed in the Special Issue of ICID Journal.
  - (c) The CTCID, JNC-ICID and KCID have sponsored 3 WG publications. Further, the CNCID has sponsored 1 publication.
  - (d) The International Short Course on “Resilience and Adaptations to Climate Change for Sustainable Management of Tidal Areas” started from late 2015. The WG invited 5 lecturers and 2 keynote speakers from the Netherlands, USA, Japan, Korea and Chinese Taipei to share their experiences with the 20 participants from 14 countries covering Asia, Africa and North America at National Cheng Kung University (NCKU), Tainan, Chinese Taipei, from August 1-6, 2016. The participants have given positive feedback for the short course.
2. During 2011-2016, WG-SDTA held a series of activities and roughly learned the situations about the tidal areas of the coastal countries. They are facing the paradox of the competition and cooperation as well as how to balance between development and conservation. In addition to the updated professional techniques and the public monitoring of data the stakeholders’ involvement should strengthen the communications of knowledge and concepts. Furthermore, they are able to include both development and conservation by experience and technique consultant from other countries.
3. The tidal level variations directly influence the drainage systems of the coastal countries. In order to reduce the loss of property and lives, the constructing intelligent flood control system would be a solution by integrating the rainfall information in upstream catchments, the waterway monitoring systems of middle/downstream and the potential flood simulation and tidal level prediction model of downstream.
4. To better understand and deal with problems such as land-subsidence caused by over pumping of groundwater and sea water intrusion as well as flood caused by the depreciation of drainage systems along the coast, it is a good way to construct the optimal management system by exploiting the modern technologies like Cyber-Physic System and IOT.
5. In addition to the interdisciplinary collaborations of hydrology, hydraulics, irrigation, drainage and sea tides, waves, current and storm surge techniques, the WG will promote the advanced management of irrigation, drainage, flood control and groundwater by combing the latest technologies of ICT, IOT, CPS and data techniques.
6. To achieve the goal of promoting sustainable development of tidal areas, the WG has updated the mandate for 2016-2022 as below:
  - (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.



