

APPENDIX XVII [PCTA Item 8.1]

**AGENDA FOR THE 2ND MEETING OF THE
WORKING GROUP ON CAPACITY DEVELOPMENT, TRAINING AND EDUCATION (WG-CDTE)**

12 October 2017, 09.00-10.30 hours (Session I)
12 October 2017, 11.00-12.30 hours (Session II)
Mexico City, Mexico

Strategy Theme: Knowledge

Presented by the Chairman

Year of Establishment: 2015

Completion of the Mandate: 2021

Mandate: (i) Coordinate and guide the knowledge management activities of the Commission and the capacity development activities by various WGs; (ii) Compile the status of training and educational programmes offered in different regions; (iii) Compile the Educational Programs being offered in irrigation and drainage in different regions; (iv) Identify the training and education requirements, and identify gaps in available training programs, explore the feasibility of developing e-learning program and prepare guidelines for their development to support education and training programmes; (v) Explore the scope of use of IT in capacity development including distant learning, and implement where feasible; (vi) Make available various tools required for sustainable development; (vii) Oversee the establishment and functioning of a Technical Support Unit for supporting NCs; and (viii) Facilitate the process of balancing education and training requirements, and provision and training services.

Website: http://www.icid.org/wg_cdte.html

WG-CDTE Agenda Item 1: Action Taken Report by Chair

1. The Chair will present report on the actions taken on the decisions and proposals of the working group at its last meeting held at Chiang Mai in November 2016.
2. No new nominations have been received from NCs during the year. Chairman in consultation with Vice Chair of the WG and the Central Office has updated the membership of the WG as given at **Annex 1** (*refer electronic version for latest list*). New nominations, if any, for the membership received will be dealt suitably after the meeting.

WG-CDTE Agenda Item 2: Road Map to ICID Vision 2030 – Activities on capacity development, training and education

3. Based on the inputs from the workbodies at the 67th IEC and fresh inputs received upto March 2017, the Consultative Group (CG) on Action Plan 2030 finalized Action Plan for ICID as presented in their report "A Water Secure World Free of Poverty & Hunger : A Road Map to ICID Vision 2030". Action Plan for WG-CDTE as presented in CG report is given as **Annex 2**.
4. During Chiang Mai meeting, the Chair presented and discussed the draft Action Plan 2030 of the WG and identified that three Goals - (i) Facilitate exchange of information; (ii) Encourage research and support development of tools to extend innovation into field practices; and (iii) Facilitate capacity development, are relevant to the activities of WG-CDTE. The Group will discuss the Action Plan, review / update information on various activities and finalise milestones to achieve outcome as indicated in the Action Plan.

WG-CDTE Agenda Item 3: Promoting capacity development, training and education

WG-CDTE Agenda Item 3.1: Updates on activities of Technical Support Unit (TSU)

5. Technical Support Unit (TSU) was established at ICID Central Office vide notification no.1/2016 dated 4 January 2016 to undertake capacity development activities in the field of agriculture water management (AWM) in support of rural development. As a part of the implementation mechanism, a Core Group headed by the President, ICID and Chair PCTA, PCSO, AFRWG, ASRWG, WG-CDTE as Members and Secretary General, ICID as Convener was also set up as per ICID notification no. 1/2016 to finalise and prioritize work programme, review and monitor programme, administrative and financial decisions in respect of TSU activities etc.

6. In accordance with resolution IEC-2/67, NCs were requested to (i) take full advantage of the establishment of the Technical Support Unit (TSU), and (ii) to contribute towards the Fund created for undertaking activities of TSU. National Committees were also requested to volunteer and nominate expert/professional both for long-term (initially 6 months) as well as short-term (upto 10 days at a time) to support the activities of TSU.

7. In this respect, ICID Central Office developed and shared nomination forms and terms of reference for long term experts/ professional with the NCs. In response, Korean National Committee (KCID) informed that they are in the process of nominating a professional for long term and contributed US\$ 5,000 for capacity development fund to support activities of TSU in 2017 and also committed similar funds during 2018 and 2019. Egyptian National Committee (ENCID) and Pakistan National Committee on Irrigation and Drainage (PANCID) nominated VP Dr. Wabha (Egypt) and Ch. Foad Hussian (Pakistan) as short-term experts.

8. Iranian National Committee (IRNCID) submitted request for support of TSU for two capacity development programs i.e. (a) Training Course on ‘Measurement of Crops actual evapotranspiration using the following device; Bowen, Eddy Convariono, Cosmos, Ratio” and (b) Workshop on “Practical Benchmarking for improving performance of Irrigation and Drainage Schemes”.

9. The Core Group, established to guide Technical Support Activities undertaken by TSU, held its first virtual (video-conference) meeting on 14 June 2017 and discussed various issues related to functioning of TSU such as - (i) Nomination of Experts and Contribution to Capacity Development Fund established in the Central Office as part of TSU Program; (ii) NCs’ request for getting support of TSU; and (iii) Honorarium for experts from NCs of developing countries. After deliberations on various issues, it was decided that the TSU should implement a Technical Support Program (TSP) and that the decisions taken in relation to TSU and its related activities should be compiled and framed as a Technical Support Program Scheme describing the Scope of the TSP and the mechanism, and TSU in a consolidated manner. The TSP scheme is given as **Annex 3**. Chair may apprise the WG members on the status of TSP activities at the meeting.

WG-CDTE Agenda Item 3.2: Training programme for YPs (Asian Region)

10. ICID in association with the Chinese National Committee (CNCID) is planning to organize a five-day training programme in November/ December 2017 on the theme “Performance Assessment of Irrigation Systems”. NCs have nominated Young Professionals (YPs) for the training programme from institutions involved in agriculture water management within Asian countries. The training programme will provide opportunity to the participants with broad understanding of various related topics pertaining to performance assessment such as need, framework, performance indicators, techniques and tools for performance assessment etc. The main focus will be on physical, institutional, organizational and participatory management aspects. Representative from CNCID/Chair may provide further updates during the meeting.

WG-CDTE Agenda Item 3.3: Training programme for YPs in 2018

11. As a part of capacity development programme, ICID Central Office proposes to organise a training programme for YPs during 2018. WG may discuss the need, details, theme, topics, host NC/ institute etc. for the next training programme.

