

Pro-Poor Intervention Strategies in Irrigated Agriculture in Asia (RETA-5945)

**Report on the Study Achievements, Second Regional workshop
Outcomes and Follow-up Activities**

**submitted to
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Pro-Poor Intervention Strategies in Irrigated Agriculture in Asia: RETA-5945: Fifth Agriculture and Natural Resources Research at CGIAR Centers

This document reports overall progress, achievements and follow-up plan for the study on “Pro-Poor Intervention Strategies in Irrigated Agriculture in Asia (RETA 5945)” financed by the Asian Development Bank (ADB), the International Water Management Institute (IWMI) and national partner organizations. The study was implemented by IWMI in collaboration with national research and development organizations in six developing member countries (DMCs) of ADB: Bangladesh, China, India, Indonesia, Pakistan and Vietnam. The document outlines key features and achievements of the study, outcomes of the study final regional workshop held on 25-27 August 2004, summary of responses to comments and suggestions received from the workshop participants and from the ADB, and provides an outline of the follow-up activities. The document is divided into three main parts as follows:

Part -1: Introduction—study objective, scope, outputs/impacts and overall achievements of the study.

Part -2: Final regional workshop—outcomes, comments and suggestions from the workshop participants and responses thereof; responses to written comments and suggestions received from the ADB

Part 3: Conclusions and the follow-up plan

Part -1

Introduction

The objective of the study is to determine what can realistically be done to improve the returns to poor farmers in the low-productivity irrigated areas in the context of improving the overall performance and sustainability of the established irrigation schemes. The study focused on the selected low-productivity canal irrigated systems and their peripheries with a large number of people under persistent poverty in Bangladesh, China, India, Indonesia, Pakistan and Viet Nam. As initially specified, the scope of the study is as follows:

- 1). Analysis and field research on the impacts of the current policy and institutional framework, and the impacts of underlying physical, economic, and sociocultural conditions on the selected areas in particular and on the overall irrigation systems at large, including the assessment of opportunities for, and constraints on, improving productivity in these less-productive areas through improved access to irrigation water.
- 2) Identification and evaluation of a range of potential pro-poor economic, financial, institutional, governance and technical interventions at field and system levels against a set of criteria including cost of implementation and potential to reduce poverty, and assessment of necessary changes in overall policy and institutional framework under which such interventions could most effectively address poverty reduction in the study areas.

3) Formulation of a set of appropriate interventions and the policy and institutional frameworks, including adequate support systems, required to ensure large-scale uptake, replicability, and higher impacts within and between Asian countries, to culminate into a) the guidelines for identifying and evaluating appropriate pro-poor interventions and enabling policy and institutional framework for irrigated agriculture in Asia, and b) country-specific action agendas for the selected low-productivity areas of the participating DMCs.

The inception activities for the study were initiated by IWMI soon after the TA agreement was authorized in February 2001. IWMI and the country teams prepared draft work plans for each country and an overall work plan for the study, setting out the study objectives, scope, specific questions to be answered and hypotheses to be tested, and the study approach and methodologies in a comprehensive manner. The overall work plan of the study, which included the individual country work plans, was prepared through a consultative process including discussions with the ADB in April 2001. For this purpose, the project leader from IWMI visited the ADB head office during 4–6 April 2001 and held discussions with the ADB project staff including those in charge of the water sector in participating countries to further discuss and agree on the study approach, scope, coverage and overall work plan (please see note on ADB-IWMI discussions, 4–6 April 2001). In addition, as proposed by the ADB, consultations were held through organizing national-level workshops during May–July 2001 in each of the participating countries, followed by a regional workshop held in Colombo during 9–10 August 2001. The objectives of the workshops were to involve stakeholders in the study right from the planning phase and obtain their inputs in designing the study, identify and discuss the country-specific issues related to irrigation and poverty, discuss the study approach and identify the specific study locations/sites. The workshops were very well attended, drawing substantial response from key policymakers of participating countries, international and national researchers, NGOs and donor representatives including ADB resident mission staff.

In view of the complexities of the topics to be covered in the study, and with feedback from stakeholders including ADB, it was agreed that the study would focus on the selected medium- and large-scale irrigation systems, and would cover the following four components:

- 1). An assessment of poverty in irrigated areas and analysis of linkages between poverty and irrigation. This component of the study aimed at improving the understanding of how and to what extent irrigation contributes to poverty reduction; what are the key dimensions; and are there any spatial patterns in location of the poor and access to irrigation water along reaches of the irrigation systems—understanding linkages and impacts of irrigation on poverty.
- 2). Assessment of irrigation system performance and associated impacts on poverty. This component aimed at improving the understanding of irrigation system performance and establishing a knowledge base on irrigation performance and related management issues and their implications for the poor in the study areas—understanding irrigation performance and its impacts on the poor.
- 3). Assessment of current institutional interventions. This component aimed at increasing the understanding of the irrigation performance improving interventions such as irrigation

management transfer/ participatory irrigation management, water charging/cost recovery, and water rights and allocation procedures and their implications for the poor.

4). Identification of the opportunities and constraints, and potential pro-poor interventions — based on the above three components.

For further clarity and specificity of research work, each of the above research component was framed into a set of specific questions as follows (please see the study work plan for details on research questions):

1. What is the poverty situation in canal irrigation systems? What is its magnitude and causes, and are there any spatial patterns of poverty in the systems?
2. What is the impact of irrigation on poverty?/does irrigation reduces poverty?
3. Does performance of canal irrigation systems influence poverty?
4. What are the implications of on-going/proposed institutional reforms and interventions in irrigation (including interventions related to management transfer, participatory irrigation, irrigation charging/financing, water allocation and rights).
5. How can we enhance the anti-poverty impacts of irrigation and related interventions, and what are the potential pro-poor interventions?

Further, the research questions and issues were translated into six hypotheses to be tested. These are:

- (1) command areas of specific canal reaches receiving less irrigation water per hectare have lower productivity and a higher incidence of poverty;
- (2) under existing conditions, small, marginal and poor farmers receive less benefits from irrigation than large and nonpoor farmers;
- (3) the greater the degree of operation and maintenance (O&M) cost recovery the better the performance of irrigation management;
- (4) effective implementation of PIM/IMT leads to improved irrigation system performance that, in turn, reduces poverty;
- (5) absence of clearly defined water allocation and distribution procedures, and absence of effective and clear water rights (formal and informal) adversely affects the poor more than the nonpoor;
- (6) there is a scope for improving performance of irrigation systems under existing conditions, with effective and improved institutional arrangements. These were then translated into a set of activities to be carried out for the study.

After further discussions and deliberation on the draft work plan, we agreed that: a) the draft work plan is in line with the TA agreement for this study signed between ADB and IWMI in February 2001, and the study would follow the broad framework outlined in the draft work plan; b) the study would focus mainly on the software side of relatively large- and medium-scale surface irrigation systems; c) the study would focus mainly on uses of water for irrigation/crop production, and will not cover other uses of water including the micro-scale multiple uses of water; and d) the study would not include micro-scale irrigation technologies, except in certain situations where such micro-scale irrigation practices are an important part of the large-/medium-scale irrigation systems (as elaborated in note on ADB-IWMI Discussions dated 4–6 April 2001 on RETA 5945).

The study progress was reviewed by the ADB Mission during 1–5 October 2001 in Colombo, and the Mission noted that significant progress was made in implementing the study. The Mission made suggestions in relation to the inclusion of study sites in Madhya Pradesh, development of a special website for the study for facilitating cross-fertilization of ideas and information exchange across the study teams; and preparation of a presentation (based on the study outputs) for ADB’s Water and Poverty Initiative Forum at WWF3 in Kyoto. These suggestions were implemented, accordingly. Further, IWMI submitted to the ADB semiannual progress reports on a regular basis, providing details of the activities accomplished, outputs and the outcomes achieved during the respective progress-reporting periods.

