



Food and Agriculture
Organization of the
United Nations

OFFICE OF EVALUATION

Project evaluation series

Final evaluation of the Groundwater Governance: A Global Framework for Action

April 2016

PROJECT EVALUATION SERIES

**Final evaluation of the Groundwater
Governance: A Global Framework for Action**

**FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS
OFFICE OF EVALUATION**

April 2016

Food and Agriculture Organization of the United Nations

Office of Evaluation (OED)

This report is available in electronic format at: <http://www.fao.org/evaluation>

The designations employed and the presentation of material in this information product do not imply the expression of any opinion whatsoever on the part of the Food and Agriculture Organization of the United Nations (FAO) concerning the legal or development status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. The mention of specific companies or products of manufacturers, whether or not these have been patented, does not imply that these have been endorsed or recommended by FAO in preference to others of a similar nature that are not mentioned. The views expressed in this information product are those of the author(s) and do not necessarily reflect the views or policies of FAO.

© FAO 2016

FAO encourages the use, reproduction and dissemination of material in this information product. Except where otherwise indicated, material may be copied, downloaded and printed for private study, research and teaching purposes, or for use in non-commercial products or services, provided that appropriate acknowledgement of FAO as the source and copyright holder is given and that FAO's endorsement of users' views, products or services is not implied in any way.

All requests for translation and adaptation rights, and for resale and other commercial use rights should be made via www.fao.org/contact-us/licence-request or addressed to copyright@fao.org.

For further information on this report, please contact:

Director, Office of Evaluation (OED)
Food and Agriculture Organization
Viale delle Terme di Caracalla 1, 00153 Rome
Italy
Email: evaluation@fao.org

Photo credits: cover (top to bottom) ©FAO/Noah Seelam; ©FAO/Hoang Dinh Nam;
©FAO/Giulio Napolitano; ©FAO/Noah Seelam; ©FAO/Noah Seelam; ©FAO/Giulio Napolitano

Contents

<i>Acknowledgements</i>	<i>vi</i>
<i>Acronyms and abbreviations</i>	<i>vii</i>

Executive summary	1
--------------------------------	----------

1. Introduction	6
1.1 Background	6
1.2 Evaluation scope and audiences	6
1.3 Methodology	7

2. Context of the project	8
--	----------

3. Evaluation findings	10
3.1 Analysis of project concept and design.....	10
3.2 Analysis of project implementation	11
3.2.1 Component 1: Compilation of the global state of groundwater governance in relation to groundwater supply and demand (quantity and quality)	12
3.2.1.1 Governance definition meeting report	12
3.2.1.2 Case studies	13
3.2.1.3 Thematic papers	13
3.2.1.4 Synthesis report	14
3.2.2 Component 2: Development of a global/regional groundwater diagnostic integrating regional and country experiences with prospects for the future.....	14
3.2.2.1 The regional consultations	14
3.2.2.2 Private sector engagement.....	16
3.2.2.3 The global groundwater diagnostic.....	17
3.2.2.4 Mainstreaming groundwater in GEF programmes	18
3.2.3 Component 3: Definition of a shared vision and global framework for action on groundwater governance	18
3.2.4 Component 4: Communication strategy and dissemination of the framework for action on groundwater governance.....	20
3.2.4.1 Communication strategy	21
3.2.4.2 The project consultation mechanism	21
3.2.4.3 Outreach and dissemination of results.....	22
3.2.5 Component 5: Project management, monitoring and evaluation	24
3.3 Financial resource management (value for money).....	25
3.4 Institutional arrangements	26
3.5 Analysis of the project's contribution to results	27
3.6 Analysis of cross-cutting issues and sustainability	32
3.6.1 Gender and equity dimensions	32
3.6.2 Partnership and alliances	33
3.6.3 Sustainability, ownership of results of follow-on activities.....	33

4. Conclusions	35
5. Recommendations	37
6. Lessons learned	39
Appendices.....	40
Appendix 1: Final independent evaluation of Groundwater Governance: A Global Framework for Country Action – terms of reference	40
Appendix 2: Evaluation matrix.....	47
Appendix 3: Profiles of team members	49
Appendix 4: Persons interviewed during the evaluation	50
Appendix 5: Survey methodology and results	51

Tables

Table 1: Participation in the regional consultations.....	15
Table 2: Composition of the PCM in 2015.....	22
Table 3: Budget comparison by component ('000 USD).....	25
Table 4: In-kind contributions by each agency, by project component ('000 USD).....	26
Table 5: Status report on project results attainment.....	29
Table 6: Project performance against GEF assessment criteria.....	31

Acknowledgements

The Evaluation Team would especially like to thank the staff of both FAO and partners associated with global water governance for facilitating, supporting and contributing to the evaluation. Partners include the United Nations Educational, Scientific and Cultural Organization-International Hydrological Programme (UNESCO-IHP), the International Association of Hydrogeologists (IAH) and the World Bank. Without their valuable and timely support the evaluation would not have been conducted so efficiently and according to schedule.

Particular gratitude is due to the many respondents from the Project Consultation Mechanism and CapNet who participated in the very informative discussions, and contributed significantly to the evaluation findings.

We would also like to thank the FAO Project Task Force for Global Water Governance for their insights and contributions, as well as FAO's Office of Evaluation for their support throughout the evaluation.

Evaluation team

Ms Maxine Olson (United States of America), Team Leader

Mr Hugh Turrall, Team member

Ms Arwa Khalid, Evaluation Manager, FAO Office of Evaluation

Acronyms and abbreviations

CDT	Core Drafting Team
ECE	United Nations Economic Commission for Europe
ET	Evaluation Team
FAO	Food and Agriculture Organization of the United Nations
FFA	Framework for Action
GD	Global Diagnostic
GEF	Global Environment Facility
GWG	Groundwater Governance
IAH	International Association of Hydro-geologists
IFI	International Finance Institution
IHP	International Hydrological Programme
IW-Learn	International Waters-Learn
MTR	Mid-term Review
NGO	Non-governmental Organization
PC	Project Coordinator
PCM	Permanent Consultative Mechanism
PCU	Project Coordination Unit
PIR	Project Implementation Report
PSC	Project Steering Committee
RC	Regional Consultations
SSA	Sub-Saharan Africa
STAP	Scientific and Technical Advisory Panel (GEF)
TCI	FAO Investment Center
UNDP	United Nations Development Programme
UNEG	United Nations Evaluation Group
UNESCO	United Nations Educational, Scientific and Cultural Organization