WG-CDTE Agenda Item 4: Knowledge Management Strategy

12. As a professional network that deals in scientific and technical domains, ICID managing its knowledge cycle/ process is a key activity in order to fulfil its overall mission of sustainable development of agricultural water resources through an international platform of a very diverse group of stakeholders. ICID plays a critical role in the field of irrigation, drainage and flood management by facilitating strategic communication and collaboration among scientific, engineering, policy making and water manager/user communities, all striving to find sustainable solutions for agricultural water management. Better communication precedes better collaboration and collaboration leads to better synergy of limited resources, both physical and human. ICID Central Office has developed a Knowledge Management Strategy (KMS) (**Annex 4**) to leverages the knowledge generated over the 60+ years through various working groups, NCs and partners and others. An Irrigation and Drainage Knowledge Base has been conceptualized and will be presented for the consideration of WG-CDTE. WG members may discuss the draft KM strategy and provide their suggestions for its finalization. Members will also discuss how they can contribute towards implementation of KM strategy.

WG-CDTE Agenda Item 4.1: Dissemination of Knowledge

13. As decided during the Chiang Mai meeting, the website of the WG http://www.icid.org/wg_cdte.html has been updated with the new membership list, agenda, minutes, paper presentations, publications etc. In February 2017, the members were requested to provide interesting articles/ papers/ presentations/ documents related to the scope of the group for uploading on the ICID website. Members may like to discuss and evolve methodology for sharing of information and updation of WG website.

WG-CDTE Agenda Item 4.2: Sharing of Knowledge

14. In addition to the ICID international events such as WIF, Congresses, Regional Conferences, WG meetings, Web based seminar (Webinars) were first discussed. The WG-CDTE supported the suggestion of organizing webinars to promote sharing of vast expertise available with ICID fraternity. The Central Office requested members to provide their suggestions on the topics on which webinar can be considered along with name of the relevant experts who could be contacted to develop webinars. The group may discuss and suggest suitable topics along with names of expert for organizing webinars.

15. During the year, ICID Central Office started a new initiative of organising series of webinars. So far, 6 webinars have been organised on the topics (i) Water Use Efficiency by VPH Felix Reinders (South Africa), (ii) Water Accounting and Audit by Dr. Wim Bastiaanssen (UNESCO-IHE), (iii) Practical Benchmarking or Improving Performance of Irrigation and Drainage Schemes by Dr Martin Burton (UK), (iv) Planning for Irrigation Modernization – The MASSCOTE Approach by Dr Robina Wahaj (FAO), (v) National Water Account: Australian Experience by Dr Amgad Elmahdi (Australia), and (vi) Seminario web sobre El Marco de Contabilidad de Agua WA+ para la Gestión de Recursos Hídricos in Spanish (Water Accounting +) by Dr. Gonzalo E. Espinoza (UNESCO-IHE). Live recording of webinars is available at ICID web site http://www.icid.org/icid_webinars_past.html.

WG-CDTE Agenda Item 4.3: E-learning programmes as a capacity development tool

16. Constraints in financial resources limit the outreach of the capacity development activities as detailed under item 3. In order to reach out to a larger community the mechanism of e-learning provides an opportunity. During Chiang Mai meeting, the Group discussed the issue to undertake the study on “capacity development needs, available training courses, gaps, institutes which can provide training to fill gaps” and “the role of ICT in capacity development in agricultural water management”. While the group agreed to make effort to gather the information on available existing e-learning modules related to agriculture water management (AWM) through the NCs as well as various institutes and education and training centres. In February 2017, the WG requested the members of the Group to collect and provide the necessary information related to e-learning modules with brief details etc. from their NC. In response, KCID informed that they desired to organise a joint training programme with ICID at RC-IEEC, Korea. WG Chair will provide updated status on the study on capacity development needs. Vice Chair Dr. Young D. Kim will provide update of functioning of RC-IEEC and organising training programmes at the institute during the meeting.

17. Based on the success of on-going ICID Webinar Series, various options for e-Learning platform are being explored by ICID CO and also hybrid-learning programs are being reviewed to enhance the effectiveness of training and learning activities. WG may discuss how the existing capacities in the NCs could be used to establish a regular e-learning programme in ICID.

WG-CDTE Agenda Item 5: Any other business



NOTES FOR CHAIRPERSON:

Draft minutes of this meeting to be submitted to ICID Secretariat at Mexico City (Mexico) after the meeting.
Chair to participate and present the WG report to PCTA meeting on 13 October 2017.

ATTENDANCE OF MEMBERS IN 2016

Sl. No.	Members	Member From (Year)	2016		Remarks
			Self	Contributed by mail	
1.	Prof. Dr. Abdelhafid DEBBARH (Morocco), Chairman	2015	•		
2.	Dr. Young D. Kim (Korea), Vice-Chairman)	2015	•		
3.	Mr. Mirza Asif Baig (Pakistan)	2016			Provisional Member (2016)
4.	Dr. Nader Heydari (Iran)	2016			Provisional Member (2016)
5.	Eng. Abu Obieda Babiker Ahmed Hassan (Sudan)	2016			Provisional Member (2016)
6.	Mr. Ramesh Kumar (India)	2016			Provisional Member (2016)
7.	Mr. Hasan Basri Yuksei (Turkey)	2016			Provisional Member (2016)
8.	Ms. Dahile Abdulquader Abdulhammed (YP) [Iraq]	2016			Provisional Member (2016)
9.	Mr. Raad F. Amein Taha	2016			Provisional Member (2016)
10.	Secretary General, ICID			•	



ROAD MAP TO ICID VISION 2030 – ACTIVITIES OF WG-CDTE

	Activity	Outcomes/ Outputs	Milestone for Year 2017	Milestone for Year 2018	Milestone for Year 2019	Milestone for Year 2020	Milestone for Year 2021
Goal C: Facilitate exchange of information, knowledge and technology							
C5. Strategy: Dissemination of Data, Information, Tools, Knowledge and Know How	5.1 Guide and support organization of seminar/ workshops etc. by WGs and NCs	Networking and exchange of knowledge	Regular	Regular	Regular	Regular	Regular
	5.2 Report on role of ICT in capacity development	Study report	Discussion, collection and analysis of information Draft report	Finalisation and release of report	Collection of additional data and information	Update of report	Collection of additional data and information
Goal E: Encourage research and support development of tools to extend innovation into field practices							
E1.Strategy: Support Improving Research Prioritization in the Countries	1.3 Overseeing activities of Technical Support Unit (TSU)	Capacity development and technical support to NC	Regular	Regular	Regular	Regular	Regular
Goal F: Facilitate capacity development							
F1. Strategy: Enhancing Institutional Capacity Development of Member Countries	1.1 Provide technical support of National Committees, member and non-member of ICID (TSU)						
	1.2 Assisting to find capacity gaps in NC (TSU)						
	1.7 Contribute in the process of reorganization of NCs (TSU)						
F2. Strategy: Support Capacity Development Activities of Member Countries	2.1 Facilitate donor NCs supports joint research, invitations training, YP support program, or membership subscription in certain period (TSU)	Technical Report	Finalisation and dissemination of technical report				
	2.2 Report on capacity development needs, available training courses, gaps, institutes which can provide training to fill gaps etc.	Study report	Discussion, collection and analysis of information Draft report	Finalisation and release of report	Collection of additional data and information	Update of report	