Study Achievements—Outputs, Outcomes and Impacts

A brief summary of achievements of the study in terms of key outputs, outcomes and impacts generated during the study-implementation period are provided in tables 1 and 2. As is clear from the tables, the study has generated a considerable amount of outputs. These include not only the study final reports for each country and a summary/synthesis report, but also other outputs including those published as IWMI papers/reports, papers published in peer-reviewed journals, papers presented at international fora, study briefs and so on. In addition, the study has resulted in significant outcomes and impacts in a relatively shorter period of time (as outlined in table 2).

Table 1. Summary of project achievements—participation, consultation, dissemination and capacity development (process indicators).

Item/Indicators	Total number
<i>A. Project participation</i>	
a. Research personnel	
Senior professionals	38
Junior professionals	189
Male professionals	170
Female professionals	57
b. Rural (farm and nonfarm) households	6637
c. Others (see workshop participation)	846
Total participation	7700
<i>B. Consultation, communication and dissemination</i>	
a. National/Regional workshops	
No. of workshops conducted	14
No. of stakeholders who participated	846
b. Media coverage	
No. of news items in national newspapers	47
No. of project articles in newspapers	8
No. of project-related items of news on the TV	8
No. of project-related news on the Radio	5
<i>C. Project in-country monitoring/reviews</i>	20

<i>D. Written outputs/Reports/Publications</i>	
a. Joint written outputs by IWMI and National Partners (journal articles, research papers, working papers, conference papers, workshop proceedings, project reports, project briefs and other outputs)	59
b. Other publications/reports/papers by national partners	28
Total written outputs	87
<i>Capacity Development</i>	
a. No. of students financially supported	8
b. No. of trainings conducted	19
c. No. of junior professionals trained	134
d. Other training/capacity building (e.g., PostDocs)	5

Note: For details, please see part 3 of the final summary report for the study.

Table 2. Summary of project achievements – II: Outputs, outcomes and impacts.

<i>Outputs</i>
1. Review of global literature on irrigation and poverty
2. Methodological framework for analyzing irrigation-poverty impacts
3. Irrigation-poverty profiles for each of six participating countries (covering macro, meso and micro levels)
4. Individual country-project reports providing detailed analyses of issues addressed in the study for each country
5. Summary report providing synthesis of issues, lessons, a set of pro-poor interventions, actions and implementation strategies with detailed guidelines
6. Shorter versions of country reports/briefs synthesizing country-specific issues, options and proposed actions for each of the six countries
7. Shorter version of the summary report synthesizing generic issues, lessons and guidelines
8. Other key outputs—published articles in peer-reviewed journals (Water Policy 2003, International Journal of Irrigation and Drainage 2004, Water International Journal June 2004, Policy Brief with GWP on ‘Poverty reduction through integrated management of surface water and groundwater), other published papers, IWMI unpublished papers/reports
9. Mass-scale awareness-raising on water and poverty issues in the regions at national and international level through 34 presentations
10. National and regional workshops organized for the study—12 national-level workshops (2 in each of the participating countries) and 2 regional-level workshops
<i>Note:</i> The study findings/outputs have been referred to or quoted by a number of

international organizations including Economic and Research Department of the ADB, World Bank, DFID and others.
<i>Outcomes, Impacts, Uptake of Study Outputs</i>
1. The study has made a significant contribution to enhancing the knowledge base on irrigation and poverty—contribution to methodologies, improved understanding of the issues; and identification of pro-poor interventions and actions.
2. The Pakistan Poverty Alleviation Fund (PPAF), the lead apex organization for poverty alleviation in Pakistan, has been reported to incorporating some of the lessons and recommendations of the study into its operational strategy.
3. PPAF is proposing the initiation of pilot testing of one of the recommendations of the study (on integrated service provision through private-sector involvement at three sites in Punjab and Sindh, with operational funding from PPAF (see PPAF office memo dated 13 September 2004).
4. International Development Enterprise (IDE) is taking up some of the recommendations of the study into its operational strategy (<i>see IDE paper by Magistro, Roberts, Haagblade and Kramer 2004, presented at Study Regional Workshop by Michael Roberts</i>).
5. The study's recommendations on irrigation water charging have influenced recent changes in irrigation charging policy by the Government of Punjab in Pakistan.
6. The Punjab Irrigation Minister has expressed interest in initiating pilot projects for testing the study recommendation on the multifunctionality of water user organizations for the development of stallholder economies at the lower Jehlum canal in Punjab.
7. Stakeholders have shown significant interest in replicating the study in other locations of the region.

Note: For details, please see part 3 of the final summary report for the study.

Part -2

Final Regional Workshop—Outcomes, Comments, Suggestions and Responses

The final regional workshop for the study was held in Colombo during 25–27 August 2004. The objectives of the workshop were to a) share, discuss and disseminate key findings, lessons, and recommendations of the study, b) invite other (non-IWMI) organizations/experts working on similar issues to share their work, c) and obtain feedback from the stakeholders on the study outputs and outcomes. The workshop was attended by around 60 participants representing a wide range of institutions including key government agencies (policymakers), NGOs, R&D organizations and donor agencies including representatives from the ADB. The stakeholders have shown substantial interest in the study outputs, key lessons and recommendations made in the study—with lots of positive feedback, interesting comments and suggestions for follow-up of the study outputs. Stakeholders from national agencies, such as policymaking bodies, and implementing bodies, such as NGOs, have shown interest in initiating pilot projects for testing some of the recommendations of the study; the ADB representatives have shown interest in

further consolidation and synthesis of the study outputs and in the development of guidelines for on pro-poor interventions for use by the Bank's operations staff, country policymakers and NGOs, and also in further disseminating the study outputs at the national and international levels; participating researchers have made useful suggestions for further research work on a number of issues related to those addressed in the study. Overall, the key messages that emerged from the final workshop are: a) there is substantial interest and demand for work/knowledge base on water and poverty, b) there is an increasing interest in uptake of evidence-based/research-based recommendations/interventions for implementation, and c) there is tremendous scope for cross-country learning through such multi-country studies. Details of the comments and suggestions from various stakeholders are summarized in the sections below.

Summary of Comments, Suggestions and Responses

A wide range of interesting comments and suggestions were received during the workshop, including written and verbal comments and suggestions from ADB on the draft study reports. These include the following:

1. Discussions, inputs, suggestions and comments during the workshop, including comments and suggestions from the ADB representatives [detailed review comments from Professor Michael Lipton are available on the following site: http://www.sussex.ac.uk/Units/PRU/iwmi_irrigation.pdf]
2. Consolidated written comments and suggestions on the draft final report by ADB for discussion during the workshop, sent by Mr. Bert van Ommen, dated 20 August 2004.
3. Additional written comments on the draft final report (supplementary to the above comments) provided by Professor John Soussan on 26 August 2004.

Regarding 1: *Discussions, comments/concerns and suggestions made during the workshop can be summarized and organized into the following categories:*

1. *Consolidation and further synthesis of the study outputs:* Comments and suggestions made in the workshop are about further tightening-up of discussions on issues addressed in the study, consolidation and further synthesis of all project outputs/reports/papers/articles, filling up gaps in analyses and providing empirical support to arguments where necessary, further strengthening the presentation of findings, conclusions and recommendations in the draft summary final report.
2. *Extension of the study:* Inputs and comments during the workshop suggest extending the study by including further analyses related to other aspects/dimensions of issues covered in the study including issues such as poverty impacts of small-scale irrigation, corruption in irrigation, and technological choices in irrigated agriculture..
3. *Expansion of the study:* Comments and suggestions in this category imply expanding the study by incorporating more dimensions of issues related to those addressed in the study. These include: uses of water other than crop production, multiple uses of water, comparison of small-scale vs. large-scale irrigation, small-scale technologies, issue of

corruption, wider referencing of literature, review of other related IWMI and non-IWMI research—requiring further expansion of the study in terms of coverage of the issues.