Executive summary

Introduction

- ES1 The project “Groundwater Governance: A Global Framework for Action GCP/GLO/277/GFF” emanated from a request by the Scientific and Technical Advisory Panel (STAP) of the Global Environment Facility (GEF) due to the lack of information on groundwater governance (GWG) and management. The objective of the project was briefly described in the project document as follows: “to influence political decision-making by achieving a significantly increased level of awareness of the paramount importance of sustainable groundwater resource management in averting the impending water crisis”.
- ES2 As originally conceived, the project approach was planned around three main lines of action: (i) to build on the existing knowledge base and initiatives, and to consolidate and synthesize knowledge and experience related to the GWG framework at country level; ultimately, this was planned to culminate in the development of a framework for action (FFA) to systematize the steps and priorities for groundwater governance; (ii) to strengthen partnerships, first within the international water community and subsequently with non-governmental organizations (NGOs) knowledgeable about societal and community aspects of groundwater management policy, with water users themselves, and with decision makers at national and local levels who ultimately must formulate, implement and enforce governance measures; and (iii) to mainstream groundwater in the GEF-supported programmes and projects. Although the project was global in scope, it built on a regional knowledge base in order to consider specific regional dimensions of groundwater governance as the basis to produce a Global Diagnostic (GD), a Vision for Groundwater Governance and a Framework for Action.
- ES3 The project was implemented by the Food and Agriculture Organization of the United Nations (FAO), acting as the lead agency, United Nations Educational, Scientific and Cultural Organization–International Hydrological Programme (UNESCO-IHP), and the International Association of Hydrogeologists (IAH). The World Bank was also a full partner in project implementation. The project was financed with a combination of cash (GEF, USD 1 750 000) and in-kind contributions: FAO (USD-equivalent 850 000); IAH (USD-equivalent 150 000); UNESCO (USD-equivalent 850 000); and World Bank (USD-equivalent 850 000). The total value of the project amounted to USD 4.75 million. Additional contributions were provided by several partners over and above those amounts recorded in the project document. Implementation of the project began in 2011.
- ES4 The final evaluation assessed the project’s achievements toward its expected outputs and outcomes, and aimed to recommend follow-up actions as required. It also assessed the potential for upscaling lessons learned for the formulation and execution of similar projects. The evaluation built on the mid-term evaluation carried out in 2013.
- ES5 The final evaluation was managed by an Evaluation Officer from FAO’s Office of Evaluation (OED). It was conducted by an independent evaluation team (ET) comprised of two international experts with experience in institutional governance, hydrology and evaluation methodology between August and December 2015.
- ES6 The evaluation was both consultative and transparent, with stakeholders involved throughout the process. It adhered to the United Nations Evaluation Group (UNEG) Norms and Standards, as well as ethical guidelines for evaluations. The initial findings were validated through triangulation with different key informants, and the resulting evidence supported the conclusions and recommendations. Several methods and tools for data collection were used by the evaluation team:
- A desk-review was conducted of existing project documentation and all reports produced by the project in order to understand the context (see Annex 2 for a list of project reports and documentation);

- Semi-structured interviews were held with key informants, stakeholders and participants (face to face for the parties visited and by phone for those not visited), supported by checklists and/or interview protocols (see Annex 3 for a list of those interviewed); and
 - Independent of the project, surveys were given to members of the Project Consultation Mechanism and Cap-Net, a comprehensive network of persons engaged in a broad spectrum of water-related activities (see Annexes 4 and 5 for the survey results).
- ES7 To ensure the sufficient collection and triangulation of evidence to answer the main evaluation questions, the evaluation team developed a detailed set of key evaluation questions and subquestions (see Annex 1. Terms of Reference); conducted semi-structured interviews with key informants and stakeholders; and visited the UNESCO-IHP office in Paris in December 2015. The overarching questions that guided the evaluation were:
- Were the stated outcomes or outputs achieved? To what extent has the project reached a broad agreement on the scientific and economic issues in relation to groundwater management, as well as a consensus on the scope for future action, and enhanced cooperation and synergies among major global stakeholders?
 - Extent to which the project has established an up-to-date baseline of science, policies, practices and experience on groundwater that effectively demonstrates governance gaps and triggers the urgent need for action;
 - Extent to which the project has created global political awareness on the urgency for improved groundwater governance, mobilizing relevant stakeholders, and using effective tools, approaches and processes;
 - Extent to which the project has demonstrated the need for groundwater governance and facilitated effective links among the main actors and themes, including land use planning, urban development, mining and food security.
 - Extent to which the project's communication and outreach strategy has been efficient in engaging stakeholders, disseminating materials and catalysing action and investments in groundwater governance.
- ES8 The evaluation also assessed gender and equity dimensions, partnerships and alliances, and sustainability.
- ES9 The evaluation team began its work in Rome in early October 2015 by holding initial discussions with the Project Coordinator (PC) and other members of the Project Coordination Unit (PCU). It also travelled to Paris for discussions with the UNESCO-IHP partners, and held telephone interviews with the World Bank and IAH. On the basis of these discussions, the team compiled an evaluation matrix in order to organize its work and respond to the main questions raised above.

Evaluation findings

- ES10 The main findings of the evaluation are presented below, grouped by evaluation question.
1. *Were the stated outcomes or outputs achieved? To what extent has the project reached a broad agreement on the scientific and economic issues in relation to groundwater management, as well as a consensus on the scope for future action, and enhanced cooperation and synergies among major global stakeholders?*
- ES11 Almost all of the output level results have been achieved, including production of the Global Diagnostic, the Vision and the Global Framework for Action. In terms of outcome-level results, the project has considerably increased the scientific and economic knowledge and understanding about issues related to GWG, particularly among the technical groundwater community. The FFA lays out a very broad scope for future action. The prepared documents are not, however, sufficiently oriented to national decision makers (the project's target group). In their present form, the documents' dissemination is unlikely to significantly raise national awareness or understanding of the key issues, or to build political will for further national investment.

ES12 The Project Steering Committee (PSC) partners are the main international organizations concerned with groundwater. Interviewed stakeholders expressed strong satisfaction with the work in groundwater management and governance. This work was perceived to have increased over the life of the project, due in part to the documents produced and synergies among participating agencies. The mainstreaming of results within the partner organizations exceeded those originally foreseen, which is an important outcome. It was also noted that general awareness of groundwater is increasing in all sectors, and that international organizations and professionals are becoming more aware of the need for better governance.

2. Extent to which the project has established an up-to-date baseline of science, policies, practices and experience on groundwater that effectively demonstrates governance gaps and triggers the urgent need for action.

ES13 During the first few years of the project, a number of technical documents were produced which considerably expanded the existing knowledge base on groundwater management and governance at both regional and global levels. Through this work, the project has produced a credible, scientific basis for GWG. Stakeholders interviewed expressed satisfaction with the quality of the documents produced during the first years of the project.

3. Extent to which the project has created global political awareness on the urgency for improved groundwater governance, mobilizing relevant stakeholders, and using effective tools, approaches and processes.

ES14 The project was well respected by other development partners in the region. In order to raise awareness about the project's objectives and preliminary results, a number of presentations were made at global and regional water meetings. However, a significant increase was not observed in political awareness for improved groundwater governance at the global and national levels. After a number of unsuccessful attempts to include representatives of water user groups and national decision makers in the PSC, the project focused more on the groundwater community itself.

ES15 The limited success at the political level did not deter partners from using key messages in the reports to support their own work in GWG. Expanding the reports' messages to a larger audience in this way could eventually increase political support for GWG at the national and international levels.

4. Extent to which the project has demonstrated the need for groundwater governance and facilitated effective links among the main actors and themes, including land use planning, urban development, mining and food security.