	Activity	Outcomes/ Outputs	Milestone for Year 2017	Milestone for Year 2018	Milestone for Year 2019	Milestone for Year 2020	Milestone for Year 2021
	2.3 Organizer Webinar	Online meeting	Identification of topics and resource persons/ institutes	Support development of webinar material and its wider dissemination	Support development of webinar material and its wider dissemination	Support development of webinar material and its wider dissemination	Support development of webinar material and its wider dissemination
F3. Strategy: Technical Training of Young Professionals from Member countries	3.1 Develop on-line training and extension material to be used in support of improving irrigation practices and increasing water productivity						
	3.3 Establishment of a distance learning mechanism	e-learning modules	Identification of topics and resource person/institutes for development of e-learning modules	Development of e-learning modules and its wider dissemination	Development of e-learning modules and its wider dissemination Identification of additional topic etc.	Development of e-learning modules and its wider dissemination	Development of e-learning modules and its wider dissemination
	3.4 Capacity development/training program on request from NCs	Training of professionals	Organisation of regional training program one every year	Organisation of regional training program one every year	Organisation of regional training program one every year	Organisation of regional training program one every year	Organisation of regional training program one every year
	3.5 An online directory of institutes providing formal degree in Irrigation and Drainage	Online course	Collection and analysis of information and its wider dissemination	Update of information	Update of information	Update of information	Update of information
F5. Strategy : Providing Technical Support to NC's (TSU)							

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



TECHNICAL SUPPORT PROGRAM (TSP)

I. Background

1. The great challenge for the coming decades will be to increase food production with less water, particularly in countries with limited water and land resources. The effective and sustainable use of water for agriculture has become a global priority of vital importance, requiring urgent and immediate solutions in view of intensifying competition. The importance of Capacity Development for attaining sustainable developments in irrigation, drainage and flood management sectors is fully understood. The consensus among policy-makers in the developing world is that a lack of capacity is constraining the development of irrigated agriculture. Although this concern is not new, it is now receiving much attention in the irrigation and drainage world, where it is becoming an issue in its own right due to the increasing complexities of development, multi-disciplinary nature sustainable solutions, the close linkages between water-food-energy, rapid changes in the irrigation and drainage sector, the need to bring together various stakeholders who might not necessarily be experts. Moreover many countries are facing shortage of qualified technical persons

II Technical Support Program

2. The National Committees of ICID have expressed the need for professional guidance and support from ICID in initiating certain studies and activities. In order to meet this requirement a Technical Support Program is established by ICID. The objective of the Program will be to:

“Undertake capacity development activities in the field of agriculture water management (AWM) in support of rural development”.

3. Technical Support Programme will be implemented by the Technical Support Unit (TSU) which was set up vide ICID notification no. 1/2016 under WG-CDTE with the approval of the International Executive Council (IEC) at its 66th meeting held on 16 October 2015 at Montpellier, France vide IEC Resolution 3/66. keeping in view the need of capacity building, education and awareness of technical staff working in the field of agriculture water management.

4. The scope of work and expected outputs/deliverables of TSP are as follows:

- (a) Support the member countries in:
 - (i) general assessment of gaps in AWM capacities within the countries and suggest possible solutions;
 - (ii) developing feasibility reports for small and medium irrigation, drainage and flood management proposals;
 - (iii) training needs assessment; and
 - (iv) undertaking capacity development programmes.
- (b) Coordinate and execute capacity development programs of ICID under the overall guidance of WG-CDTE and administrative directions of the Core Group; and
- (c) Develop a knowledge base of AWM with the help of ICID working groups, partner institutions and member countries.

III Core Group

5. A Core Group with the following Composition and Terms of Reference (ToR) has also been set up to guide activities under Technical Support Program :

Composition

- | | | |
|-----|-------------------------|------------|
| (a) | President, ICID | - Chairman |
| (b) | Chair, PCTA | - Member |
| (c) | Chair, PCSO | - Member |
| (d) | Chair, AFRWG | - Member |
| (e) | Chair, ASRWG | - Member |
| (f) | Chair, WG-CDTE | - Member |
| (g) | Secretary General, ICID | - Convener |

In addition, the representatives (maximum two at a time) of Financial partner contributing to CDF, particularly supporting specific activities, will be co-opted by the President.

Terms of Reference (ToR)

- (i) Finalizing and prioritizing the work program of TSU;
- (ii) Review and monitor progress of activities of TSU;
- (iii) Take administrative and financial decisions regarding the engagement of volunteers and other experts; and
- (iv) Support resources generation and take all financial decisions

IV Mechanism

6. **Technical Support Unit (TSU)**, will serve to execute the activities under TSP. TSU will consist of distributed network of short-term and long term expert volunteers, who commit to dedicate a maximum of ten man-days for short-term and up to 6 months as long-term experts to the TSU activities. The activities will be supported by a Coordination Unit (CU) established within the Central Office. NCs and other members, including partner institutions, will be requested to depute personnel to the CU of TSU from time to time, as required. Broad terms of reference of long term expert indicating scope of deputation of experts, financial aspects etc. is at **Annexure A**, which also include nomination form (**Annexure B**). Long-term Experts/ professionals will be paid a suitable honorarium in accordance with the Government of India rules, payable by Non-government organization, non-profit organizations such as ICID and approved by the Core Group.

7. Nomination forms for deputation of short term experts is at **Annexure C**. Since short term experts will provide voluntary contributions to the activities of the TSU, ICID will provide honorarium (US\$ 100–150) to them for delivering lectures and preparing lecture material in addition to economy class air fare along with Boarding and Lodging by the Recipient NC. The travel of the expert volunteers in connection with TSU activity and honorarium for the experts, will be supported through CDF.