4. *Development of guidelines.* Suggestions relate to developing sets of guidelines for various categories of stakeholders including operations staff of ADB, policymakers and NGOs.
5. *Further dissemination of the study outputs:* Suggestions were made to further disseminate the study outputs at the national and international level through a variety of means.
6. *Pilot testing of recommendations:* Suggestions were made to initiate pilot projects for implementing some of the study recommendations. PPAF has offered to collaborate and provide part of the required funding.
7. *Further research work:* Comments and suggestions made suggest initiating and incorporating research studies on other related issues and topics. These include the following:
 - ? impacts of global warming on water resources and crop production
 - ? impacts of increasing water scarcity, institutional reforms, water pricing, etc., at the river basin level
 - ? impacts of institutional reforms on uses of water other than crop production—off-farm water uses, drinking water uses, health impacts
 - ? impacts of institutional reforms on seepage, percolation and evapotranspiration
 - ? impacts of recycling, drainage and technologies for sustainability of irrigation
 - ? impacts of displacement of people from large-scale irrigation development on poverty
 - ? impacts of water-saving technologies on water use efficiency and sustainability of resources
 - ? macro-level analyses and assessment of impacts of unequal land and water distribution on economic growth at the economy level
 - ? analyses of indirect impacts of irrigation on economic growth at the macro economy level
 - ? analyses of full range of alternatives/choices for investments in agriculture and non-agriculture sectors, opportunity costs of alternatives to irrigation, analyses of investments in other sectors such as health, education, roads, etc.
 - ? analyses of investments by the private sector in groundwater development
 - ? analyses of impacts related to multiple uses of water, especially water use for drinking, health effects and externalities

Response

These are interesting and useful sets of comments and suggestions, and could be helpful in further expanding the knowledge base on water and poverty and in other related areas. Some of these suggestions call for broadening the scope of the study, others require initiating new activities and yet others require new research studies. Please see last section on conclusions and the study follow-up plan.

Regarding 2: *Consolidated written comments and suggestions on the draft final report by ADB and responses*

We would like to thank the ADB for all the support and cooperation extended in implementing the study. We are specially grateful to ADB for its feedback and review of the study reports and the overall importance given to this study, with special thanks to ADB's Lead Water Resources Specialist, Mr. Wouter L. Arriens, and Mr. Bert van Ommen, Prof. John Soussan, and other ADB staff for their review of the draft final reports, valuable comments and suggestions, and for contributions to the study final regional workshop.

Our responses to the written comments and suggestions are given in Table 3 below:

Note: Please note that these comments are based on earlier versions of the draft reports, which were further synthesized and developed into much more shorter and accessible products sharply presenting summary of key findings, conclusions, lessons, messages, guidelines and action plans (submitted to the ADB just before the regional workshop). Most of the comments and suggestions related to the size/length of the reports, length of the executive summary, presentation of findings, conclusions and guidelines have already been addressed in the shorter versions of the report, including the shorter version of the summary/synthesis report [available at www.iwmi.org/proppoor]

Response to Consolidated written comments and suggestions on the draft final report by ADB and responses

COMMENTS	RESPONSES
<p>Part A – Comments 1-60 1-5: introductory remarks, study objective and scope</p> <p>Comments 5–10:</p> <p><i>Summary of comments:</i> These comments relate to a) presentation of findings and key messages for policymakers and external agency staff, b) shortening of the executive summary, and c) on the issue of resource redistribution (particularly land).</p> <p><i>Details:</i></p> <p>5: The RETA design has envisaged key outputs including (i) guidelines and strategy for pro-poor irrigation development in the region, and (ii) country-specific action agendas for the low-productivity irrigated areas. These need to be more clearly presented as key messages to the DMC policy makers as well as any external agency staff promoting participatory, sustainable, and pro-poor irrigation development.</p> <p>6: The report tends to promote resource re-distribution in particular of land as one of the key elements of pro-poor irrigation development. While this is fine, it should also provide sufficient recommendations under the condition where this option is difficult to pursue (which is the case in most DMCs). One avenue would have been to pursue the more equal distribution of water (as against land), and more progressive levying on water (including investment costs) to those having more land assets. For example, investment cost recovery may be pursued with larger landowners as an alternative measures towards resource re-distribution.</p> <p>7: In this connection, we have jointly developed, during the early days of the RETA implementation, a menu of potential pro-poor irrigation management practices, including water management association structure and management, water distribution rules, differential pricing and cost recovery, water right administration (de-linking of land and water rights), targeted interventions to the poor, etc., and submitted those in the ICID congress in Canada. They could have been further explored and developed in</p>	<p>These are very useful comments and suggestions indeed. Comments and concerns related to presentation of the study outputs, key messages and length of executive summary have been addressed in the shorter versions of the individual country and summary reports/briefs developed and submitted to the ADB before the regional workshop (please see 8-page briefs for each of the country studies and a main brief summarizing key problems, issues, lessons, interventions, and guidelines).</p> <p>On the issue of resource distribution, the study suggests that the underlying land distribution structure is a key determinant of water distribution, and the study provides options for improving equity in land distribution and identifies conditions under which the suggested options for improving land distribution to the poor could be pursued (please see summary report pages 74–79). Further, the study also suggests other measures for improving equity in water distribution and highlights examples of good practices for equitable water distribution (e.g., rotational distribution system/warabandi system, decoupling of land and water rights under specific conditions), and also explores options such as</p>

<p>defining specific institutional recommendations.</p> <p>8: The study analyzes 26 selected irrigation systems in Asia. The main study components include: (i) assessment of impacts of irrigation on poverty; (ii) irrigation systems performance; (iii) implication of institutional reforms and service charges on poor; and (iv) lessons learned and recommendations. The study provides an excellent and comprehensive analysis of the key factors that have impacts on poor (e.g. system performance, water charges, inequity of irrigation, service provision in agriculture, etc.). A number of best practices that could be disseminated in other Asian countries are identified in the study: (i) equitable land distribution to landless; (ii) establishment of commercially oriented irrigation/drainage companies; (iii) differential water fees depending on type/location of systems and socio-economic conditions; and (iv) introduction of participatory irrigation management.</p> <p>9: However, the presentation of the report could be improved. The report could be more focused on summarizing: (i) the main problems; (ii) what are the root causes of these problems; (iii) recommendations and phased actions can resolve the problem; (iv) how can poor be engaged in the problem resolution.</p> <p>10: It is therefore proposed that the executive summary could be condensed, by shortening the narrative sections and providing a matrix containing the main study findings, key issues, and recommendations for (i) each of the studied countries; and (ii) common recommendations related to all studied countries. Similar approach could be adopted in presenting the findings/recommendation for each of the studied countries (Part 2 of the report). A phased plan of prioritized actions required for increasing returns from irrigated agriculture to poor farmers could be provided for each country.</p>	<p>progressive levying on irrigation water under conditions of highly inequitable land distribution (please see summary report pages 39–49). Overall, we agree that the above issues could be further sharpened and their presentation could be further improved. This is an area where further analysis, review and synthesis will be done based on existing data/information or drawing on evidence from other studies done on the topic.</p>
<p>Comments 11–16:</p> <p><i>Summary of comments:</i> These comments are about a) organization and presentation of the study findings; suggesting to include the study background, purpose, hypotheses and scope of the research as described under the RETA; b) providing evidence on tangible increases in income in irrigated agriculture due to irrigation (as the cost of</p>	<p>Regarding a), please note that chapter 1 of the draft final report is on the “Study Background” providing a summary of the background, study goal, objective/purpose, scope, study components and</p>

production also increases with irrigation), c) including community-based organizations (farmer groups, rice growers' associations, cooperatives), NGOs and the private sector in the proposed institutional reforms; and issues related to gender, indigenous people and marginalized people

Details:

11: This was a unique research study in terms of coverage and scope with voluminous findings and conclusions. Wading through the report was tedious and it would be helpful if the whole research result would be mapped in a conceptual framework indicating the internal and external variables affecting the study. Although the issue of poverty is multidimensional, there were some findings that were two-dimensional and could be represented through a graph or map for easier visualization.

