

Minutes for the First Meeting of the  
**WORKING GROUP ON SUSTAINABLE DEVELOPMENT OF TIDAL AREAS (WG-SDTA)**  
 Tehran, Iran  
 17 October 2011: 9:00-12:30 hours  
*Strategy Theme: Basin*

**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. Park Sang Hyun, Chairman (Korea, Rep. of 2002); (2) Ir. Henk P. Ritzema, Vice-Chairman, 2009 (The Netherlands, 2002) represented by Prof. Bart Schultz; (3) Dr. Ruey-Chy Kao, Secretary, 2009 (Chinese Taipei, 2007); (4) Vice President Hon. Prof. Cai Lingen (China, 2002); (5) Dr. Indreswari Guritno (Indonesia, 2002) represented by Vice President Hon. **Dr. A. Hafied A. Gany**; (6) ) Mr. R.C. Jha represented Dr. E.J. James (India, 2002); (7) Mr. Ueda Kazumi (Japan, 2003) represented by Dr. Kazuaki Hiramatsu; (8) Mr. Teoh Weng Chaw (Malaysia, 2007) represented by Prof. Mohd. Amin. Mohd. Soom; (9) Dr. (Ms.) Hsiao-Wen Wang (Chinese Taipei, 2010) as Young Professional; and (10) Secretary General, ICID represented by Dr. Vijay K. Labhsetwar.

**Members Hon.:** (i) VP Dr. Laszlo G. Hayde (Hungary); and (ii) VPH Shinsuke Ota (Japan).

**Observer:** Dr. Jo Jin Hoon (Korea, 2009).

**Others:** (i) Ms. Chun-Yi Liu (Taiwan); (ii) Dr. Joong-Dae Choi (Korea); (iii) Dr. Kiwook Park (Korea); (iv) Ms. Eunmi Hong (Korea); (v) Ir. Jin-Yong Choi (Korea); (vi) Ir. Waled K. Shlash (Iraq); (vii) Ir. Khaled Qassim Othman (Iraq); (viii) Ir. Budi Santoso Wignyosukarto (Indonesia); (ix) Engr. Md. Ahasan Ullah (Bangladesh); (x) Ir. Sun Ju A. (Korea); (xi) Ir. Gilchai-Shin (Korea); (xii) Ir. Hiroyuki Suzuki (Japan); (xiii) Ir. Kunihiro Naito (Japan); (xiv) Prof. Dr. Tai Cheol Kim (Korea); (xv) Ir. Loh Kim Mon (Malaysia); (xvi) Dr. Chan Chee Sheng (Malaysia); (xvii) Dr. Iwamoto Akira (Japan); (xviii) Ir. Ray-Shyan Wu (Chinese Taipei); (xix) Ir. Ping Chen (Chinese Taipei); (xx) Ir. Abdal-Redha Mistad (Iraq); (xxi) Ir. Basil Irhayyim Marzok (Iraq); (xxii) Ir. Kadhimchaloob (Iraq); (xxiii) Ir. Ming-Young Jan (Chinese Taipei); (xxiv) Ir. Chang-Chi Cheng (Chinese Taipei); (xxv) Ir. Hyun-Tai Kim (Korea); (xxvi) Ir. Pei-Chun Ni (Chinese Taipei); (xxvii) Dr. Koji Inosako (Japan); (xxviii) Ir. Heru Sunarto (Japan); (xxix) Ir. Tris Radityan (Indonesia); (xxx) Ir. Ferdinand Pakpahan (Indonesia); (xxxi) Ir. Ezzatollah Farhadi (Iran); (xxxii) Ir. Iwan Nursyirwan (Indonesia); (xxxiii) Ir. Imam Ahns Mueroho (Indonesia); (xxxiv) Ir. Tohik Usmana (Indonesia); (xxxv) Ir. Sung Hee Lee (Korea); (xxxvi) Ir. Azita Ramezani (Iran); (xxxvii) Ir. Emir Faridz (Indonesia); (xxxviii) Ir. Fauzi Idris (Indonesia); and (xxxix) Ir. Mudjadi (Indonesia).