8. **Request for support from TSU**. In order to get support from the TSU, NCs seeking support from the TSU will submit their request in the prescribed form (**Annexure D**) providing information related to the type of audience who would be benefitting from the program, brief outline of the Program for which support is sought, areas where the external expertise is required, contribution of the recipient NC to the cost of the experts, etc. in a structured format in order to facilitate processing of the request.

9. The status of the requests received from NCs will be maintained in a 'Request Register'. The first priority will be given to the requests where the Recipient NC is ready to provide full financial support for services of the experts in terms of travel, accommodation etc. and involvement of the TSU will essentially be that of facilitation and identifying the experts. The prioritization for support by TSU will be as follows:

- (a) Trainings and Workshops in the recipient country fully funded by the Recipient NC
- (b) Trainings and Workshops in the recipient country partially supported by the Recipient NC
- (c) Study and preparation of the Report on the Capacity Development Needs in a Country
- (d) Preparation of pre-feasibility proposals for small irrigation schemes

10. In case of multiple requests from a particular NC, as far as possible equity will be maintained keeping in view the constraints of the funds. Immediately after receiving the request, TSU will identify the experts in consultation with the Chair/Vice Chairs of the concerned WG. Based on the suggestions received and the roster of short term experts available, the TSU will facilitate the process and depute expert(s) to the Recipient NC for supporting the programme/activity of the NC.

V Fund

11. In order to ensure smooth functioning of TSU, a **Capacity Development Fund (CDF)** is established for the activities of TSU. The Fund will be supported by member countries on a voluntary basis.



**Terms of Reference for Engaging Expert for
TECHNICAL SUPPORT UNIT (TSU) IN ICID CENTRAL OFFICE**

Post Title: Expert (Agricultural Water Management)

Duty Station: ICID Central Office, New Delhi, India

Duration: Six months (*initially*)

TERMS OF REFERENCE (TOR)

1. Background

The National Committees of ICID have expressed the need for professional guidance and support from ICID in initiating certain studies and activities. Accordingly, the 66th ICID's International Executive Council meeting held on 16 October 2015 at Montpellier, France, approved the setting up of a Technical Support Unit in ICID vide IEC Resolution 3/66 keeping in view the need of capacity building, education and awareness of technical staff working in the field of agriculture water management. The objective and scope of activities of TSU are as given in the Technical Support Program scheme.

2. Deputation of Expert to Technical Support Unit (TSU)

As per decision of IEC (Resolution 3/66, TSU is being set up in ICID at its Central Office located in Delhi with deputation of experts on short term on voluntary basis from interested National Committees. Brief description of scope of activities and other terms and conditions is given below:

2.1 Broad scope of deputation of expert to TSU

National Committees / Committee are requested to consider deputing their mid-level experts for short term to support activities of TSU on capacity development programme in agricultural water management for least developed countries in Africa and Asia including support to development of proposals for small scale irrigation, flood management and drainage at feasibility level. Broad ToR of experts is given below:

- (a) The Expert nominated by the National Committee / Committee to Technical Support Unit (TSU) will be working on voluntary basis for an initial period of six months.
- (b) Expert should be professionally qualified in the field of Agricultural or Water Resources Engineering, preferably, post-graduate
- (c) At least 10 years work experience in dealing with agricultural and water management issues having experience in the areas of research, capacity development, training, project planning and development etc.
- (d) The Expert should be in the age group of 40 to 50 years of age.
- (e) The Expert should be fluent in Spoken and Written English and computer savvy.

2.2 Financial aspects

The Sponsorship Organisation has to bear all the financial expenses of the expert in terms of salary and allowances, travel expenses, per diem, accommodation, local transport, insurance etc., to undertake the assignment. However, ICID will pay an honorarium of Rs.10, 000/- (US \$ 150) {as per Government of India norms} per month.

2.3 Documents

While deputing expert to TSU, the National Committee may kindly furnish Curriculum Vitaé (CV) of the applicant along with the following documents:

- (a) Educational qualification
- (b) Experience profile
- (c) Copy of passport

The condition for grant of visa for working in India for NGOs and other organizations is available at: <http://mha1.nic.in/foreigDiv/OverviewVisa.html>



**TECHNICAL SUPPORT UNIT IN ICID CENTRAL OFFICE
APPLICATION FORM FOR LONG-TERM EXPERTS**

A. Applicant's personal and experience details

1. Personal Information

Name

Position

Organization / Department

Gender

Male

Female

Date of birth:

Day

Month

Year

Nationality

Contact details including e-mail

Passport Details
(attach a copy)

Number	Validity		Issuing authority	
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2. Educational background and experience (Attach brief CV):

- (i) Degree & above:
- (ii) Brief details of experience in the field of agricultural water management, flood management, drought and related areas with expertise in research, capacity development, training, project planning and development, (use separate sheet, if required.):
- (iii) Specify experience on development of proposals for small scale irrigation, flood management and drainage at feasibility level, if any:
- (iv) Experience of working in least developed countries in Africa and Asia, if any:

3. Other details (please specify):

	Fair	Good	Excellent
Knowledge of English			
Spoken			
Written			

- i. Are you willing to work in least developed countries of Africa and Asia on short term basis?

Date: _____

Signature: _____

B. Recommendation by Sponsoring Organisation

Mr / Ms _____ is sponsored to work in Technical Support Unit of ICID, New Delhi. This is to certify that the above information is correct best to our knowledge. We undertake to bear all financial expenses of the expert in terms of salary and allowance, travel expenses, per diem, accommodation, local transport, insurance etc. to undertake the assignment.

Name of the person

Position

Name of Sponsoring Organization

Date: _____

Signature: _____

C. Recommendation by the ICID National Committee

Mr / Ms _____ is recommended to work in Technical Support Unit of ICID, New Delhi.