ES16 The project's original intention was to involve a wider representation of the development community so that its products would reflect the perspectives of the non-agricultural water community. This aim was not met for the following reasons: (i) the experts who developed the Vision and FFA were primarily groundwater experts, rather than representatives of water user communities; (ii) the documents produced primarily reflect the views of the technical groundwater community, and both the length and the content render them of limited use outside of this group; and (iii) various respondents noted the need for guidelines through which to apply FFA principles in specific countries and regions.

5. Extent to which the project's communication and outreach strategy has been efficient in engaging stakeholders, disseminating materials and catalyzing action and investments in groundwater governance.

ES17 Although outreach and communications were considered essential to reaching target audiences, and to achieving the desired impact on national decision makers, the draft communication strategy was not effectively implemented. Neither of the mechanisms designed to broaden the dialogue on GWG – the Permanent Consultation Mechanism and the Advisory Panel – have functioned as intended. Furthermore, they have not integrated

the views of the broader group of water users, or national decision makers, into the project during the implementation phase. A misunderstanding regarding the available funding for this component seems to have limited further work in communication and outreach.

6. Gender and equity

ES18 Gender and equity issues among water user populations were not adequately addressed in the project documentation. This represents a missed opportunity and could result in the continued neglect of water access issues in the application of GWG principles.

7. Partnerships and alliances

ES19 The partnerships established within the PSC and the core drafting team (CDT) were exemplary, and bode well for continued collaboration to take the learning and application of the project forward on an inter-agency basis. Much remains to be done, however, with regard to alliance building beyond the technical water community, as noted above.

8. Sustainability, ownership of results of follow-on activities

ES20 The project activities are unlikely to be sustainable, as the project was not designed to focus on developing knowledge products and awareness-raising among national decision makers. While outreach to national decision makers was not entirely successful, important indications of the project's impact include the speed with which FFA principles were integrated into PSC agencies' work, and the increase of the agencies' activities in GWG.

Conclusions and recommendations

Conclusion 1: Particularly in its early years, the project produced valuable documentation on the issue of GWG. The later documents – the Vision and the Framework for Action – were not oriented toward the original target audience, and are therefore unlikely to have the desired effect unless remedial action is taken.

Conclusion 2: The project's original intention was to raise the awareness of a broad spectrum of water users and decision makers about the need for GWG. The focus shifted, however, to concentrating on the more technical aspects of GWG.

Conclusion 3: The partnership among participating agencies was an important achievement, which should serve as the basis for further collaborative work on GWG while addressing the shortcomings of the present project phase.

Recommendations

ES21 The project has produced sound technical documentation on GWG. In order for this information to form the basis of more effective governance, additional steps are needed to strengthen outreach to decision makers, raise awareness and increase understanding of the process and components of GWG (Recommendation 1). There is also a need to take stock of present and potential GWG activities within each of the partner agencies, to promote GWG from within, and to determine whether there is scope for a coordinated programme of pilot projects to test the FFA (Recommendation 2); if so, a subsequent phase of the GWG project should be undertaken (Recommendation 3).

Recommendation 1: To FAO: The ET recommends that in order to reorient the materials to reach the intended target audience, the project should be extended for six months beyond 31 December 2015, using existing funds to prepare materials for outreach to national decision makers. If resources within FAO or UNESCO are committed elsewhere, the project steering committee should consider contracting a communications specialist for this task for three to four months.

Suggestions

- The revised version of the Vision should be two to four pages in length, containing the components described in Section 3.2.3.
- A brief, decision maker oriented version of the FFA should be limited to a four to eight page summary explaining why improved management and governance is needed; the principles of GWG; the importance of local context; and outlining practical steps to strengthen GWG. The document could include explicit reference to water user participation in all phases of GWG formulation and implementation, including both men and women and other identifiable user groups presently drawing upon the aquifer. Reference could also be made to the full FFA, GD and relevant regional diagnostics, with additional details included in the complete documents.
- These brief documents should be available in UN working languages. A limited print run of 1 000 to 1 500 copies would be sufficient.
- Identify specific target audiences and begin discussions for GWG promotion, including G77 groups at partner agencies and decision makers in selected countries where partners are already implementing (or planning to implement) GW-related projects.

Recommendation 2: To FAO. Organize mainstreaming meetings within partner agencies and among partner focal points and operational units to (i) identify opportunities for the inclusion of GWG components in ongoing and pipeline projects, as well as other promotional activities, in order to promote GWG widely; and (ii) identify specific programmes that could form the basis for continued interagency collaboration and learning on the application of the FFA in a variety of socio-ecological contexts.

Recommendation 3: to FAO. If the project is extended as recommended by the ET, a second phase is recommended in order to implement aquifer-based pilot projects, with a specific focus on the management and governance issues linked to higher level national initiatives.

ES22 This second phase would build a reference base of successes and failures in groundwater governance and management, and effectively “test” the FFA with a view to refining it. Pilot projects included in the programme should have the possibility of replication within the same aquifer, and also generate experiences applicable to other socio-ecological contexts. Some elements to consider in designing this phase include:

- Identify and possibly incorporate trans-sector interest and activity. This could include urban development and/or building a strong environmental dimension into country/ aquifer diagnostics.
- Gender and equity should be fully incorporated into groundwater governance pilot projects, as well as the associated design and development of community-based, stakeholder managed aquifers.
- Pilot projects should have both local and national/provincial level actions, which facilitate connections between aquifer level activities and broader GWG elements. Complementary studies of the political economy of groundwater management and governance should also be undertaken.
- Elaborate the costs of improving management and governance, and develop strategies to increase financing for groundwater governance initiatives beyond pilot projects.
- Pilot projects should include guidelines for applying the FFA in specific country and aquifer contexts, including transboundary aquifers.
- Expand partner representation on the PSC to include (i) expertise in advocacy and facilitating high-level policy dialogue; (ii) representatives of the target groups; and (iii) socio-ecological expertise on GWG.
- Establish a community of practice for groundwater governance to promote experience sharing.

1. Introduction

1.1 Background

- 1 The project “Groundwater Governance: A Global Framework for Action (GCP/GLO/2777/GFF)” emanated from a request of the Scientific and Technical Advisory Panel (STAP) of the Global Environment Facility (GEF). This request was based on the lack of information regarding groundwater management and governance. The project was formulated in 2008-09, approved for funding by the GEF in November 2010, and began implementation in early 2011. The project was designed to increase knowledge and awareness about the present state of groundwater governance (GWG) worldwide, and to formulate a framework for action (FFA) for its governance and management with an orientation toward decision makers at the national level.
- 2 The project was implemented by the Food and Agriculture Organization of the United Nations (FAO), acting as the lead agency, as well as the United Nations Educational, Scientific and Cultural Organization–International Hydrological Programme (UNESCO-IHP) and the International Association of Hydrogeologists (IAH). The World Bank was also a full partner in project implementation. The project was financed with a combination of cash (GEF, USD 1 750 000) and in-kind contributions: FAO (USD-equivalent 850 000); IAH (USD-equivalent 150 000); UNESCO (USD-equivalent 850 000); and World Bank (USD-equivalent 850 000). The total value of the project amounted to USD 4.75 million (see section 3.3.2 for detailed budget information). Additional contributions were provided by several partners over and above those recorded in the project document (see section 3.3).