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

**Item 1 : Confirmation of the minutes of the 9<sup>th</sup> meeting of the erstwhile Working Group**

The minutes of the 9<sup>th</sup> meeting of the erstwhile Working Group held at Yogyakarta (2010), Indonesia were confirmed.

## A Issues emerging from the erstwhile WG-SDTA

### Item 2 : Publication of the Handbook on SDTA

The Handbook on SDTA titled 'Towards Sustainable development of Tidal Areas: Some Principles and Experiences' had been published and since been released during the Tehran Congress.

As customary, the members of the WG-SDTA, all active NCs and present office-bearers receive a complimentary copy of the SDTA Handbook.

Additional copies of the publication can be purchased from the ICID Central Office at 50% discount to National Committees and members.

Japanese NC had published Japanese proceedings based on SDTA Handbook which were circulated among NCs in March 2011.

Korean NC will publish the Handbook in Korean in 2011.

### Item 3 : A Special issue of ICID Journal on SDTA

At Yogyakarta (2010), WG members agreed that a Special Issue of ICID Journal based on SDTA - publication will be published in 2011 and NCs represented in the WG-SDTA will sponsor the Special issue. A Special issue costs about US\$ 15,000 for about 10 papers which will be reviewed by Guest Editors.

National Committee	Papers to be included	Special issue costs
Chinese Taipei	3	
Indonesia	1 (2)	
Japan	(1~3)	
Korea	3	
The Netherlands	2	
TOTAL	9 (10~13)	US\$ 15,000

Nine papers had been submitted (3 from Korea, 3 from Taiwan, 2 from The Netherlands and 1 from Indonesia).

Chairman requested Japanese NC to submit 2 or 3 papers. Dr. Hiramatsu agreed and will discuss the issue with Dr. Taniyama and expedite sending the papers from Japan.

Dr. Park hoped that Indonesia, Japan, Korea, Taiwan and the Netherlands could share the cost. Chairman informed that USD 5000 will be made available from Korean NC, requiring new WG leaders to support and manage the balance cost.

## B Issues emerging from the New Mandate

Referring to the description of the mandate (draft) at **Annex 1**, Prof. Hsiao-Wen Wang (Chinese Taipei) presented the new mandate and the six year rolling plan.

Prof. Choi Joong-Dae (Korea) recommended that sea erosion problem should also taken into consideration. In addition, Chairman Dr. Park, reminded that WG-SDTA is under ICID and the productivity and profit from the irrigation and drainage in tidal areas should be kept in mind.

### Item 4 : Review of membership of the Working Group

#### 4.1 Continuing the membership

The Indian NC has nominated (6 July 2011) Mr. T. Nagendra (India) in place of Dr. E.J. James for the membership of the WG. However he did not attend in the WG Meeting. His nomination was deferred to the next meeting.

The Indonesia National Committee of ICID (INACID) nominated Prof. Budi Santoso Wignyosukarto to replace Dr. Indreswari Guritno. His nomination was accepted, as he attended the meeting to show his willingness to contribute as a WG Member.

The Japanese National Committee of ICID (JNC-ICID nominated) Dr. Kazuaki HIRAMATSU in place of Mr. Ueda Kazumi for the membership. His nomination was accepted as he was present and had already contributed as chapter editor to SDTA Handbook.

The Korean NC nominated Dr. Park Kiwook (Korea) in place of Dr. Park Sang Hyun for the membership. His nomination was accepted, as he attended the meeting to show his willingness to contribute as a WG Member.

In addition, Engr. Md. Ahasan Ullah (Member Secretary, Bangladesh National Committee) attended the WG meeting and submitted his CV requesting WG Membership. As he came from LDC and had shown willingness to contribute, his nomination was accepted as a new WG member.

#### **4.2 Election of Chair, Vice-Chair and Secretary**

Firstly, the proposal (3 October 2011) from Ir. Henk P. Ritzema (The Netherlands) to continue as Vice-Chairman of WG-SDTA was accepted.

All the WG members agreed with the proposal of Dr. Park Sang Hyun that Prof. Ruey-Chy Kao (Taiwan) will be new Chairman of the WG.

Prof. Ruey-Chy Kao (Taiwan) proposed Prof. Kazuaki Hiramatsu (Japan) as the new Secretary and all the WG members agreed with it.