Name of the person

Position

Name of National Committee

Date: _____

Signature: _____



**TECHNICAL SUPPORT UNIT IN ICID CENTRAL OFFICE
NOMINATION FORM FOR SHORT TERM EXPERT**

A. Personal and experience details

1. Personal Information

Name	
Position	
Organization / Department	

Gender Male Female

Date of birth: Day Month Year

Nationality

Contact details including e-mail

Passport Details <i>(attach a copy)</i>	Number	Validity	Issuing authority
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2. Educational background and experience (Attach brief CV):

- (i) Degree & above:
- (ii) Brief details of experience in the field of agricultural water management, flood management, drought and related areas with expertise in research, capacity development, training, project planning and development, *(use separate sheet, if required.)*:
- (iii) Specify experience on development of proposals for small scale irrigation, flood management and drainage at feasibility level, if any:
- (iv) Experience of working in least developed countries in Africa and Asia, if any:

3. Expertise in fields related to Agriculture Water Management (select any three)

- Agronomy related aspects
- Bio-Drainage
- Climate Change Adaptation
- Drainage
- Development of Tidal Areas for Agriculture
- Drought Management
- Environmental Aspects of Irrigation & Drainage
- Flood Management
- Irrigation Development & Management
- On-Farm Management

- Participatory Irrigation Management
- Use of Poor Quality Water in Agriculture
- Any other (Please specify)

4. Knowledge of Languages (please specify):

Languages	Fair	Good	Excellent
i. English			
Spoken			
Written			
ii. French			
Spoken			
Written			
iii. Any other			
Spoken			
Written			

iv. Are you willing to work in least developed countries of Africa and Asia on short term basis?

Date: _____

Signature: _____

B. Recommendation by Sponsoring Organisation

Mr. _____ is sponsored as Short Term Expert (upto 10 days) to support activities of the Technical Support Unit of ICID, New Delhi. We undertake to bear financial expenses of the expert in terms of salary and allowance during period of assignment.

We understand that ICID / Host country will make arrangement for travel and accommodation and Expert would be paid honorarium as per ICID norm.

Name of the person

Position

Name of Sponsoring Organization

Date: _____

Signature: _____

C. Recommendation by the ICID National Committee

Mr. _____ is recommended to work as Short Term Expert to support activities of Technical Support Unit of ICID, New Delhi.

Name of the person

Position

Name of National Committee

Date: _____

Signature: _____

**TECHNICAL SUPPORT UNIT IN ICID CENTRAL OFFICE
REQUEST FORM FOR NATIONAL COMMITTEES**

1. Name of the National Committee

2. Request submitted for (please ✓ applicable one and insert the title in the box below):

- (a) Workshop/ Training in the Country
- (b) Exchange Visit to another NC
- (c) Study/ Gap Analysis of Capacity Development in the country
- (d) Pre-feasibility report preparation

3. Topics of the Workshop/Training or the Scope of the Study

4. Target audience for the Workshop/Training:

5. Approximate dates and duration of the event

(Please give 6 months advance notice and a flexible time schedule):

6. Priority of the request (if more than one request is submitted in a given financial year):

7. Please indicate which of the following costs the NC will be able to meet (please ✓ applicable box):

No.	Item	Yes	No	N/A
1	International Air Travel costs by Economy Class	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2	Internal travel/transportation costs (within the country)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3	Boarding and Lodging of the Experts	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4	Training material including its reproduction	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5	Honorarium to the Expert	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6	Videography of the lecture proceedings	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7	Surveys or studies required from local experts	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

8. Outline of the proposed Training/Workshop/Study

(Also, please *attach* a brief outline of the event or study, the list of topics of lectures, the lectures taken by local experts and those required from ICID-TSU External Experts):

Attached Not attached

- 9. **Other National Institutions involved in the activity:**
- 10. **Contact person for the activity:**
- 11. **Any additional information:**

Signed/submitted by:

President/Chair/Secretary-General/Secretary
of the National Committee/Committee

Place:

(Please affix the signature)

Date:



KNOWLEDGE MANAGEMENT STRATEGY (KMS)

CONCEPT NOTE FOR BRAIN-STORMING / DISCUSSION

1. Introduction

1.1 It is needless to say that the basic aim of knowledge is to empower human society against a number of survival challenges under a highly dynamic environment, and that there is no clear distinction between knowledge creator and knowledge user. We are all participating in a knowledge process or part of a knowledge cycle, and we all contribute to it based on our capacity as well as draw from it based on our unique needs. From this perspective, for *International Commission on Irrigation and Drainage (ICID)*, a professional network that deals in scientific and technical domains, managing its knowledge cycle/process is a key activity in order to fulfil its overall mission of sustainable development of agricultural water resources through an international platform of a very diverse group of stakeholders. ICID plays a critical role in the field of irrigation, drainage and flood management by facilitating strategic communication and collaboration among scientific, engineering, policy making and water manager/user communities, all striving to find sustainable solutions for agricultural water management (AWM). We all realize that better communication precedes better collaboration and collaboration leads to better synergy of limited resources, both physical and human. The keyword here is “better,” building upon what has proven good.

2. Knowledge Management Strategy (KMS)

2.1 Based on the recommendations of a series of consultations of ICID Working Group on Knowledge Theme and those emanating from various ICID partners, the ICID Central Office has deployed a small dedicated team of professionals to manage knowledge processes within ICID network. The first task of the team is to review the existing KM processes in water management circles and then suggest a possible future strategy keeping in view the requirements of ICID members, partners and other stakeholders with due consideration of resources available and under existing institutional framework.

2.2 A brief review of KM practices of other similar international networks such as FAO and CGIAR was also considered essential as part of this KMS development. FAO, being an international extension agency, puts greater focus on information or knowledge dissemination rather than knowledge creation. However, CGIAR system generates knowledge through research and therefore its main objective is to make research output easily available to all stakeholders. The first lesson learned by all is that KM should not be technology-centric, but should make best possible use of technology in various stages of the knowledge process. Another general observation is that most organizations arrange their knowledge around their thematic units, which may not be the best way of holistic knowledge dissemination or for issue-based global knowledge integration. A neutral hub or knowledgebase approach in which all multi-disciplinary stakeholders participate freely and with ease would be an ideal platform for sustainable knowledge-based solutions. Thriving virtual social networks serve as a good example of this phenomenon.

3. Conceptual Framework

3.1 Knowledge management encompasses creation, generation, extraction, consolidation, compilation, synthesis, storage, packaging, and dissemination of data, information, knowledge and know-how to the end users as well as impact assessment of knowledge use through a feedback mechanism that completes the knowledge cycle. In other words, this feedback mechanism could also act as an external knowledge contribution or knowledge validation feature.

3.2 As a professional network ICID is not mandated to conduct original research and build a knowledge base of its own, its primary role in knowledge processes of its members and partners is to facilitate communication, collaboration and wider dissemination of knowledge produced. From time to time, ICID has also strategically produced special publications whenever it realized that a certain agricultural water management (AWM) issue did not receive the attention it deserved or from ICID’s vantage point it was better placed to add more value to the knowledge process on a particular AWM issue.