1.2 Evaluation scope and audiences

- 3 The project document called for two evaluations: the mid-term review (MTR), conducted in February 2013, and the present final evaluation, carried out from October to December 2015. The final evaluation focused on the results achieved, including outputs produced by the project, the implementation process, the extent to which the project has contributed to outcome results, and the likelihood that the results of the project will continue to make an impact after project closure. The evaluation also assessed the potential for follow-up actions and lessons learned for the formulation and execution of similar future projects. This evaluation builds on the MTR. In particular, the evaluation:
 - assessed the relevance of the project at the current final stage of implementation;
 - reviewed the effectiveness, efficiency and timeliness of project implementation;
 - assessed the relevance, efficiency and effectiveness of partnership arrangements;
 - reviewed the relevance and technical quality of the deliverables produced by the project, including technical and thematic reports;
 - evaluated the relevance, quality and extent of the achievement of project outcomes at the end of project implementation, and the potential for their continued use after project closure;
 - identified the strengths, weaknesses and lessons learned from the project, which could lead to follow-up actions by stakeholders;
 - made recommendations for potential follow-up by the project stakeholders, with specific reference to project partners.
- 4 The main audience of the evaluation with whom the findings and recommendations will be shared include the Programme Steering Committee (PSC) and the organizations and entities that were involved in the project implementation. The evaluation report will also be shared with other organizations that may benefit from the project findings, such as UN Water partners (FAO, International Atomic Energy Agency, United Nations Development Programme (UNDP), United Nations Environment Programme, UNESCO, United Nations Children’s Fund, World Health Organization and World Meteorological Organization) and the members of the Permanent Consultative Mechanism of the project, which was established to serve as a sounding board.

1.3 Methodology

- 5 The evaluation adhered to the United Nations Evaluation Group (UNEG) Norms and Standards as well as ethical guidelines for evaluations. The overarching questions that guided the evaluation were:
 - Were the stated outcomes or outputs achieved? To what extent has the project reached a broad agreement on the scientific and economic issues in relation to groundwater management, as well as a consensus on the scope for future action, and enhanced cooperation and synergies among major global stakeholders;
 - Extent to which the project has established an up-to-date baseline of science, policies, practices and experience on groundwater that effectively demonstrates governance gaps and triggers the urgent need for action;
 - Extent to which the project has created global political awareness on the urgency for improved groundwater governance, using effective tools, approaches and processes and mobilizing relevant stakeholders;
 - Extent to which the project has demonstrated the need for effective links between groundwater governance and facilitated effective links among the main actors and themes, including land use planning, urban development, mining and food security;
 - Extent to which the project's communication and outreach strategy has been efficient in engaging stakeholders, disseminating materials and catalyzing action and investments in groundwater governance.
- 6 The evaluation also assessed gender and equity dimensions, partnerships and alliances, and sustainability.
- 7 The evaluation team began its work in Rome in early October 2015 by holding discussions with the Project Coordinator (PC) and other members of the Project Coordination Unit (PCU). The team also travelled to Paris for discussions with the UNESCO-IHP partners and held telephone interviews with the World Bank and IAH. On the basis of these discussions, the team compiled an evaluation matrix in order to organize its work and respond to the main questions raised above. The evaluation also used the following tools to collect primary data and evidence to answer the evaluation questions:
 - desk review of existing project documentation and all reports produced by the project (see Annex 2 for a list of project reports and documentation);
 - semi-structured interviews with key informants, stakeholders and participants (face to face for the parties visited, and by phone for those not visited), supported by checklists and/or interview protocols (see Annex 3 for a list of those interviewed);
 - surveys of members of the Project Consultation Mechanism, and Cap-Net, a comprehensive network of persons engaged in a broad spectrum of water-related activities, independent of the project (see Annexes 4 and 5 for the survey results).
- 8 The Evaluation Team (ET) was composed of two senior consultants in evaluation methodology and hydrology, supported by an Evaluation Manager in the FAO Office of Evaluation. The evaluation was carried out in a consultative and transparent manner with internal and external stakeholders; validation and analysis was based upon the triangulation of evidence and information gathered.

2. Context of the project

- 9 By the mid-2000's, as awareness of the importance of groundwater for human, economic and environmental purposes was growing, the management and governance of subsurface water remained largely uncharted. This was attributed in part to the fact that groundwater is the 'invisible' resource: the impact of increasing levels of abstraction, pollution, and competing uses of the subsurface are not clearly evident to either the users themselves, or to those in decision-making positions. This problem combined with recent advances in pump technology and availability, and the relative ease with which subsurface water can be accessed and extracted in an uncoordinated way, has led to an often chaotic situation. Existing regulations and the related governance activities are inadequate to meet the increasing challenge, either because they do not exist, or because they cannot be effectively implemented.¹
- 10 The GEF STAP has identified groundwater as a priority for subsequent GEF Work Programmes and, inter alia, urged GEF to promote the integration of groundwater governance issues into the global dialogue on water. This project was formulated as a response to this call, in order to strengthen the basis for and promote wider dialogue on the need for better governance of groundwater resources.
- 11 The project was initially formulated by the World Bank; however a decision was ultimately made to designate FAO as the lead executing agency, due to the process-intensive nature of the project and FAO's substantial experience in water management, particularly as it pertains to agriculture and food security.
- 12 The objective of the project was described in the Project Document as follows: "to influence political decision making by achieving a significantly increased level of awareness of the paramount importance of sustainable groundwater resources management in averting the impending water crisis."²
- 13 More specifically, the project was designed to expand the context in which groundwater management and governance is considered, by increasing the knowledge base on interlinkages between groundwater and the human and ecological context in which it is found and used. While groundwater study has long been the domain of hydrogeologists, this project was designed to broaden the dialogue to include as wide a range of users as possible, and to reach decision makers at national and local levels who are responsible for formulating policies and regulations that fundamentally affect groundwater use.
- 14 As originally conceived, the project approach was planned around three main lines of action: (i) to build on the existing knowledge base and initiatives, and to consolidate and synthesize knowledge and experience on the governance framework for groundwater at the country level; ultimately, this was planned to culminate in the development of a framework for action to systematize the steps and priorities for groundwater governance; (ii) to strengthen partnerships, first within the international water community, and subsequently with non-governmental organizations (NGOs) knowledgeable about societal and community aspects of groundwater management policy, with water users themselves, and with decision makers at national and local levels who ultimately must formulate, implement and enforce governance measures; and (iii) to mainstream groundwater in the GEF-supported programmes and projects. The project was global in scope, but built on a regional knowledge base, in order to consider specific regional dimensions of groundwater governance as the basis to produce a Global Diagnostic (GD), a Vision for Groundwater Governance and a Framework for Action.

1 Please see the project document, Groundwater Governance: A Global Framework for Action, GCP/GLO/277/GFF, 2010 or the project reports for further background information. All are available at www.groundwatergovernance.org.