**Item 5 : Sustainable management options for lowlands**

**Item 6 : Climate change and increasing risks on tidal areas**

**Item 7 : Survey – past design and management systems, operational standards and rehabilitation methods**

**Item 8 : Review the progression of natural wetland conservation and constructed wetland development in tidal areas**

**Item 9 : Organize international dialogue / conferences to promote land and water management in tidal areas**

As for as item 5 to 9 were concerned, Prof. Hsiao-Wen Wang (Taiwan) presented some of the possible management options for each criterion. Dr. Park Sang Hyun (Korea) emphasized that the work plan shall reflect the SDTA principles in detail, including productivity, ecological conservation and disaster prevention for the sustainable development and management of irrigation and drainage activities in Tidal areas. New WG Chairman and leaders will further revise and improve the work plan.

**Item 10 : Internal Workshop of WG-SDTA, Tehran, Iran**

The internal workshop of WG-SDTA titled “*Sustainable Water / Environment Management in Tidal Areas*” is scheduled to be held on 17 October 2011 (13:30-17:00 hours).

**Theme:** “Sustainable Water / Environment Management in Tidal Areas”

**Sub-themes:**

1. Water Quality Management in Tidal Areas
  2. Ecological Resources Management in Tidal Areas
  3. Flood Management in Tidal Areas
  4. Engineering for Sustainable Development of Tidal Areas
  5. Integrated Tidal Area Management and Decision and Policy Making
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Nine papers have been received, so far: Taiwan (3), Indonesia (1), Korea (3), and The Netherlands (2). Integrated Review has been carried out by WG Leaders including Prof. Henk, Prof. Ruey and Ms. Liu (Chinese Taipei) in WG Secretariat as well as Mr. Kim Ju Chang (Korea).

Korean NC supported the printing of the WS Proceedings in cooperation with Prof. Kao, as ever. The list of papers is available at **Annex 2**. Selected papers will find a place in the Special Issue of ICID Journal on SDTA in 2012.

**Item 11 : Work Plan / Future Activities**

At the WG meeting in Tehran, detailed Six-years rolling plan (**Annex 3**) for future activities of the WG SDTA was presented by Prof. Hsiao-Wen Wang (Taiwan) It was accepted by the WG. Some part of the plan will be revised later.

**Item 12 : Any Other Business**

**Best Performing Work body Award (2011)**

Chairman announced that the WG-SDTA had been selected to get the 3<sup>rd</sup> Award for the Best Performing Workbody in 2011.

The Chairman appreciated all the WG members and distinguished supporters who have devoted to publish Handbook on SDTA and organize International Workshops for 8 consecutive years from 2002 to 2010, supported by numerous ICID NCs and ICID leaders.

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**WORKING GROUP ON SUSTAINABLE DEVELOPMENT OF TIDAL AREAS (WG-SDTA)****Mandate:**

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- (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;
- (vi) To collaborate with other related working groups actively, and to exchange relevant experiences amongst NCs and support for developing, and least developed countries.

**Description of the Mandate (Draft)**

Tidal areas, with abundant ecosystems, are important interactive water-land environments. Due to the global climate change, tidal areas are threatened complicatedly by rising sea level, extreme floods events and droughts and so on.

It is hence urgent to revisit the past design and management system, operational standards and rehabilitation methods of the existing irrigation and drainage facilities, and review the progression of natural and constructed wetlands in near shore, estuary, and tidal flat areas.

Aiming to reduce CO<sub>2</sub> and protect the ozone shield, green power generation such as wave or tidal current energy is adopted, hoping that by which measure we can slow down the climate change. However, as offshore energy infrastructures are being established increasingly, facilities such as offshore wind farms may occupy large areas and compete with other users of the maritime space. Offshore platforms than can combine many functions within the same infrastructure could offer significant benefits in terms of economics, optimizing spatial planning and minimizing the impact on the environment.

Hence, novel innovative designs for multiuse offshore platforms targeting ocean renewable energy and in particular offshore wind, aquaculture and the related services should be developed in tidal areas. Efforts need to be made to address the interaction between energy and other platform users, and to assess the economic viability and environmental impacts in Tidal areas. Also, in order to better understand the changing tidal area environment, we have to introduce enhanced survey techniques and systematic monitoring programs in the tidal area.