3.3 Scientific knowledge creation and generation process falls within the purview of the research and development institutions of the ICID member and non-member countries as well as ICID partner institutions and networks ICID’s Irrigation and Drainage Journal captures such scientific knowledge from innumerable global sources. The various technical Working Groups of ICID, through their activities, also help validate, extract, compile, and synthesize this knowledge to make it useful for AWM policy makers and practitioners.

3.4 It is assimilated through various application and development processes, sectors and/or disciplines. The effort is to appropriately synthesize both scientific and non-scientific interactions among technology, techniques, and people for greater good. For sharing this knowledge or know-how across a wide spectrum of users the ICID Central Office is assigned the responsibility of facilitating dissemination by making optimal use of the advances in the information technology and other communication channels. Over the years ICID has continuously taken initiatives to upgrade its capacity and facilities to provide a user-friendly access to the latest data, information and knowledge products for AWM. Some of such services by the Central Office include:

- (a) Peer-reviewed Irrigation and Drainage Journal
- (b) Continuously Updated ICID Website
- (c) Integrated Library Management System (ILMS)
- (d) Text Delivery System (TDS)
- (e) Multilingual Technical Dictionary (MTD) on Irrigation and Drainage
- (f) Electronic Bulletins, Newsletters and Special Publications
- (g) Distance Learning and Training Tools
- (h) Virtual Communication Tools: Web-conferencing and Tele-conferencing
- (i) Research Database: IrriReSearch
- (j) Products and Services Directory: Irrigation and Drainage YellowPages

3.5 Using contemporary approaches and technology, for more than six decades ICID has been continuously managing knowledge on various aspects of irrigation and drainage through its membership activities, interactions in various fora, and diverse partnerships. All the data and information collected thus far and documented in ICID productions are currently stored and maintained under varying formats and at several locations. In recent years efforts have been made to organize the available data, information and knowledge in a consistent manner; for example, ICID website (www.icid.org) is evolving as the primary interface to the knowledge base or source of ICID knowledge objects. With general improvements in internet connectivity across the world, website-based interface is preferred choice of most knowledge organizations for expanding their reach.

3.6 Information flows of NC's research and outreach activities and that of ICID partners are yet to be mapped in a definitive form that makes them seamlessly integrated with ICID knowledge base and thus easily searchable and retrievable through ICID web site. ILMS, MTD and IrriReSearch initiatives are significant efforts in that direction. The idea is not to duplicate or replicate what is provided by others, but to improve access to knowledge objects wherever they exist in public domain. In this regard, a good metadata directory service assumes important significance.

3.7 Knowledge is also a dialogue process, therefore it must flow in all possible directions. Another on-going ICID effort is to allow two-way knowledge interaction using virtual communication tools and e-Learning methodologies. A series of "webinars" on emerging AWM topics/issues has become a regular feature with satisfactory participation from across the globe despite time-zone limitations of a synchronous seminar session in such conditions. ICID also facilitates a young professionals' e-Discussion forum (IYPeF) for knowledge sharing. Along the similar lines, relevant e-Learning courses are being planned for a diverse group of learners. Content and target audience for these are being worked out. ICID participates in irrigation and drainage related e-Discussions and other fora of its members, partners and other groups and shares its own learnings.

3.8 In summary, the core principle of this ICID KMS is to facilitate better knowledge creation through better knowledge flows by being a synergetic player in global, national and local knowledge processes of its members, partners, users and peripheral stakeholders. This concept note outlines a framework for a distributed yet virtually integrated irrigation and drainage knowledge base for all AWM stakeholders.

4. I&D Information/Knowledge Content Providers and Users

4.1 A typical ICID information provider and/or user may belong to one or more of the following categories:

- (a) ICID Members and Partners, and their Libraries
- (b) Practicing AWM Engineers and professionals
- (c) College/University Faculty and Students, and Field/University Researchers
- (d) Community Development Workers/Planners/Managers
- (e) Private Sector involved in agricultural water business
- (f) Farmers, Extension Workers and Water Activists/Enthusiasts
- (g) ICID supporters and other institutions

5. Irrigation and Drainage Knowledge Base

5.1 While so far a fragmented, static method of information organization has worked well within ICID, it makes information dissemination outside ICID network somewhat difficult due to diverse background and knowledge needs of AWM stakeholders. The inherent rigidity of current information structure requires significant search time for a specific piece of information and it is also vulnerable to fluctuating nature of constantly changing content providers and users. The new knowledge base framework, briefly described in this note, will help develop a comprehensive, flexible, user-friendly, and subject matter-oriented multimedia knowledge base on water resources development and management with primary emphasis on ICID network productions and mandates as well as those of its members and partners. Public-domain knowledge objects of ICID members and other organizations or networks will be listed in the metadata directory of keywords and hyperlinked for ease of access. It is proposed that the available ICID knowledge be:

- (a) **re-structured** (in the form of an irrigation and drainage subject matter),
- (b) **expanded** (by adding new information and content or hyperlinks to it), and
- (c) **presented** as a flexible source to suit varying requirements of a diverse audience.

5.2 Available information first needs to be organized as a collection of ICID’s knowledge objects as shown in Table 1. Some examples of a knowledge object are water cycle, irrigation/drainage structures, and crops. A knowledge object will have sub-objects such as components of water cycle, types of structures, and crop-specific irrigation requirements, and so on (refer Table 1). An object, whether main or sub, will have certain attributes, which are ICID and other productions describing that object. ICID productions such as textual descriptions (special publications, position papers, abstracts of publications, technical articles, theses and dissertations, etc.), tables, drawings, computer programs, images, audio/video clips, etc. for all the knowledge objects, sub-objects, and sub-sub-objects should be stored in a database with multiple entry points.