2 The term decision maker is not specifically defined within the project document. For the purposes of this evaluation, the ET has devised the following operational definition: those individuals in political or administrative positions within their national or local governments who have the responsibility to make decisions regarding GWG. While this includes those with specific responsibilities regarding water management and use, the project emphasized the importance of decision makers with broader responsibilities, and who are critical in shaping groundwater governance as one component of the larger governance process. For the sake of brevity, the term "decision maker" and "target audience" are used throughout the text to refer to this group.

- 15 FAO, UNESCO-IHP, IAH and the World Bank, and the GEF Secretariat comprise the PSC, which has oversight responsibility for project implementation. A PCU was established in the Land and Water Division of the Natural Resources and Environment Department of FAO, under the leadership of a PC. The PCU carries out the day-to-day administration of the project and is accountable to the Steering Committee for project activities, financial accountability, record keeping and reporting, as well as organizing all meetings, monitoring and evaluation activities. The PCU is also responsible for the organization of outreach and communication activities, including the creation and maintenance of the website. The project document called for the establishment of a Communication Team, to be responsible for the design and operation of the website, the organization of consultation and outreach conferences, workshops and special events for the production of dissemination materials and publications, in concert with UNESCO-IHP, IAH and the Programme Coordinator. The team was to operate according to its own work plan. (See Section 3.2.4 for a discussion of the arrangements as the communications component was implemented).
- 16 In addition to the PSC and PCU, the project document provided for an Advisory Panel on Groundwater Policy, to be composed of leading international experts on water policies, advocates of sustainable development, as well as high level government and civil society leaders. The Panel was to provide policy guidance throughout the project, participate in the definition of the Vision and Framework for Action and, for some members, to be a part of outreach events.
- 17 A Permanent Consultation Mechanism (PCM) was also specified for the following purposes: to hold regular stakeholder consultations, to create synergies among similar and complementary initiatives in order to share experiences, and to contribute to the project documents.

3. Evaluation findings

3.1 Analysis of project concept and design

Findings

The project concept and elements were clearly defined in the project documentation, and the activities were described in detail. The Strategic Results Framework presents a logical hierarchy of the results needed to achieve the project's objectives. The indicators specified in the Framework, however, focus only on the process rather than the content and audience of the key outputs.

- 18 The project's objective of improving the governance and management of groundwater resources in relation to their sustainable and beneficial use was highly relevant. Likewise, the two-pronged strategy was appropriate: to develop a sound technical basis on groundwater management and governance issues, and to increase public and political discourse to encourage the adoption of groundwater governance reforms.
- 19 The project document provides a comprehensive hierarchy of the outcome and output results needed to achieve the project's objectives, and outlines the activities and approach required to: clarify the concept of GWG; build the technical basis for GWG; and undertake outreach activities to communicate with and influence the target audience (national decision makers). The theory of change implicit in the project is spelled out in the specific steps envisaged in the project document³. In short, the project is built on the proposition that, with clear agreement on the definition of GWG, it would be possible to document the current state of GWG, build a knowledge base of regional variations and produce a global diagnostic of the status of GWG. The broader understanding of the challenges and opportunity in GWG would form the basis for mainstreaming GWG into the GEF portfolio, as well as for the preparation of short, synthesis statements of the GWG challenge for use with national decision makers to stimulate greater awareness and action. A further element of the theory of change expressed in the project document is the importance of expanding the dialogue of GWG to include non-agriculture water users and high-level decision makers, both during project implementation and after, once the documents were available.
- 20 The strategic framework attached to the project document provides a schematic representation of project implementation, from its contribution to global environment and development objectives, to project outcomes, outputs, activities and indicators. The strategic framework indicators are essentially a checklist of physical products to be produced, such as reports and minutes. There are no indicators to assess the quality of the outputs in terms of orientation to the intended audience, or whether advocacy and awareness work was having the desired effect on the target audience.
- 21 The time frame of the project was originally conceived as three years. This proved to be inadequate, given significant delays in the production of many of the reports. The monetary resources specified in the project were adequate; however the in-kind contributions by the participating organizations as spelled out in the project document were underestimated in all cases. Co-financing costs were originally limited to report production and meeting organization by the participating agencies. Except for FAO, no provision was made for the services of the partner agency personnel who served on the PSC throughout the five years

3 These are: (i) agreeing on a definition of groundwater governance that would effectively define the scope of the project's work, (ii) documenting existing knowledge and practice of groundwater governance and management through technical reports and case studies, (iii) holding regional consultations to consider regional/local variations, (iv) holding regional consultations to consider regional/local variations, (v) consulting with private sector representatives to explore opportunities for collaboration in defining key messages, disseminating the framework for action and information sharing, (vi) undertaking a mainstreaming exercise, to integrate the approaches into the GEF programmes, (vii) developing a Shared Vision for Groundwater Governance, and a short Framework for Action, directed to leaders in government, the private sector and civil society, to convey selected key policy message and recommendations, and (viii) creating and sustaining an outreach program throughout the project period, to disseminate the project's key messages and to broaden the dialogue on GWG beyond the groundwater specialist community.

of the project. Each of the agencies contributed significantly in this respect, although it has not been systematically recorded in the project reporting.

- 22 As noted above, the project document identified stakeholders broadly, to include a wide range of water users beyond the agriculture sector. Specific mention was also made of the importance of targeting national decision makers in order to increase their awareness of the importance of GWG in their countries. These choices were appropriate, given the wide range of uses for groundwater, and the political nature of governance and decision making for groundwater itself.
- 23 The project was designed for joint implementation by the two United Nations organizations with specific expertise in groundwater, FAO and UNESCO, as well as the World Bank, which had a vital role in investment for groundwater extraction, and the IAH, which is the leading global professional association of groundwater expertise. The partners were highly appropriate. The decision to implement the programme jointly, relying on organization staff to serve on the PSC and provide leadership resulted in a management group that was highly qualified, but who also had numerous other responsibilities which at times took precedence over their work with the project and caused delays. FAO's selection as the lead executing agency was appropriate, given its expertise in hydrology.

3.2 Analysis of project implementation

Findings

- Almost all of the project activities were implemented, although there were major delays in the preparation of the project products, requiring a two-year extension.
 - The Project Coordination Unit in FAO provided very good support for the administration of the project. The collegiality and productivity of the PSC is a notable process achievement.
 - The decision to form a core drafting team to prepare the major project products (GD, Vision and FFA) considerably enriched the discussion on the elements of GWG.
 - Engagement with private sector, other water users and high-level national decision makers proved problematic, and was insufficient to have the desired impact with these stakeholders, who were essential to the original project conception.
 - Mainstreaming GWG concepts within the partner agencies exceeded project expectations, which is a notable achievement.
 - The communication component of the project was under-implemented. The communication strategy was not finalized, and outreach to the target audience was insufficient. A misunderstanding about available funding for this component seems to have limited further outreach work.
 - On balance, the ET found that the FFA represents an important output of the project. The FFA provides a good introduction to GWG issues, and includes many new ideas that will be useful in further work on GWG. All PSC members agreed that it is necessary to develop key messages oriented to the original target audience, in a length and format accessible to them. Some partners have already begun to do so, for use within their own organizations.
- 24 As noted above in Section 2, project implementation was the formal responsibility of the PSC, to whom the PC and PCU reported. The project document also specified the establishment of the PCM and the Advisory Panel to enhance the work of the PSC by including the views of the larger water user audience and decision makers.
- 25 The approach outlined above and in the project document was confirmed in the first PSC meeting, held in February 2011. An inception meeting was held in September 2011, with 60 invitees from UN agencies, NGOs, universities, and Permanent Representations to UNESCO. At this meeting, the project approach was again confirmed and the arrangements for the Regional Consultations (RCs) and a consultative communication strategy were discussed. The meeting noted, *inter alia*, the importance of the regional level consultations, the potential that the project would significantly increase synergy among the international organizations involved in the project, and that the primary target of the project was to raise awareness among decision makers about the importance of groundwater governance.
- 26 An implementation analysis by project component is provided below.