Under the pressure of human activities, tidal land area in many countries has been subsiding due to over-pumping groundwater. Problems such as sea water intrusion, land salinization, and decreasing land value could then occur in higher potential. While tacking with the extreme events, ICID WG-SDTA should initiate more discussions on and raise awareness of the increasing risk on tidal areas by joining international dialogues and organizing international conferences in cooperation with related WG, such as WG-DRG, WG-DRG, WG-CLIMATE and WG as well as WGENV, supported by each regional WG and NC who are concerned with Tidal areas.

The ultimate goal for WG-SDTA is to find a balance between the preservation and development of tidal areas, and thus provide relevant experiences to assist island, developing, and undeveloped countries.

WG SDTA will derive feasible strategies of sustainable management of lowland, watershed, and water and land resources to reduce the risk or appropriate exploitation of tidal and ocean energy to reduce carbon dioxide emissions should be formed.

**INTERNAL WORKSHOP OF WG-SDTA**

***“Sustainable Water / Environment Management in Tidal Areas”***  
**17 October 2011 (13:30-17:00 hours)**

1. Temporal and Spatial Variations of heavy Metal Concentrations in Sediments of the Tainan Coastal Area, Taiwan- Ping Chen, et.al
  2. Habitat for the Migratory Birds in Tidal Land Reclamation Area of Korea-Dr. Sang-Hyun Park, Jae-Ok Kim, Kwang-Jae Ji and Deog-Bae Lee
  3. Strategies to Cope with Uncertainty in the Development of Water Management Practices in Tidal Areas-Dr. H.P. Ritzema
  4. Catchment Water Quality Management Planning for Sustainable Development of Tidal Areas-Prof. J. oong-Dae Choi, Kyong-Jae Lim and Cheol-Hee Won
  5. Application of Decision Support System to Sustainable Lowland Planning and Management in Yunlin Area, Taiwan- Prof. Hsiao-Wen Wang, et.al
  6. Monitoring of Shallow Groundwater Salinity in Livestock Manure Application to Tidal Reclaimed Land- Ms. Eun-Mi Hong, Jin-Yong Choi, Seung-Hwan Yoo, et.al
  7. Reliability of Tidal Irrigation System for Leaching and Flushing of Acidity in the Reclamation of Acid Sulphate Soil, Kalimantan Indonesia- Dr. Budi Santoso et.al
  8. Global Inventory of Closed-Off Tidal Basins and Developments after the Closure- Prof. Bart Schultz, Laszlo Hayde
  9. Investigation and Assessment of Submarine Groundwater Discharge of Ping-Tung Near Shore Area in Southwestern Taiwan- Prof. Ruey-Chy Kao, et.al
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**WORKING GROUP ON SUSTAINABLE DEVELOPMENT OF TIDAL AREAS (WG-SDTA)  
SIX-YEARS ROLLING PLAN**

<b>Activity</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>
<b><i>Publication of Special Issue</i></b>						
• Announcement Guidelines	✓		✓ (3)	✓		
• Inviting Authors	✓		✓	✓	✓	
• Study and Writing	✓			✓	✓	
• Publication of the Special Issue		✓ (1)				✓
• Dissemination of the Special Issue		✓ (2)				✓
<b><i>Workshop</i></b>						
• Determining subject of workshops	✓	✓		✓		
• Workshops	✓		✓		✓	
• Website dissemination	✓	✓	✓	✓	✓	✓
<b><i>Short Courses</i></b>						
• Determining subject of short course			✓		✓	
• Determining organizer of each course			✓		✓	
• Preparing			✓		✓	
• Short courses				✓		✓
• Website dissemination		✓	✓	✓	✓	✓
<b><i>New Membership</i></b>	✓	✓	✓	✓	✓	✓
<b><i>SDTA Information Platform</i></b>	✓	✓	✓	✓	✓	✓
<b><i>Visiting member counties (experience sharing and discussion)</i></b>	(to be discussed)					

\*(1) and (2): indicate the publication of special issue on the topic "Sustainable Water / Environment Management in Tidal Areas".

\*(3): In 2013, WG leaders will discuss the new theme and topic for another special issue.