Table 1. Irrigation and Drainage Knowledge Base

SOURCES OF IRRIGATION	APPLICATION OF IRRIGATION WATER	IRRIGATION AND ENVIRONMENT
<ul style="list-style-type: none"> • Irrigation History • Sources of Irrigation • Improving soil moisture • Ponds • Tanks • Diversion weirs • Large Reservoirs • Groundwater • Conjunctive water use • Wastewater • Poor quality water 	<ul style="list-style-type: none"> • Canal Irrigation • Flood Irrigation • Deficit Irrigation • Supplemental Irrigation • Sprinkler Irrigation • Drip Irrigation • Lift Irrigation • Centre Pivot Irrigation • Tidal Irrigation • Micro-Irrigation Technologies for Small Holders • Automatic Irrigation Systems • Pressurized Irrigation • Irrigation in Viticulture 	<ul style="list-style-type: none"> • Pollution and Irrigation • Irrigation and Climate Resilience • Environmental aspects of Irrigation • Environmental Impacts of Irrigation • Green Lawn Irrigation • Safe Use of Wastewater in Irrigation • Organic Agriculture • Soil Health • Soil Health Management • Quality of Irrigation Water
INSTRUMENTS AND IMPLEMENTS OF IRRIGATION	IRRIGATION MANAGEMENT	PURPOSE OF IRRIGATION
<ul style="list-style-type: none"> • Pumps • Centrifugal Pumps • Submersible Pumps • Turbine and Jet Pumps • Conveying pipes • Sprinklers • Drippers • Canal automation systems 	<ul style="list-style-type: none"> • Economics of Irrigation System • I&D System Types • I&D Investment Functions • I&D Management Issues • Participatory I&D Management • Equity in irrigation • Irrigation services 	<ul style="list-style-type: none"> • Kitchen Garden • Landscape • Agriculture • Horticulture • Floriculture • Forestry
CAPACITY DEVELOPMENT	DRAINAGE TYPES AND SYSTEMS	DRAINAGE ISSUES
<ul style="list-style-type: none"> • Irrigation Services Certification • ISO Certified Irrigation Equipment • ISO Standards on Irrigation Equipment • Levels of Capacity Development • Capacity Development Framework • Tools for Integrated Water Resources Management • Irrigation Services 	<ul style="list-style-type: none"> • Agricultural Drainage • Canal Irrigation and Drainage • Field Drainage systems • Surface drainage • Sub-surface Drainage • Mole Drainage • Bio-Drainage • Regional Bio-Drainage 	<ul style="list-style-type: none"> • Waterlogging and Soil Salinity • Conjunctive use of Surface and Groundwater • Drainage and Water Quality • Environmental & Economic Benefits of Drainage • Environmental Impact Assessment • Management of Drainage Water • Sustainable Urban Drainage
ICID DATABASES		ANALYTICAL TOOLS/MODELS
<ul style="list-style-type: none"> • Integrated Library Management System • ICID Database • ICID Publications • ICID News and Articles • ICID Members and Partners • Irrigation and Drainage Dictionary • Directory of Irrigation and Drainage Products and Services 		<ul style="list-style-type: none"> • BHIWA • PODIUM • WEAP • SALTMED • IrriReSearch

6. User Interface

6.1 The main feature of this new framework is its flexibility, which is in direct contrast to the rigidity of the current information structure. In this new framework users will have greater control over what is displayed to them about a particular object or keyword. In other words, there will not be a single set of information presented to all users, rather a user will virtually build a knowledge base on his/her own by selecting appropriate knowledge objects or keywords. This will be useful when a user becomes familiar with the knowledge base and explores it for different purposes on subsequent visits.

6.2 The new interface will be able to handle instruction-related and exploration-related requests from a user. Based on user preference (instruction or exploration), the new interface will retrieve relevant knowledge objects from the knowledge base and dynamically create one of the following three different views of the information:

- (a) Multilevel Subject Matter View for instruction-oriented users,
- (a) Query-Based View for specific information seeker, or
- (b) Activity-Based View for use of AWM tools, techniques/methods by user.

Advanced script programming techniques and database management systems will be used to provide this dynamism in the knowledgebase. This knowledge base will also have the potential of being published as a web site (scaled-down version for preview purposes) as well as a DVD-based product (full-scale multimedia database). Individual topics can also be printed in PDF format if desired by a user. Specific queries will result in ICID products and hyperlinks to outside sources. The knowledge base will also act as an online calculator for standard irrigation and drainage design and water management tools.

7. Multilevel Subject-Matter View

This view will be in response to an instruction-related request from the user. It will be useful mainly for students, teachers, and those who would like to learn about irrigation and drainage or find subject matter information in a structured way. A tentative organization of this view is represented in Figure 1 using a water pond as the basic object or keyword.

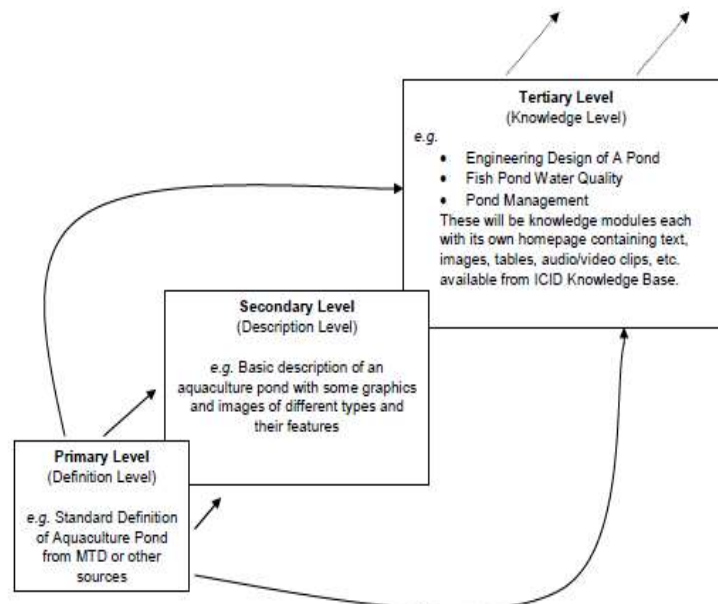


Figure 1. Multilevel Subject Matter View of “Pond” Object

All the Primary Level objects (or keywords) may be contained in an “Overview of Irrigation and Drainage,” which will serve as the first interface for Multilevel Subject Matter View and currently exists on ICID web site. For each object there will be two different menu sets – one for Secondary Level information and the other for Tertiary Level information. These menu sets will be designed specifically for the type of object, e.g., all irrigation systems will have the same menu sets and so will drainage systems.

8. Query-Based View

In this exploration-related view the user will type a query about irrigation or related subject. Using the knowledge object(s) or keyword(s) appearing in the typed query, the new interface will provide appropriate menu sets associated with each object of the query. The sub-objects associated with the knowledge object will also be displayed along with their menu sets. Knowledge objects and sub-objects have been described previously in this note. An example menu set and brief descriptions of various menu choices are shown in Figure 2. By clicking on

a choice in the menu set, user will be able to retrieve information from irrigation and drainage knowledge base. Retrieved information will be displayed in a separate pop-up window.