3.2.1 Component 1: Compilation of the global state of groundwater governance in relation to groundwater supply and demand (quantity and quality)

27 Component 1 outcome:

- Broad agreement on the scientific and economic issues in relation to groundwater management and a consensus on the scope for future action; and enhanced cooperation and synergies among UN Water Agencies, major international financing institutions (IFIs) and key NGOs, professional associations and client countries.

28 Component 1 outputs:

- a governance definition report was developed to inform the conceptual framework of the project;
- case studies were prepared to inform the Global Diagnostic;
- thematic papers were prepared to distil current knowledge on a number of relevant aspects related to groundwater governance, management, exploration and exploitation to inform the Global Diagnostic; and
- a synthesis report of the major findings of the case studies and thematic papers was developed to guide discussion at the Regional Consultations.

3.2.1.1 Governance definition meeting report

29 A meeting to discuss the definition of GWG was held in April 2011, organized by UNESCO-IHP. The invited participants included experts from international organizations, research institutions and academia. While a number of existing definitions were explored, the meeting did not make a decision on what definition to use within the project.⁴ The terms of reference (ToRs) for the technical papers cited the following definition, while keeping the possibility open for further discussion:

"Water Governance refers to the range of political, social, economic, and administrative systems that are in place to develop and manage water resources and the delivery of water services at different levels of society. It comprises the mechanisms, processes, and institutions through which all involved stakeholders, including citizens and interest groups, articulate their priorities, exercise their legal rights, meet their obligations and mediate their differences." http://www.undp.org/water/about_us.html

30 Discussion about how GWG should be defined continued throughout project implementation. The definition used by Robert Varady in Thematic Paper #5 was adopted as the standard in preparation of the regional consultations. Robert Varady's version was penned by Saunier and Meganck in 1995 and reads as follows:

«Groundwater governance is the process by which groundwater is managed through the application of responsibility, participation, information availability, transparency, custom, and rule of law. It is the art of coordinating administrative actions and decision making between and among different jurisdictional levels – one of which may be global⁵.»

31 Later, the Core Drafting Team continued to struggle to find a satisfactory and easily communicable statement. They found the above definition too normative, and modified it to the one now used in the Vision:

"Ground water governance comprises the promotion of responsible collective action to ensure control, protection and socially-sustainable utilization of groundwater resources and aquifer

4 GCP/GLO/277/GFF – GEF ID no. 3726 (FAO, GEF IW, IAH, UNESCO-IHP, WB) 1st Experts Meeting: Governance Definition, 29-30 April 2011 – UNESCO Headquarters FINAL MINUTES.

5 GROUNDWATER GOVERNANCE: A Global Framework for Country Action. GEF ID 3726 Thematic Paper No. 5: Groundwater Policy and Governance By Robert G. Varady, Frank van Weert, Sharon B. Megdal, Andrea Gerlak, Christine Abdalla Iskandar, and Lily House-Peters, 2013

systems for the benefit of humankind and dependent ecosystems. This action is facilitated by an enabling framework and guiding principles.

Groundwater governance has four components:

- *an effective and articulate legal and regulatory framework;*
- *accurate and widely-shared knowledge of the groundwater systems concerned, together with awareness of the sustainability challenges;*
- *an institutional framework characterized by leadership, sound organizations and sufficient capacity, permanent stakeholder engagement, and working mechanisms to coordinate between groundwater and other sectors;*
- *policies, plans, finances and incentive structures aligned with society's goals."*

32 The emphasis accorded to the various components of the definition – technical, institutional and the process of prioritizing competing uses and interests – changed with these various definitions. The later definition used in the Vision has little emphasis on the need to establish usage priorities and to manage competing interests, in comparison to earlier definitions. The ET found that all of the definitions used in the project focus on the technical and institutional arrangements for groundwater management, and have diminished treatment of the socio-economic context of groundwater use, as well as the power dynamics among users and with government, including enablement/facilitation, leadership and direction. In other words, the discussions and decisions on the definition of GWG emphasized the technical issues rather than those of central concern to the key outreach target, national decision makers.

3.2.1.2 Case studies

33 A number of case studies were originally envisaged; however, given the wealth of material available elsewhere, including those accessible through the World Bank's GW-Mate website, only three were prepared (by the World Bank) for India, South Africa and Kenya, under the auspices of this project. In addition, FAO contributed nine case studies and a synthesis document that had been completed just prior to the start of the project on the Near East (Algeria, Iran, Libya, Morocco, Oman, Saudi Arabia, Tunisia and Yemen). Regional Consultation participants subsequently prepared a wealth of material.

34 The MTR noted that while there are fewer case studies than originally envisaged, "one may argue that this was compensated by the material that is embedded in the presentations from the regional consultations. In general, the project has produced a very rich knowledge base and more country cases would not have added much value." PSC members have agreed with this finding, as does the present ET.

3.2.1.3 Thematic papers

35 Generic terms of reference were formulated and agreed by the PSC for the thematic papers to be prepared under the aegis of the partners. The following twelve papers were commissioned: **IAH**: (i) Trends in groundwater pollution; trends in loss of groundwater quality and related aquifer services (including ecosystems); (ii) Conjunctive use and management of groundwater and surface water; (iii) Urban-rural tensions; opportunities for co-management; and (iv) Management of recharge/discharge processes and aquifer equilibrium states. **UNESCO-IHP**: (v) Groundwater policy and governance. **FAO**: (vi) Legal frameworks for sustainable groundwater governance; (vii) Trends in local groundwater management institutions/user partnerships; (viii) Social adoption of groundwater pumping technology and the development of groundwater cultures; (ix) Macro-economic trends that influence demand for groundwater and related aquifer services (Joint FAO/World Bank); (x) Governance of the underground space and groundwater frontiers. The **WORLD BANK** also contributed two papers that were prepared as part of its in-kind contribution: (xi) Political economy of groundwater governance; (xii) Groundwater and climate change adaptation (also prepared and published as a Bank Water Working Note).

36 The first drafts of the majority of the papers were originally intended to be prepared during the second and third quarters of the first year of the project, so that they would be

synthesized and available for the RCs; thus, most first drafts were received by the end of the fourth quarter (December 2011) and some were received in 2012, after the RCs had been held. The paper on macroeconomic trends was never completed, although a summary of the issues was written by one of the PSC members as a digest. Four-page digests were prepared for all other papers, excepting numbers 11 and 12, and are available on the website.

- 37 The set of papers covers a range of governance, institutional, management and technical topics relating to the exploitation, protection and management of groundwater, including a section on the prospects for better management facilitated by improved governance. There are some gaps in the subject matter, including environmental aspects and the socio-economic context in which extraction takes place, and the critical role of users in viable governance formulation, implementation and, more broadly, water management. For example, issues of variable power among water users and consequent access to groundwater are not discussed, nor are the perspectives of various user groups (both men and women) as well as other specific, culturally defined groups. Furthermore, the issue of the prioritization of water use, when there are competing demands, is under-explored. This narrower focus makes it more difficult to respond to the concerns of the intended audience for the project's products.

3.2.1.4 Synthesis report

- 38 Although the final synthesis report could not be prepared before the RCs, an interim version was prepared based on drafts of the thematic papers and later updated to more closely reflect them. The synthesis was further revised in mid-2015 resulting in a better illustrated and more condensed version.
- 39 The synthesis report is a good, well-balanced document that accurately distils the range, detail and complexity of the material presented in the thematic papers. It was heavily used in the preparation of subsequent project outputs (Global Diagnostic, Vision and Framework for Action) and is written in less technical language than the thematic papers. It also emphasizes the importance of understanding the local context in designing effective GWG, including the needs of the various user groups and the importance of involving users in the diagnostic and governance formulation and implementation phases.

3.2.2 Component 2: Development of a global/regional groundwater diagnostic integrating regional and country experiences with prospects for the future

- 40 Component 2 outcome:
- A Global Groundwater Diagnostic is informed by regional consultations (including private sector interests) and is projected globally by mainstreaming viable groundwater management practices in GEF programmes and projects and across focal areas.
- 41 Component 2 outputs:
- Regional consultations and private sector roundtable are held;
 - Production of a global groundwater diagnostic report; and
 - Mainstreaming of groundwater governance in GEF programmes.

3.2.2.1 The regional consultations

- 42 The objectives of the RCs were: (i) Compilation and discussion of the groundwater characteristics and issues in the region, including challenges and priorities; (ii) Building partnerships among cross-sectoral collaborating project agencies, stakeholders and decision-makers; and (iii) Raising awareness and promoting a global groundwater agenda.
- 43 UNESCO-IHP took the lead role in organizing the five RCs through their regional networks and offices, with assistance from FAO and IAH members within each region. The RCs were

completed within 12 months, from April 2012 to March 2013. The MTR commended the organizational efforts made by the project team, particularly UNESCO and IAH.

- 44 The meetings hosted a broad range of stakeholders directly concerned with groundwater issues. The list of participants in the RCs (Table 1) shows that a significant number of countries were represented by a variety of different organizations concerned with groundwater.

Table 1: Participation in the regional consultations

Number of countries represented	90
Number of participants	479
Participant institutional affiliation (in percent)	
Government - <i>Managerial (15.2 percent)</i> - <i>Technical (14.4 percent)</i>	29.6
International organizations	30.5
NGOs	5.2
Academic and research	20.7
Private sector	3.8
Journalists	4.2
Water networks	1.0
Total	100.0

- 45 Typically the host country was best represented, ranging from 25 to 59 percent of the total number of attendees. Government representatives are separated in the table above into two groups – those in management positions in ministries or transboundary organizations (around 15 percent), and those with a more technical role in planning, monitoring, or field level management of natural resources, including groundwater (14 percent). High-level decision makers, such as vice ministers and directors of departments attended opening meetings; however, the number of high-level officials attending all sessions was low. Representation of UN and other international agencies accounted for 20-42 percent of attendees, with the highest in Near East and North African and Asia and the Pacific and the lowest in Sub-Saharan Africa (SSA). Academic and research interests typically accounted for around 20 percent of attendance, with the highest proportion in the UN Economic Commission for Europe (ECE) consultation (31 percent). Private sector involvement was modest, and was highest in ECE and SSA (4.5 and 9.7 percent), representing a mix of consultants, a mining company, multinational drinks manufacturers and private water supply companies. The majority of participants were directly involved in groundwater in some way, with relatively small percentages representing other interests. An interesting observation from the SSA consultation was the presence of a large number of journalists (16 percent of the total in SSA).
- 46 The consultations revealed that the primary concerns are different in each region, and can be summarized briefly in terms of the key uses and consequences of groundwater use. Environmental issues are of greatest concern in Latin America and the ECE, where transboundary issues are also high on the agenda. In contrast, the provision of safe drinking water, the conundrum of mining fossil groundwater and the dubious advisability of using groundwater for irrigated agriculture are key issues for Arab countries. The potential for much greater development of aquifers for drinking water supply and sanitation is foremost in SSA, with secondary interest in sustainable development of groundwater for pastoralists and farmers. Local over-abstraction and contamination of urban and peri-urban aquifers is also evident, although at national and regional scale. The development and use of groundwater remains modest. The predominant issue in Asia is clearly the unconstrained pumping for irrigated agriculture, and the consequent impacts on all other stakeholders. The emerging competition for groundwater between cities and agriculture appeared to

be less considered, even though there are many examples of the need to improve the governance and management of this interface. However, there were also examples of successful interventions to remediate the consequences of unfettered urban pumping, as with the case of Bangkok. The predominant issues in the Small Island States of the Pacific are protecting the fragile, limited water lens from pollution and over-extraction (due to population growth) through better coordination among stakeholders, and more effective monitoring.

- 47 The presentations and discussions during the regional consultations served to confirm that groundwater governance was still largely in its infancy, and that there remained much to be done. The MTR's subsequent survey of participants who had registered with the PCM indicated that the exchange of ideas and experiences was considered to be the most significant output of the RCs⁶.
- 48 After the RCs, the PSC decided to prepare Regional Diagnostic documents in addition to the RC reports. National consultants were hired to synthesize and enhance the material into a more mutually consistent format and focus.
- 49 The regional diagnostic reports provide a wealth of information. They combine the broader range of perspectives and experience emerging from the regional consultations, with local technical background detail and knowledge. In general, they contain a good balance of technical, geographic, institutional, governance and management content and the identification of key problems in GWG⁷. The reports all note that the priority focus should be at country or aquifer level, and they have a realistic context and focus. One key consensus arising from the regional diagnostics was that in most countries the existing suites of laws, regulations and institutional frameworks are perceived to be adequate, but ineffective. This is due to inadequate resources (e.g. expertise, personnel, finances) and working in an environment which lacks the political imperative to improve groundwater governance and management.

3.2.2.2 Private sector engagement

- 50 As envisaged in the project document, a Private Sector Roundtable was held immediately after the ECE RC organized by UNESCO-IHP. Its aims were: (i) to capture the views and interests of the private sector; and (ii) to explore opportunities for partnerships and information sharing. Ten private sector representatives participated, drawn from multinational companies in water-related businesses, such as agriculture, drinking water and mining. Issues of trust and the importance of identifying common interests and mechanisms for working together were raised. While the roundtable was an initial exploration, the group agreed that more regular interaction over time would be needed to build substantial results.
- 51 The private sector roundtable was intended to be the beginning of a longer term interaction, but little further has been done. This seems to have been due in part to the extensive process of document preparation. Some interviewees for this evaluation observed that there were a number of missed opportunities for follow-up with the private sector, such as participation in umbrella organization meetings and water thematic groups sponsored by the private sector.
- 52 A survey of the PCM members undertaken for the MTR revealed that members thought that broader stakeholder engagement with the private sector would be useful – especially with mining, energy and underground construction activities. There are 11 people from

6 Independent Mid-term Review of the project Groundwater Governance: A Global Framework for Country Action – GCP/GLO/277/GFF, Final Report, February 2013, p. 16.