12: The research started with various hypotheses. Can the findings and conclusions be grouped according to the hypotheses? Is there a threshold in the results in which the hypotheses changes from null to one? Can a rule curve be developed for each hypothesis?

13: It is suggested to include in the introduction a summary of the background, purpose and scope of the research as described under the RETA.

14: Generally speaking, costs for farm inputs are born by the poor tenants and marginal/small farmers while credit for farm inputs and farm-gate prices are controlled by middlemen and traders. Costs may increase due to (better) irrigation, but this does not guarantee an increase of income. Is there evidence of any tangible increase of income for the poor farmer in irrigated agriculture?

15: Institutional reform seems to be limited to formal/government reforms. It is suggested to include the community-based organizations (farmers groups, rice growers associations, cooperatives), NGOs and the private sector in the proposed reforms processes and trends.

16: Since the research is focused on the poor farmers, issues of gender and their ethnicity may have been subsumed in this study. However, mainstreaming of gender, indigenous peoples and marginalized groups issues should still be given due attention

research hypotheses.

Regarding b), the study provides empirical evidence on benefits of irrigation to farmers from crop production, estimated with Net Irrigation Benefit (NIB) per unit area indicator, defined as the net value of farm production per unit area from irrigated settings minus net value of farm production per unit area from the adjoining rain-fed settings. Net value of production for both settings is net of production costs (see table 3.1, column 9 for estimated net benefits of irrigation). This indicator provides estimates of contribution of irrigation to farm incomes. However, evidence on this issue will be further re-examined and presented in the revised version of the synthesis report.

Regarding c), part 2 in each country report is devoted to analyses of formal and informal institutions for irrigation management, including the role of government and non-government organizations, WUAs, cooperatives, etc. Further, one chapter in part 3 of each report provides analyses of institutional reforms and their implications for the poor. The findings are synthesized in respective chapters in the summary report, and further synthesis and generic conclusions are presented in part 1 of the summary report (pp. 5–64). Similarly, issues related to gender, caste and marginalized groups are also covered in the relevant parts of the study reports.

Overall, the presentation of the issues could be further improved, and this will be done in the final

<p>and be incorporated in this research.</p>	<p>synthesis report. We will broaden the scope of the study, and provide addition coverage of issue including service perspective of irrigation and gender aspects based on further synthesis and review of the study outputs and other related material on the topics.</p>
<p>Comments 17–21:</p> <p><i>Summary of comments:</i> These comments are about a) lengthy size of the country study reports, summary report and the executive summary; b) focus of analysis on irrigated areas “without looking at wider causal factors in rural poverty and/or agricultural productivity”.....and the broader socioeconomic context; c) level of generalization in the main report; d) “the study assumes that irrigation is the determining factor without an adequate level of analysis to prove this causal relationship.”</p> <p><i>Details:</i></p> <p>17: The series of reports from this project total to well over 1,000 pages, with a main report of over 270 pages and 6 country reports of around 200 pages each. This is a huge volume of work that reflects a sustained effort over a considerable period of time. The reports contain a great deal of information, covering a wide range of issues. The depth and rigor of the field studies in particular is impressive.</p> <p>18: One result of this huge volume of information is that it is extremely difficult for the reader to identify the main messages, and in particular to distil the key points on the potential impact of irrigation on poverty reduction or the main policy and planning recommendations from the study. There is, of course, a trade-off between ensuring that the full depth of information is presented and easy access to that information, but despite this the key messages could and should be presented more coherently and in an easily accessible form. Even the “executive summary” of the main report (which is itself over 20 pages of densely written text) does not give a clear and sharp message. The executive summary is more descriptive than analytical and should lay out the key policy and planning recommendations in a clear and easily accessible manner. This</p>	<p>Regarding a), the concern related to the large size of the reports has been very well addressed in the final shorter (8 page) versions of the study reports, including a shorter version of the summary report, presenting the key findings, lessons, messages, recommendations and guidelines more sharply.</p> <p>Regarding b) and c), we have some concerns about these comments. Each country report begins with detailed analyses and assessments of the broader socioeconomic context, trends in poverty, and wider causal factors influencing poverty. In order to avoid generalization and to retain specificities for each country, the study findings, conclusions and recommendations for each country are synthesized into a separate chapter presented in part 2 of the summary report. Here too, each chapter begins with analyses of the contextual factors. Country specific findings, recommendations and actions are further sharpened in shorter versions of country reports/briefs.</p> <p>Regarding d), in relation to irrigation and poverty relationships, the study results suggest that irrigation is one of the key factors influencing poverty (but not</p>

would go a long way to remedying one of the main problems with the reports, which is the lack of sharpness and accessibility in the main messages.

19: The other systematic issue with the reports is that they focus almost exclusively on the situation within irrigated areas without looking at wider causal factors in rural poverty and/or agricultural productivity. The “on-the-ground” perspective should, of course, be at the heart of the work and much of what is presented is in great depth and is extremely valuable, but the context within which irrigated systems operate – the wider socio-economic framework, related arenas of policy etc – are important in defining what does or does not happen within systems. There are references to these issues, but they are not presented in as systematic a manner as is needed and, in particular, their significance is not adequately represented in the recommendations made.

20: This sort of in-depth comparative work across six countries with very different characteristics is always difficult and the research team has attempted to set up a structure to produce results that would permit a good level of generic conclusions to be drawn. This is to be commended in many regards, but does have the drawback that the specific subtleties of different settings can be lost. The individual country reports overcome this to some extent, but the level of generalization in the main report does lose some of these specificities. This means that the overall conclusions – that people are poorer and systems perform less adequately in South Asia than in South-East and East Asia – are hardly either surprising or new.

21: Similarly, the conclusion that people are better off in irrigated than in rain fed areas is again well known. What is not so clear, and does not come out well in the studies either, are the other factors, besides the availability or lack of irrigation, that causes this. This includes many factors such as remoteness, poor soils, higher incidence of ethnic minorities, poorly-developed services and infrastructure and other factors that characterize many rain fed areas when contrasted to irrigated areas. There is some reference to other dimensions of poverty, and this is to be commended, but the sense from reading the report is that it is assumed that irrigation is the determining factor in explaining higher or lower incidences of poverty without an adequate level of analysis to prove this causal relationship.

the only factor). Also, it is not based on any assumptions (as mentioned in the review comments) but rather based on rigorous quantitative analyses of irrigation and poverty linkages presented in two chapters (entitled ‘Poverty in irrigation systems, linkages and spatial dimensions’; and ‘Determinants of poverty in irrigated agriculture’) in each of the reports. We find this comment inconsistent with comments 8 and 25 in the review report. Overall, the revised version of the synthesis report will be strengthened with more empirical evidence on irrigation-poverty links.