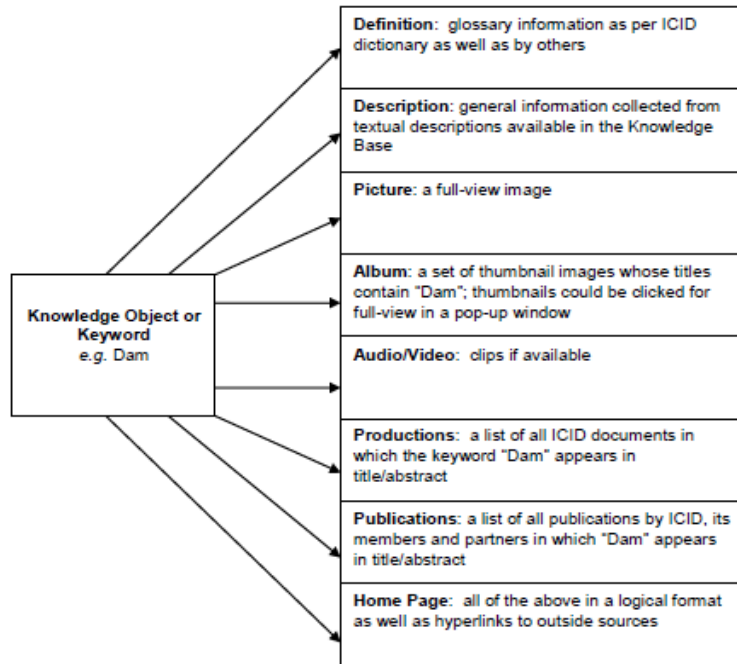


Figure 2. Query-Based View of Irrigation and Drainage Knowledge Base

This view will be useful for researchers, extension workers, and those looking for some specific information about irrigation and drainage. This view will greatly reduce the navigation time to retrieve a particular piece of information. If the user is satisfied with the displayed information, he/she will have an option to print some or all of it.

9. Activity-Based View

Activity-Based View, a response to exploration-related request from a user, will employ a problem-solving approach of information dissemination. User will select an online tool or case study from a collection covering all the important aspects of irrigation and drainage. This first interface will be similar to the "Overview of Irrigation and Drainage" interface used for Multilevel Subject Matter View.

The tool or case study will provide stimuli (knowledge objects or keywords and their associated menu sets) to explore the knowledge base. The case study will include a description of a situation and an associated set of problems that need to be solved by the user. These tools and case studies can either be real or hypothetical designed specifically to highlight a particular aspect of irrigation or drainage. The user will solve the problems using information available from the knowledge base. The solution(s), representing user's own knowledge base, will contain all the information derived from the knowledge base. Figure 3 depicts this interaction between the user and the knowledge base.

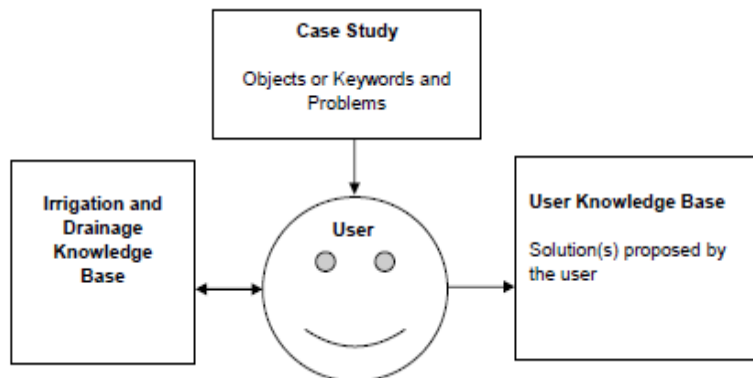


Figure 3. Activity-Based View of Irrigation and Drainage Knowledge Base

This view will be useful for practitioners, field workers, designers, self-learners or trainees. Teachers and professional trainers can also use this as a learning tool. While standard AWM tools are easy to incorporate, it

will require significant input in the form of real and hypothetical case studies from subject-matter specialists within ICID members and partners.

A hypothetical case study could be designing a tilapia grow-out pond facility as described here. The user will be able to create his/her own knowledge base on a template by picking (cut-and-paste) ICID productions of knowledge objects (from the Knowledge Base) required to design such a pond and arranging them in a manner suggested in the problem statement.

10. Example for Activity-based View: Pond Design Problem

10.1 Problem Statement

Design a series of ponds as a 100 T/year tilapia production facility. Assume the source of water to be a well near the pond site with a maximum flow capacity of 200 L/min. Use a nearby ditch (klong) as a discharge destination. The proposed design should include the followings:

- (a) Site-selection (choices are Northeast Thailand, Southern Vietnam, and Northern Vietnam)
- (b) Background information such as environmental (water quality) requirements of tilapia, tilapia growth cycle, etc.
- (c) Required feeding rates and oxygen requirements at different stages of tilapia growth
- (d) Pond type and layout (including number and size of ponds and their location with respect to each other -- drawings please)
- (e) Inlet and outlet structures for each pond and water flow rates
- (f) Pumps (location, number and capacity of each)
- (g) Aerators (location, number and capacity of each)
- (h) Tilapia stocking rates of different ponds assuming that 50-g size fingerlings are available and market size is 500-g/fish.

You can make certain assumptions about this problem, but they should be supported by valid references. Most of the knowledge objects (or keywords) are underlined in the problem statement to help you search for information from irrigation and drainage knowledge base.

11. Basic Requirements/Skills for I&D Knowledge Base/Hub

- (a) Formal and informal need assessment of potential participants of Irrigation and Drainage Knowledge Cycle/Base (identification of not so obvious groups)
- (b) ICID information/knowledge flow mapping and further conceptual development of the KM framework (how ICID acquires knowledge, not necessarily information/data)
- (c) Consultations with primary content providers to develop a super list of knowledge objects, classification scheme for knowledge objects, and contents of user interface
- (d) Interface layout design, color schemes and intuitive user-friendly features
- (e) Technical aspects of database design and associated tools
- (f) Conversion of audio/video and other data into digital form
- (g) ICID Information Database setup (any open source program)
- (h) Script programs for database search and view display/print
- (i) Typing/Database Entry (all the technical topics/write-ups that ICID publishes are knowledge objects and thus they need to be structured accordingly)
- (j) Scanning of old documents and pictures
- (k) Knowledge Object Organization System:

