

**WORKING GROUP ON VALUE ENGINEERING (WG-VE)
69th IEC Meeting Saskatoon, Canada 2018
Closure Report — May 2024**

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BACKGROUND HISTORY AND MANDATES

The Working Group on Value Engineering (WG-VE) was formalized in 2018 at the 69th IEC Meeting in Saskatoon, Canada. It originated from the ICID Task Force on 'Value Engineering for Cost Saving in Irrigation and Flood Projects' (TF-VE) that was established in 2011 to bank upon the benefits of Value Engineering and Value Management. Having concluded its mandate in 2016, TF-VE's terms were extended till 2017 to develop a scoping document for the new WG-VE and fresh mandate.

The objective of WG-VE was to promote the application of Value Methodology (Value Engineering, Value Analysis, Value Planning, Value Management and Value Engineering Change Proposal (VECP) in irrigation, drainage, and flood management projects to increase benefits, reduce cost and to ensure Sustainable Irrigated Agriculture.

WG-VE MANDATE

The following mandate of the WG-VE is as follows:

- (a) To motivate ICID National Committees in various countries to set up their National Working Groups.
- (b) To provide guidance to compile, publish, update and/or translate documents on Value engineering projects (irrigation, drainage, flood management, and river engineering);
- (c) To promote inter-disciplinary exchange of information, knowledge, and experience, as well as networking on the topic;
- (d) To organize seminars at ICID Congresses and meeting to enhance awareness of importance of Value Engineering;
- (e) To prepare a paper on "Application of Value Engineering in Irrigation and Flood Projects" for publication in Irrigation and Drainage (IRD);
- (f) To finalize a book on Application of Value Engineering in Irrigation and Flood Projects."
- (g) To encourage member countries to produce papers on Value Engineering case studies (h) To promote the planning and execution of the virtual training of the WG for selected engineers from different countries on 'Value Engineering application for saving in irrigation, drainage, and flood projects.

ACTIVITIES UNDERTAKEN

- (a) Seminars were organized during ICID congresses and meetings.
- (b) Short training films on VE were prepared.
- (c) The WG's publication on VE were promoted.
- (d) The paper published in Irrigation and Drainage Journal on VE by WG's chairman was promoted.
- (e) Virtual meetings were held.

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- (f) WG's website were enriched.
- (g) A VE training course were presented of YPs of ICID.

2013 – 64th IEC Mardin, Turkey

- (a) Working Group sharing of experiences and updates on activities in NCs
- (b) Internal Workshop on Value Engineering

2014 – 65th IEC, Korea

- (a) Working Group sharing of experiences and updates on activities in NCs
- (b) Presentations
 - ❖ 'Drainage Network in Ramhormoz-Iran' by Dr Kemran Emami (INCID)
 - ❖ 'VE in Japan' by Dr Toshihiko Kuno (JNCID)
 - ❖ 'Implementing Value Management for a Flood Mitigation Project – Malaysian Experience' by Ir. Nor Hisham Mohd Ghazali (MANCID)

2015 – 66th IEC, France

- (a) Task Force sharing of experiences and updates on activities in NCs
- (b) Presentations
- (c) 'Value Engineering 101' by Dr. Mike Pearsall
- (d) 'Value Engineering, Creative Synergy and the Challenges of the Third Millennium' by Dr Kemran Emami (INCID)
- (e) 'VE Application in Water Engineering' by Dr Kemran Emami (INCID)
- (f) 'Trend of VE in Japan' by Dr Toshihiko Kuno (JNCID)

2016 – 67th IEC, Chiangmai, Thailand

- (a) Taskforce sharing of experiences and updates on activities in NCs

2017 – 68th IEC Meeting, Mexico City, Mexico

- (a) Taskforce sharing of experiences and updates on activities in NCs
- (b) Half-day Training workshop for Young Professionals titled "Value Engineering: An effective and efficient methodology for Enhancing irrigation, drainage and flood management projects". About 17 young professionals from Afghanistan, Australia; Canada; Ecuador; Egypt; Ethiopia; Finland; Ghana; Indonesia; India; Iran; Malaysia; Mexico; Morocco; South Africa; and South Korea participated.
- (c) Four presentations i.e. (i) 'Training Workshop for Young Professional entitled "Value Engineering : An Effective and Efficient methodology for Enhancing irrigation, drainage and flood management projects'; (ii) Films on introduction to Value Engineering; (iii) 'Value Engineering for Unbiased Design'; (iv) 'Case studies of VE in irrigation projects in Japan' were uploaded into the ICID WG-VE website

2018 - 8th March 2018

- (a) Training workshop on Value Engineering (V) for a team of 25 young professionals (YPs) engaged in the water and agriculture sector from the Institute for Technology and Resources Management in the Tropics and Subtropics (ITT) of Technical University of Cologne, Germany; Agricultural Sciences and Resource Management in the Tropics and Subtropics (ARTS) of the University of Bonn, Germany and Environmental Science Research Institute of the Shahid Beheshti University Tehran, Iran. These workshops were conducted by VPH Kemran Emami.

2018 - 69th IEC Meeting, Saskatoon, Saskatchewan, Canada

- (a) 1st Informal meeting of the Working Group on Value Engineering
- (b) Sharing of experiences and updates on activities in NCs
- (c) The "Workshop on Application of Value Engineering in Irrigation and Flood Projects" was organised by WG-VE on 14 August 2018, from 15:30-17:00 hours. Three papers were presented:
 - ❖ 'Contribution which a member of Japan National Committee can do to the WG-VE' – this is an information note as to the expected contributions of the JNCID member to the WGVE presented by Dr Toshihiko Kuno JNCID;
 - ❖ 'Application Case of VE to the design phase of Irrigation Drainage Project in Japan - HIRAKA Alluvial Fan Irrigation and Drainage Project -[Basic Design of MINASE-2 Main Channel]' presented by Dr Toshihiko Kuno JNCID;
 - ❖ 'Institutionalizing Value Management In The Malaysian Government Procurement System' - presented by Nor Hisham Ghazali MANCID

2019 - 70th IEC Meeting, Bali, Indonesia

- (a) Working Group sharing of experiences and updates on activities in NCs
- (b) Internal workshop of the WG-VE was conducted on 04 September 2019 and the following two presentations were made by the WG Chair:
- (c) Value Engineering Opportunities and Challenges
- (d) Summary of the publication 'Value Engineering for Savings in Irrigation, Drainage and Flood Projects

2020 – 71st IEC Meeting,

- (a) 3rd Informal Meeting WG-VE was held on 4th October 2020
- (b) Working Group sharing of experiences and updates on activities in NCs

2021 – 72nd IEC Meeting, Marrakesh, Morocco

- (a) 4th Informal Meeting WG-VE
- (b) Working Group sharing of experiences and updates on activities in NCs

2022– 73rd IEC Meeting; Adelaide Australia

- (a) 5th Informal Meeting WG-VE
- (b) Working Group sharing of experiences and updates on activities in NCs

2023– 74th IEC Meeting; Vizag, India

- (a) 6th Informal Meeting WG-VE
- (b) Working Group sharing of experiences and updates on activities in NCs

PUBLICATIONS

- (a) Paper entitled 'Value Engineering Opportunities and Challenges' was published in Irrigation and Drainage Journal (Volume 69, Issue 2, and April 2020). Digital version is available at https://icid-ciid.org/inner_page/127.

- (b) TF-VE publication ‘Value Engineering for Savings in Irrigation, Drainage and Flood Management Projects’; ISBN No. 978-81-89610-28-9; ICID 2021
- (c) TF-VE E-publication on ‘Value Engineering for Savings in Irrigation, Drainage and Flood Management Projects’ available at https://icid-ciid.org/icid_data_web/TF_VE_e-Publication2021.pdf).

CONCLUSION AND RECOMMENDATIONS

Value Engineering can play a key role in enhancing the value of water projects but the worldwide experiences indicated that much time and resources are need for promoting VE especially in developing countries. The WG’s publication (Books and Journal paper) should be promoted continuously by ICID. Virtual training courses should be prepared and/or training films should be produced.

WAY FORWARD

The WG should continue with original mandate in the context of the new structure of ICID.



SUMMARY OF ACTIVITIES OF WG (2016 - 2023)

1. **2016-17** — The WG was established in 2016 and held its 1st meeting on 12 October 2017 at Mexico City, Mexico. VPH Franklin Dimick (United States) was selected as Chairman and Clarke Ballard (Australia) was selected as Vice-Chairman. No Secretary was selected at this time but Mr. Ballard agreed to act as Secretary until one is selected next year. It was decided that the Working Group would organize and host a Workshop in Saskatoon, Canada during the IEC meeting next year. Clarke Ballard agreed to take the lead in organizing the Workshop.

2. **2018-19** — At 2nd meeting of the WG held at Saskatoon, Canada (2018), Dr. Jaepil Cho (South Korea) was selected as Secretary of the Working Group. Clarke Ballard (Australia) summarized short papers submitted to the Working Group from Australia, Japan, Turkey and USA describing case studies of managing water scarcity under conflicting demands in those countries. The Workshop planned for Saskatoon, Canada in 2018 was cancelled at the request of ICID Central Office and the CANCID Coordinating Committee. Therefore, the Working Group changed their Workshop to an internal Workshop entitled “Managing, on the National Level, Water Scarcity Resulting from Conflicting Demands.”

The 3rd meeting of the WG was held in Bali, Indonesia (2019). Vice-Chairman Clarke Ballard (Australia) conducted the meeting as VPH Franklin Dimick (USA) could not attend. Six papers were presented during the internal Workshop. The papers were from: USA, Turkey (2), Philippines, Australia, and the UK.

3. **2020-21** — Due to the international COVID-19 pandemic, no face-to-face meetings were held in Sydney, Australia in 2020 as had been planned. Both the 4th meeting of the Working Group and The International Workshop on “Managing on the Regional, State or Local Level, Water Scarcity Resulting from Conflicting Demands” were rescheduled for December 2020 in Morocco. Due to the continued COVID-19 pandemic those face-to-face meetings were dismissed early due to lack of attendance from people who could not or would not travel during the pandemic. The 4th meeting of the Working Group was held virtually via computer link on 23 October 2020. Due to the delays caused by the pandemic, the Working Group requested that the PCTA extend the completion date of its mandate by one year until 2023. That request was approved by the PCTA. A summary report of all Working Group activities to date and of the internal Workshop was presented by Vice-Chairman Ballard. A web-based seminar was planned for early 2021. Mr. Ragab Ragab (UK) agreed to be the speaker and would discuss the work he is now doing in Scotland.

A virtual meeting of the Working Group was held on 25 August 2021 to discuss status of work being performed. The International Workshop on “Managing on the Regional, State or Local Level, Water Scarcity Resulting from Conflicting Demands has been delayed until the ICID meeting in Adelaide, Australia in October of 2022. Request for Workshop papers has been recirculated.

The 5th meeting of the Working Group was held in Marrakesh, Morocco on 28 November 2021. The meeting was held both face-to-face and virtually at the same time. Preparation of the draft “Indicators for Measuring Water Scarcity” was assigned to Mr. Amali Amali (Nigeria). No Working Group member has been willing to prepare the draft “Technical Guidelines to Manage Water Scarcity under Conflicting Demands”. Dr. Jaepil Cho (South Korea) indicated that due to a change in employment he could no longer perform the duties as Secretary of the Working Group.

Two web-based seminars were held earlier in the year. One was by President Ragab Ragab entitled “Suitable Water, Crops and Land Management for Water Stressed Regions.” The other was by Terri Edwards of the U.S. Bureau of Reclamation entitled “Dividing the Waters: A History of Litigation in the Truckee River Basin and Hope for the Future.” Both the seminars were informative and successful.

4. **2022-23** — The 6th meeting of the Working Group was held in Adelaide, Australia on 8 October 2022. Dr. Mikiko Sugiura (Japan) was appointed Secretary of the Working Group. Prior to the Working Group meeting a very successful International Workshop entitled “Managing on the Regional, State and Local Level, Water Scarcity Resulting from Conflicting Demands” was held on 3 October 2022 in Adelaide. The papers presented at the workshop were uploaded on the website of the Working Group

(https://icid-ciid.org/icid_data_web/Workshop_MWSCD2022.pdf). The draft “Indicators for Measuring Water Scarcity” were prepared by Mr. Amali Amali of Nigeria and circulated to the Working Group for review and comments. Mr. Zafar Iqbal (Pakistan) agreed to prepare the draft “Technical Guidelines to Manage Water Scarcity under Conflicting Demands.” Those Guidelines were circulated to the Working Group membership for comments late in 2022. Vice Chairman Clarke Ballard (Australia) has consented to draft the final report of the working group.

Two virtual meetings of the Working Group were held during the 2023 year. One on 24 February 2023 and the second on 6 October 2023 in preparation for the 7th and final meeting of the Working Group in Vizag, Andhra Pradesh on 6 November 2023. The result of these three meetings was that the Indices and Guidelines need additional input from the Working Group members before they are finalized in early 2024. The final technical report will be completed in 2024. The structure of the draft report was circulated to Working Group members on 22 February 2023. It will have three separate sections; 1) National, 2) State or Regional, and 3) Local, approaches to managing water scarcity under conflicting demands.