<p>Comments 22–25:</p> <p><i>Summary of Comments:</i> These comments are about a) the need for more analyses and discussions on indirect/multiplier impacts of irrigation (employment, wages, incomes, etc.) in local settings; b) addressing wider poverty and livelihood development options, and issues of social inequality; c) “contradictions between ‘pro-market and pro-poor’ objectives;” and d) strengthening presentation of the identified factors influencing impacts of irrigation on poverty.</p> <p><i>Details:</i></p> <p>22: The conclusion that the indirect impacts of irrigation on poverty are more significant than the direct impacts is extremely interesting and, in many ways, one of the original insights from the study. However, the level of analysis to demonstrate that this is the case is inadequate – it is less than 1/3rd of a page in the main report (page 33). This is something that should have been explored and explained in far greater depth and then, critical in policy terms, the implications of this for the scope of interventions to greater catalyse these multiplier effects should have been set out.</p> <p>23: This is part of a wider issue - the policy and planning options that are set out are focused on the issues of increasing agricultural productivity within irrigated systems and on land distribution issues. Where relevant, these <i>are</i> related to the wider context of how to improve the effectiveness of water and land management in these areas, for example, through land reforms and irrigation sector reform. Wider poverty reduction and livelihoods development options are not addressed. Nor are issues of social inequality and development that are fundamental to the incidence and character of poverty in these areas.</p> <p>24: The recommendations state a strong case for “innovative irrigation management with pro-market and pro-poor orientation”. There are potentially basic contradictions between these two objectives: certainly in the short term, with the inability to access or compete in existing markets a key characteristic of the poverty and inequality of many</p>	<p>As mentioned earlier, one of the concerns with the review comments is that they are largely based on only one of many outputs produced for the project. The issue of multiplier impacts of irrigation in local settings is very well covered in IWMI Working Paper 38 that was produced under this project, and in a paper published in the First Regional Workshop Proceedings. The outputs have been widely referred to by several institutions including ADB (see for example: <i>Ali and Pernia 2003: Infrastructure and Poverty Reduction – What is the Connection, ERD Policy Brief Series No. 13 ADB</i>). What is presented in the draft final report are only the main points and key conclusions from the material presented in other outputs of the study.</p> <p>However, we agree that the overall discussions and presentation of indirect impacts of irrigation in local settings could be consolidated and further improved in the final report. This is an area where further review and synthesis will be done based on existing material/papers or drawing on evidence from other studies done on the topic</p> <p>Regarding b), we would like to draw your kind attention to the fact that the objective of this study is to determine options for improving returns to poor farmers through irrigation interventions in the low-productivity irrigated areas in the context of</p>

areas. The recommendations do not address the trade-offs that this may entail, nor does it characterize what a “pro-market – pro-poor” system might look like in any one area.

25: There are interesting conclusions re: the extent to which irrigation has poverty reduction impacts, with 5 key factors explaining whether irrigation is pro-poor, neutral or anti-poor. This is again an important set of findings and the analysis presented in the main report could be deepened. Of particular interest are the interactions between the 5 factors and which, if any, are the most fundamental under which circumstances. It would also be worthwhile identifying which of the 5 factors (e.g. condition of irrigation infrastructure and management) are most amenable to influence through policy and planning processes, which would need actions in wider policy and planning arenas (e.g. “support measures”), which are not easily subject to policy influences (e.g. access to markets) and which raise extremely complex policy and political issues that are unlikely to be addressed in the short to medium term (e.g. land distribution).

improving the overall performance and sustainability of the established irrigation systems. In this context, where relevant and necessary, other poverty reduction and livelihood development options have been addressed. The issue of inequality in access to resources such as land, water, production inputs and related services are also very well addressed in the study (please see IWMI Working Paper 66 for in-depth analysis of issues related to access to other inputs and services by farmers). Of course, there are many other factors causing social inequality such as inequality in access to education, health services, and other similar services provided by the public and private sectors. However, their analyses are beyond the scope of this study.

Regarding c), this comment is based on conventional thinking that there is basic contradiction between ‘pro-market and pro-poor’ objectives. The study findings, especially in relation to canal irrigation charging/pricing, suggest that the low level of charges actually dis-benefit the poor (mostly indirectly), and that the poor rely more on informal water markets (and overall, they pay more than the nonpoor). The study shows that under conditions of inequitable land and water distribution, the poor would gain from general increases in water charges that lead to improved recovery of O&M cost of irrigation, and overall increased funding for improved O&M. The study proposes a reorientation of irrigation services with commercial principles and incentives, and suggests that under conditions of highly inequitable land and water distribution there

	<p>are ways in which irrigation charging schemes can be designed such that they are both pro-poor and pro-market, and this is quite consistent with emerging new thinking in this regard, especially among development banks including ADB and the World Bank.</p> <p>On d), while chapter 4 of the summary report elaborates about which of the identified five factors are most amenable through policy, planning and management processes, and which ones are complex and raise difficult policy and political issues, however, their presentation could be further improved. We will address them in the revised version of the final report.</p>
<p>Comments 26–28:</p> <p><i>Summary of comments:</i> These comments are about a) issues in promoting land redistribution and land access to the poor; b) disagreement of the reviewer about the proposed land redistribution options, and inconsistencies in the identified options in reviewers’ view c) further strengthening the structure and presentation of chapter 4</p> <p><i>Details:</i></p> <p>26: Under the section on pro-poor intervention strategies, there is a high level of dependence on land reform and re-distribution as a fundamental condition for success. The effectiveness of land policies in Viet Nam and China are indeed impressive, and indeed do go far to explaining many aspects of the success of these 2 countries in poverty reduction over the last 10-15 years, but this reflects very specific political and historical circumstances that are not likely to be replicable in South Asia or elsewhere. And the land reforms were part of a wider package of liberalisation in economic</p>	<p>We will carefully look into the issues raised and address them on the basis of available research evidence from work within and outside IWMI. Also, the overall presentation and structure of chapters as suggested will be further improved in the revised version of synthesis report. This is an area where further analysis and synthesis will be done based on existing data/information and papers presented in the workshop or drawing on evidence from other studies done on the topic.</p> <p>Notes {regarding a) and b), the study indicates that “Successful redistribution of lands to the poor through effective land reforms in Japan (in 1948, redistributing 41% of cultivated land to 81% of landless households), Taiwan (in 1953, redistributing 44% of</p>

systems that were fundamental to releasing the latent potential of these areas. This is a real concern: the intervention options, such as they are, are consequently reliant upon a process of structural change that would require a huge amount of political capital that is unlikely to be forthcoming, that is beyond the control of the sector that this report is likely to influence and that would encounter huge social and economic barriers if it was to be implemented.

27: Following from this, I would not disagree with anything said re: the effects of inequalities in access to land, *but* the 3 options identified (page 76 main report) are all riddled with inconsistencies and are unlikely to happen where they are needed most – in the parts of South Asia where the landed are the dominant political force and carry enormous economic influence. I do not agree at all with the contention that the 3rd option “improve the poor’s chronic access to land through an incentive-based market approach” is, as the report claims “doable and should be done”. Indeed, it is not at all clear what this means and there are fundamental contradictions to creating the incentives for improving the access of the poor to land through existing (or even greatly interfered with) market mechanisms. These recommendations, which lie at the heart of the report, are presented with very limited explanation or analysis. If they are to remain then their character and the mechanisms through which they could be achieved both need far greater and more convincing analysis.

28: A final comment – chapter 4 is titled “pro-poor intervention strategies and guidelines”. This chapter does contain all sorts of interesting points (though some, as has been indicated, are contentious). But, the points are not presented in a strategic structure and do not have the character of guidelines. There would be an extremely large step between what is presented here and the development of a coherent and implementable strategy. Either the structure of this chapter needs to be re-thought or it needs to be re-titled as a series of analytical points and a further section where the strategy and guidelines are elucidated needs to be added.

cultivated land to almost 100% of landless households), South Korea (in 1948, redistributing 33% of cultivated land to 64% of landless households), (Prosterman and Mitchell 2002); China (between the 1950s to the late 1970s, especially in 1978 with the introduction of the “Household Responsibility System,” which led to equitable distribution of land to all rural households based on family sizes), and Vietnam (in 1986 under the *doi moi* reforms, which led to equitable distribution of land to all rural households, based on family sizes) have contributed tremendously to lifting a large majority of the poor out of poverty, mostly permanently, in these countries. There is ample documentation of the positive impacts of land redistribution on agricultural productivity, household food security, household incomes and rural stability. On the other hand, land redistribution attempts made through administrative reforms in India have achieved only limited success; land reforms in Pakistan and Bangladesh have largely failed to achieve desired results either due to poor records on landholdings or poor implementation of regulations. In light of such failures, the subject of land reforms in South Asia began to be considered a taboo. However, since the late 1990s, there has been growing realization that poverty may not be effectively reduced unless permanent assets are created for the poor and the deprived. The IFAD 2001 report on poverty also concludes that without assuring adequate access to this most basic productive resource (such as land), the goals of eradicating poverty, reducing hunger and promoting more broad-based and inclusive economic development will remain elusive at best. With increasing realization of the importance of equity in land distribution, and the role of access to land in chronic poverty alleviation, land reform issues are coming back on the mainstream development agenda, although there are strong controversies on approaches to land reforms. Based on the lessons learnt in this study, we present three options for promoting equity in resource distribution in South Asia and discuss the likelihood of their success, feasibility and cost implications.

Option 1: Making radical changes in the land distribution structure—ceiling-based regulatory/administrative land reforms for equitable distribution of land. However, given the historical conditions and factors, e.g., initial conditions in China and Vietnam were entirely different from those in South Asian countries; long-established rural-power structures, and in light of past experiences with such attempts in South Asian countries, fundamental redistributive reforms are unlikely to succeed. Accurate land records, which rarely exist in most situations, and effective implementation of the regulation, which is rarely the case in real-world situations in most South Asian countries, are essential for regulatory reforms. While this broad-based regulatory approach remains an option, it may not be very realistic under the prevailing

	<p><i>sociopolitical scenarios.</i></p> <p><i>Option 2</i> Promoting equity in land distribution and improving the poor's access to land through a combination of ceiling-based regulatory approach and incentive-based market approach, that is, buying lands from large landholders and distributing them to the poor landless and marginal farmers including poor women farmers, either on a grant basis or on subsidized rates or on long-term leases or through long-term loans to the poor. <i>This semi-targeted approach, though, appears an attractive option; however, some of the problems are similar to those as for option 1, and it may not be feasible due to huge costs involved.</i></p> <p><i>Option 3:</i> Improving the chronic poor's access to land through an incentive-based market approach or through other similar approaches, with emphasis on providing a basic-size holding, to the chronic poor, that is economically viable and generates livelihoods sufficient enough to support an average family. For example, the threshold level in rural Pakistani Punjab is 2 hectares; of course, this threshold will vary by locality and country depending on a range of factors including quality of land, productivity, family size, access to nonfarm sources of incomes and so on, either on a grant basis or on subsidized rates or on long-term leases or through long-term loans to the poor. The targeted approach in this option would entail substantially less cost than, for example, for an approach as assumed in option 2, and this is something doable and should be done. <i>The emphasis should be on creating economically viable, managerially efficient, socially equitable and locationally consolidated landholding units. The newly initiated irrigation-sector reforms should be seen as an important entry point for the suggested land reforms.</i></p> <p>In this regard, please note three key points: a) land distribution/ reform and improved access of the rural poor to land would be key for generating any significant impacts for rural poverty reduction in South Asia; there is a great body of recent studies supporting this; and the issue of land reform is coming back on the development agenda; b) without land redistribution, significant inequities in water distribution will continue to prevail, as the effect of other interventions would be only limited (this point is also endorsed by many workshop participants); and c) there are many different ways of improving equity in land distribution and the poor's access to land.</p> <p><i>Case from Pakistan:</i> In Pakistan, there are NGOs for the rural</p>
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	<p>landless poor that intermediate in land-leasing markets to help groups of the rural landless poor. Case studies of two such NGOs, in the Sanghar and Khairpur districts of Sindh, have revealed innovative models of intermediation. “These organizations rent land on the lease market and then sublet it to the individual members on the basis of deferred rental payments. The organizations use their social collateral to raise capital from larger NGOs, thereby relieving their members’ liquidity constraint. They also allow income smoothing for their members over 4 to 6 crop cycles, thereby alleviating vulnerability risks. Both of the experiments resulted in sustained improvements in the asset position of their participants. These experiments in leasing markets represent attempts at tackling the problem of land inequality in an innovative manner by working through existing markets” (for details, see World Bank Report 24296 – PAK, Poverty Reduction and Economic Management Sector Unit -South Asia Region).</p>
<p>Comments 29–37:</p> <p><i>Summary of Comments:</i> These observations and comments are based on only the executive summary of the draft final report. Details for several points and concerns raised are already presented in parts 1 and 2 of the report, and also in country reports and other related papers.</p> <p><i>Details:</i></p> <p>29: Institutional reform implications for the poor - para 08 in executive summary (ES): One of the key research questions of the RETA has been to what extent the ongoing reforms being promoted in the participating DMCs such as PIM are sufficient in improving irrigation system performance, and in enhancing the irrigation benefits to the poor during the process, based on which specific and practical recommendations should be drawn. While paragraph 08-h) has some information, they are too general and lack specificity, and may be strengthened and detailed on the basis of the DMC study findings.</p> <p>30: Some specific benefits of PIM reforms have been mentioned in this para, but to what extent these are due to the one-time rehabilitation assistance provided under the</p>	<p>Overall, many of these observations, comments and suggestions made are useful and interesting, and we agree that they would be helpful in further improving the executive summaries/syntheses of the study outputs. This will be addressed in the revised version of the study final synthesis report.</p>

PIM interventions? Can we say that corresponding institutions have sufficiently been developed and that these benefits are sustainable? If not, what are the causes of the deficiencies and what measures should have been considered in providing these programs? Has program sequence (infrastructure assistance as opposed to institutional development support), inputs, and managerial arrangements been effective?

31: Irrigation management with pro-market and pro-poor orientation - para 16-a) in ES: While organizational structure of WUAs are mentioned, is this sufficient to ensure equal distribution of water to the poor and the disadvantaged; what if a turnout does not have any field channel and there is serious distributional inequality within the turnout area? What additional measures may be needed within the 3-tier WUA to pursue more equal sharing of irrigation benefits between heads and tails? As to the last sentence of this para, I feel that this may show the specific reform activity sequence in view of its critical importance, following the last sentence of para 4.a) in p. 81, which may even be more detailed for the specificity of the recommendations.

32: Para 16-b) in ES: Previous IWMI study on irrigation management reform (guideline for IMT published in late 1990s) was inconclusive on the merit of pursuing multifunctionality of WUAs. There are certain pros and cons (e.g., management increasingly pre-occupied with commercial activities with reduced interests in irrigation O&M) for this, which needs to be carefully pursued.

33: Para 16-c) in ES: It would be useful if the institutional options to address the problem of "lack of accountability and regulatory backup" are elaborated, as good quality service would be a condition for beneficiary payment of fees.

34: Para 16-d) in ES: While the measures explained in the para would be useful in promoting financial sustainability of irrigation management, options to promote distributive efficiency and equity may be explored in more detail, let alone differential irrigation service fee. Specifically, we may also pursue improving water use efficiency and distribution efficiency/ equality at farm, branch and main canal levels to improve irrigation performance and its pro-poor benefits. In general, there are many cases where head reach farmers overirrigate crops causing lower crop yields and drainage congestion. At turnout level, we can not expect high productivity agriculture, diversification, or high water use efficiency if there are no field channel network, which is often the case for South Asian irrigation systems. There should be cases for

introducing effective rotational irrigation among different canals within an irrigation season. In water scarcity areas, irrigated area may even be rotated among different canal command areas on an annual basis. How about the possibility of introducing irrigated area ceiling per farm households so that water can be distributed equally between head and tails, and among large and small farmers. What are the necessary institutional mechanisms that may enable such water distribution?

35: Para 16-f) in ES: Given that there is little discussion on "water rights" in the study, "water pricing" may be the term more appropriate in the context of this para. How the water rights should be administered in the irrigation systems constructed and owned by the Government and used by beneficiaries (who may not be taking responsibility of system management) requires a careful study, without pre-judging that market-based allocation of water rights would actually benefit the poor in surface water irrigation systems.

36: Para 17 in ES: One difficulty in promoting reforms in the existing irrigation systems is that the existing water distribution and use practice (and even free provision of water) have become "customary right" of farmers, who do not easily accept any loss to their privileges. Opportunities for external support, in terms of rehabilitation or building new schemes, should be most effectively and carefully utilized as incentives for stakeholder adoption of any new customs and practices. For example, our project experience indicates that rehabilitation assistance may only be provided after the fulfillment of such pre-conditions as formation of WUAs, endorsement of improved water distribution rules, collection of irrigation service charges as a demonstration to their future willingness, self-help construction of field channels, etc. Adopting more drastic measures such as annual rotation of command area and ceiling in irrigated area per household may be feasible when new irrigation schemes are developed.

37: Para 18 in ES: Some specific examples in the participating DMC may be cited, in terms of interventions based on unrealistic targets and deadlines ignoring the appropriate process to be followed, ad hoc and temporary approaches to poverty reduction, etc.

<p>Country specific comments</p>	<p>Soon after the second regional workshop, we shared ADB's country specific comments with our country partners, and have received comments from and Bangladesh and Vietnam as given below.</p>
<p>Comments on Vietnam Report</p>	
<p>Comments: 38-45 - China</p>	<p>Responses yet to be received from the country study team</p>
<p>Comments: 44- 47: India</p>	<p>Responses yet to be received from the country study team</p>
<p>Comment: 48-49: Bangladesh</p> <p>48. In case of Bangladesh, there are significant gaps between the existing policy and institutional framework (part 2 of the country study) and actual scheme operations in the field (part 3), but the latter does not seem to have provided sufficient information regarding the system performance, gaps between institutional framework and operations, and specific recommendations. Specifically, we suggest that scheme maps (including main and secondary canal layout) should be included. In case of GK project, while we know that there is severe water shortage in the dry season, no information is provided as to how the water is distributed during the critical period.</p> <p>49. As to Pabna irrigation scheme, please note that irrigation command area is about 18,000ha while flood control and drainage command is substantially larger. We have found that actual irrigated area during the dry season remains about 30% of the command, due to the lack of field channel networks in each turnout. While the recently completed command area development project included programs for development of WUAs (with NGO involvement) and field channels (through farmer self-help efforts), they were not given sufficient attention by the EA during the implementation period, and they just went ahead with constructing main facilities and branch canals with only nominal development of WUAs (i.e., enrolling 12 members as required for registration, ignoring the rest of the farmer beneficiaries). In areas where irrigation water is available now, service quality is fine with regular supply of irrigation water but farmers are not simply paying because they see water as free gift from the government, with little motivational efforts having been provided during the planning and design stage (indicating better service quality does not automatically lead to farmer willingness to pay). In retrospect, the project design should have clearer</p>	<p>Response from BUP, Dhaka, Bangladesh</p> <p>1. G.K. Project: The Operation of the G.K. Irrigation scheme has been designed in such a way that the command area is adjusted according to the amount of water available from the Ganges river, especially during the dry season (Kharif-I). The major crop within the scheme is Kharif-II. It can be observed from table 3.4.1 that the command area in the two seasons, Kharif-I and Kharif-II, varies with the availability of water but the Kharif-II coverage is 3 to 4 times higher compared to Kharif-I. Except for adjustment of the command area the system is operated as usual (i.e. no distributional adjustments are made in a planned way) even during critical periods. In recent years, however, the farmers have started to use shallow tubewells to supplement canal water during the critical periods.</p> <p>Significant gaps between the existing policy and institutional framework and between institutional framework and operation have been well recognized. These are some of the important weaknesses of the scheme responsible for under performance. These need to be addressed on a priority basis if any significant improvement has to be made in system performance in</p>

procedural guideline that infrastructure benefits should not have been provided before sufficient farmer motivation in terms of WUA formation, field channel construction, and irrigation service fee collection have been provided. It would be useful if the study report could provide specific recommendations to improve the system performance, and to enhance the benefits to the poor.

future. In part 3, most of the major performance indicators have been evaluated and their strengths and weaknesses assessed. Based on the assessment, specific recommendations have been provided for improving the performance of the scheme and its subsequent favorable impact on the poor.

2.Pabna Irrigation Scheme: It may be noted that most of the schemes implemented by BWDB are FCID (Flood control, Irrigation and Drainage) in nature and in every scheme there are two or three major components. In the Pabna Irrigation scheme, flood control and drainage appear to be two other major components along with irrigation; and, hence, the irrigation command area is comparatively low at 18,000 ha. The scheme is performing at a very low level and a major constraint has been identified as non-performing (or poorly performing) WUAs. If these are not strengthened and made operational the scheme is unlikely to perform any better. It has been rightly mentioned that the EA, which is an engineering-focused organization, has constructed the major infrastructure but did not give due emphasis on the formation and proper functioning of the WUAs. We strongly recommend WUAs be properly formed and effectively operationalized without further delay. They must be entrusted with adequate authority in the operation and maintenance of the system.

We also recommend that, in future, command area development projects should be implemented in cooperation with other organizations, which have proper qualifications and experience in working with beneficiary groups. While the EA has expertise on the engineering side, it has very limited expertise or experience on the software side.

**Comments 5-60: Vietnam
Viet Nam**

50. The study has discussed the impact of irrigation on crop production but not yet done so for crop diversification. In many cases, crop diversification is more effective for poverty reduction than crop production due to limited market/demand.
51. The study has not yet made clearly that investment for poverty reduction through irrigation would not be sustainable if economic effectiveness would not be seriously taken into account. At present, there is a tendency to do poverty reduction at any price in water sector in Vietnam.
52. It is not fully true that in Vietnam, "irrigation charges tend to be related to the level of service and O&M costs", as the ceiling of charges has been limited by the Government and partial subsidy is still provided by the Government for this sector. This is one of main reasons causing Vietnamese irrigation systems to be degraded quickly and to require major rehabilitation in short periods.
53. The level of annual irrigation charges mentioned by the study for Vietnamese systems (US\$58 to US\$61/ha) are not correct. According to Decree 143 of the Government, the annual irrigation charges in Vietnam range from VND650,000/ha (US\$41/ha) to VND1,430,000/ha (US\$91/ha).
54. It is not fully true that level and structure of irrigation charges are determined by the provincial government, as the provincial government should determine the level and structure of irrigation charges in complying with general frame set up by central government in Decree 143.
55. It is not correct that there is no volumetric-based charging in Vietnam, as Decree 143 includes guidelines for the volumetric-based charging for areas irrigated by pumps and some provinces (for example Thua Thien Hue Province) have already applied this.
56. In Vietnam, irrigation charges are also based on the type of irrigation e.g. gravity, electric pumps, petrol pumps, directly and indirectly irrigated by pumps.
57. The Government provides budget to cover IDMCs' electric fees for electric pumping stations.
58. The study has no assessment for PIM organizations (for example Water User Groups).

Response from CIWSR, Hanoi, Vietnam

Reg 50. Actually in our study systems, soil type and topography play more important role in crop diversification.

Reg 51: It is true that investment for poverty reduction through irrigation would not be sustainable if economic effectiveness would not be seriously taken into account. However in our study systems, irrigation investment, which is for natural hazard (drought and flood prevention) had high economic benefit and high poverty reduction benefit.

Reg. 52. It is true that irrigation charges do not always tend to be related to the level of service and O&M costs. However irrigation fee collected rate is closely related to the level of service.

Reg.53: The annual irrigation charges mentioned are for two study systems. We do not see any conflict with the government decree 143.

Reg 54. The comment is correct. However, within the frame, which varies very widely depending on irrigation type, the provincial government determine the level and structure of charge. The charges thus vary widely from province to province.

Reg. 55. The volumetric based charging has only recently been applied in very limited area, mostly water scarce area. For rice, we think it is not popular to use volumetric-based charging

Reg. 56 . This is fine.

Reg. 57. This is only for flood control.

Reg. 58. There is no PIM/WUG in the study area.

<p>59. The study uses vietnamese poverty rate of 1999. These data should be updated, as 2002 data are available.</p> <p>60. For Vietnam, there are many other old data (1993 - 2001) used by the study, while 2002 data are available.</p>	<p>However the institutions for on-farm water management that are in place have been analyzed in detail in the study.</p> <p>Reg. 59 and 60, The study was initiated in 2001 and completed in 2003, using latest available published data up to 2001, data for 2002 was available/published only after the study was completed or nearing completion.</p>
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Regarding 3: Additional written comments on the draft final report (supplementary to above comments)

Comments	Responses
<p><i>Summary of additional comments</i></p> <p>The supplementary review report makes two sets of comments and suggestions as follows:</p> <p>a) “Both the research findings and recommendations are largely focused on the situation within large canal irrigation systems. This represents a narrow interpretation of the TOR and issues that directly and indirectly impact upon production in the study areas, which are not adequately addressed. These include the following:</p> <ul style="list-style-type: none"> ? Subsidies, tariffs, crop purchasing systems and other areas of policy as well as more general issues of national and rural development trends ? The legal basis of access to water and water rights need to be discussed ? Other aspects of both water use and the livelihoods of people in the study areas. ? Comparative data on other types of irrigation such as small-scale groundwater systems: the systems are only compared to rain-fed agriculture. 	<p>Most of these comments call for broadening the scope of the study and coverage of issues. For those aspects /points that may be outside the original scope of the study, we will address them, where feasible, by drawing on other IWMI work and research findings of outside researchers To the extent possible, we will address the additional, complementary aspects raised by the reviewers (e.g., service perspective of irrigation, corruption in irrigation, water rights, small-scale irrigation, resource conserving technologies, gender aspects of irrigation and indirect impacts of irrigation) by drawing from IWMI’s other on-going and past work and work of outside researchers. Additionally, in relation to wider referencing of literature, a summary of key lessons from literature will be included in the final synthesis report. In addition, the revised final report will also include recommendations for future research [please see last section on follow-up activities].</p> <p>Other comments made by Prof. John Soussan, especially on issues such as macro level interventions, subsidies/taxes in other sectors, markets, more general issues of broader rural development are no doubt very valid but these are outside the scope of the present study. But we agree that these issues merit attention in a holistic analysis of water and poverty.</p>

- ? Access to markets for inputs and crop sales, access to credit, etc.
- ? The impacts of corruption on irrigation development should be analyzed.”

b) Other comments and suggestions made in the review report include the following:

- ? More detailed analysis of indirect benefits
- ? More detailed analysis of gender issues, ethnicity and social marginalization in relation to access to benefits that accrue from irrigation
- ? Integrating perspectives of the poor communities through case studies
- ? Wider referencing of literature
- ? Prioritization of interventions. Details on specific mechanisms of how the identified interventions would be implemented
- ? Providing more discussion on service perspective of irrigation
- ? Broadening scope of options identified beyond the present focus on within-system actions to include options to enhance access to markets, credit and other factors of production and macro-economic policies and regulations
- ? Detailed specification of a set of pilot options that could be used to test the key outcomes of the study
- ? Generating materials that target the specific needs and capabilities of different stakeholders including irrigation managers, senior government officials, politicians, civil society, ADB staff, other donors, etc.
- ? Establishing linkages to PRSP processes and to key areas of policy such as decentralization and market reforms
- ? Preparation and testing of an output dissemination strategy

? Recommendations for future research	
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Part 3: Conclusions and the Follow-up Activities

This multi-country study was designed to address specific issues and to answer a specific set of research questions. The research work completed under the study has successfully answered these questions; however, many other issues and questions have arisen. The comments and suggestions on the study outputs and discussions during the final regional workshop highlight, among other things, the critical need to continue efforts to address the other related research issues and questions.

Overall conclusions from the discussions in this document can be summarized as follows: a) the study has drawn substantial response and interest from various groups of stakeholders on issues related to water and poverty; while priorities of different stakeholders vary—some emphasize on initiation of implementation of the identified actions and interventions, others see the need for developing more products from the study outputs, yet others suggest to broadening the scope of the study for expanding the coverage of the issues and topics addressed in the study—all these point to increased demand for the improved knowledge base on issues related to water and poverty; b) the study has generated a substantial amount of knowledge base and valuable outputs, with great potential for developing unique products for targeting at various groups of stakeholders; and c) there is tremendous scope and opportunities for enhancing cross-country learning of the issues and improved practices through such multi-country studies.

In view of the significant importance given to the outputs of the study by the stakeholders and suggestions made in the regional workshop, including by the ADB, the following activities are planned as a follow-up of the final regional workshop.

1. *Additional analysis:* This will include re-examining and additional analysis of available country data/information in relation to poverty impacts of irrigation in local settings in the study countries, its magnitude, and analysis of key resource related factors influencing rural poverty. This will include both qualitative and quantitative analyses using available data/information for the systems studied, and to the extent possible, will be based on published/reviewed/presented material (especially IWMI's research reports, working papers that are under preparation, and study country reports).
2. *Consolidation and synthesis of all study outputs:* This will include consolidation and further synthesis of the study findings based on all the study reports, working papers, workshop proceedings and other related grey literature produced under the study.
3. *Additional review and synthesis:* To the extent possible, we will address the additional, complementary aspects raised by the reviewers (e.g., service perspective of irrigation, corruption in irrigation, water rights, small-scale irrigation, resource conserving technologies, gender aspects of irrigation and indirect impacts of irrigation) by drawing from IWMI's other on-going and past work and work of outside researchers. Additionally, a summary of key lessons from literature will be included in the synthesis report.

4. *Preparation of final synthesis report:* A final synthesis report will be prepared based on the above analyses, reviews and synthesis. The report will provide key findings, lessons, messages and set of guidelines. The final report will be professionally edited with assistance from professional editors/writers.
5. *Further Dissemination:* The key study findings, lessons and messages will be further disseminated through published material, including the synthesis report, IWMI research reports/journal articles and through presentations at future national and international events [along with ADB sponsored film on The Impact of Water on Poverty produced by Hasley Street, New Zealand]. Dissemination activities will also be carried out through the GWP's Advisory Center and IWMI's Comprehensive Assessment (CA) Program. For wider dissemination, a separate proposal will be submitted to the ADB for its consideration by IWMI's Information and Knowledge Group (IKG).

Time frame:

Synthesis Report – end March 2005

Editorial Assistance/Publishing/Production of Final Report – April/May 2005

Publication of other related outputs (such as IWMI RRs) – August/September 2005

Submission of proposal to ADB for wider dissemination – January 2005

Dissemination of study outputs – April – December 2005

We thank ADB for the support and cooperation extended in implementing this study. For any further queries, comments and suggestions, please contact the project leader.

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