7 Some of these are: 1. Groundwater overdraft, competitive deepening, and mining of groundwater, mostly by agricultural users and underneath cities. 2. Pollution of aquifers by human settlements, coastal sea water intrusion, non-point source agricultural pollutants, mining and industrial effluents. 3. Public health issues arising from mobilisation of naturally occurring chemicals, such as fluoride, arsenic and salts. 4. Equity in access and use. 5. Competition for groundwater to meet urban and rural domestic water supply and sanitation where agricultural use is high. 6. Economic problems arising from energy subsidies (rural electrification) that stimulate over-pumping of groundwater. 7. Impacts of groundwater use on groundwater dependent ecosystems, and traditional water supplies (springs and shallow wells).

the private sector who are members of the PCM, representing water supply companies, engineering consultants, water technology companies and a selection of other related businesses. The survey carried out for this evaluation among PCM members indicated that private sector engagement continues to be considered a weak area⁸.

- 53 In short, the ET found that outreach to the private sector and its inclusion in the ongoing dialogue during the project was too small to have an impact on the project's work.

3.2.2.3 *The global groundwater diagnostic*

- 54 The Global Diagnostic, as well as the Vision and Framework for Action, were begun by individual consultants under the supervision of the PSC. On the recommendation of the MTR, a core drafting team (CDT) was formed to collectively finalize each document, in close collaboration with the PSC. The CDT was initially composed of four leading authorities in groundwater, whose experience covered groundwater governance, international organizations, institutions and law, and groundwater hydrology. A fifth member was subsequently added to coordinate their work. This individual had a strong background in groundwater visioning and governance. At the start, it was also anticipated that a wider ranging expert group would support the CDT. Although this did not materialize, the CDT members were encouraged to draw on other expertise as needed. Starting in mid-2013, all drafting was to be completed by the end of the year. Total workdays allocated to the CDT were 288, at a cost of USD 137 600. The drafting team met six times⁹ for collective discussion of the documents' contents, with the participation of the PSC. The CDT produced final drafts of all three documents by mid-2014; however there was considerable delay until the completion of an "almost-final version" was presented at the formal launch at WWF 7 in April 2015.
- 55 The Global Diagnostic was envisaged to bridge the analytical stage of the project to the visionary, providing a collective analysis of the state of groundwater, and the challenge and opportunities for improved GWG.
- 56 The Global Diagnostic summarizes the principle groundwater management issues that drive the need for good governance, and provides various examples of evidence. It also relates the general findings of the regional consultations and regional diagnostics; the generic issues in the governance (or lack of governance) in groundwater; and discusses in detail the strengths and weaknesses of five regional contexts. Furthermore, the Global Diagnostic notes the importance of customary rights and law in historical groundwater management, the importance of aligning other policies to achieve good groundwater governance, and some examples of poorly adapted and aligned policies. It stresses that improving governance is not only a reactive measure to established or emerging problems, but is also important in promoting the sustainable development of groundwater resources, notably in Sub-Saharan Africa. A main substantive shortcoming of the GD is that it does not deal with the evidence promoting alternative governance approaches in situations where regulatory approaches are unmanageable, at least in the short-term.
- 57 The GD was a necessary step in order to formulate the FFA and Vision. Due to its length and high-level synthesis, its use is limited for those engaged in management and governance. It was originally hoped that the GD could be produced rapidly to reach the media and community at large, in order to generate excitement and urgency among the target audience. This did not happen, both because it was only available simultaneously with the Vision and FFA, and also because its length and sweeping but general statements are not likely to be compelling for the target audience. The early work of the project, culminating in the GD, has however received a very positive response from PCM members, the majority of whom are water specialists. The strongest positive response from PCM members is related to the preliminary work of the project, including the GD. Eighty-five percent of the responses agreed that the project had produced a credible, scientific diagnosis of groundwater governance and management (Annex 4).

8 Please see Annex 4 for the Survey results.

9 Four face-to-face meetings and two teleconferences.

3.2.2.4 Mainstreaming groundwater in GEF programmes

- 58 An explicit objective of the project was to mainstream GWG into the GEF programme. To this end, a special event was foreseen in order to disseminate the findings of the project to all GEF programme areas to raise awareness about the issue, and to promote the adoption of GWG as an integral component of relevant GEF projects. While a separate meeting for this purpose was not held, the ET was informed that GWG has been effectively mainstreamed within the GEF programmes, as a result of the products of the project and the continuous close involvement of GEF personnel in project implementation. The GEF 6 International Waters Strategy Goal includes GWG elements, especially under Objective 2 regarding balancing competing water uses in the management of transboundary surface and groundwater. GEF would like to advance conjunctive management of surface and groundwater and promote further work on urban needs and competition with agriculture, depending on country interest and priorities. They intend to resuscitate all components of International Waters Learn (IW-Learn) and see strong value in continuing to work on an inter-organizational basis on GWG.
- 59 The project has exceeded the scope of the mainstreaming result, with significant success in expanding the groundwater portfolios of all project partners. Groundwater governance has become an important element of World Bank water-related lending, with prospectively USD 1 billion of groundwater directed investment expected to be announced over the coming 18 months, within which governance will have a key role and approximately one-third of the budget.
- 60 Within FAO, governance itself is one of the cross-cutting themes in its Strategic Framework. The project participated in the FAO Investment Center (TCI) Investment Days in 2014 to raise awareness of the importance of integrating GWG components within relevant investment projects. While specific results have not yet been achieved, the ET found that the GEF unit in TCI intends to integrate GWG as a component into its climate-smart programme, currently under formulation. A pilot project on groundwater governance in two aquifers in Morocco and Tunisia has just started under the FAO Regular Budget resources. This project arises out of initiatives by both the Governance Group at FAO and the Near East Regional Initiative on water scarcity, and is potentially a most instructive outcome. The FFA has been used in the design of the project and in the formulation of the diagnostic activities. At corporate policy level, upon presentation of the project to the FAO Committee on Agriculture, the Committee encouraged FAO to continue to systematically integrate the governance dimension in its work on water for sustainable agriculture and food security, and recommended that FAO member countries consider incorporating water governance in their national policies and priority frameworks.¹⁰
- 61 UNESCO-IHP is continuing with transboundary groundwater work in three locations: Central Asia, Central America and Southern Africa, with assistance from Swiss Cooperation. This programme has a GWG dimension, and UNESCO will also continue to work with other organizations on the issue. IHP staff also noted the importance of continuing advocacy for GWG, particularly the use of champions.
- 62 As a result of this project, IAH has established a new commission related to GWG to provide a specific forum for its members in this area. This commission is active during the annual congress, as well as regionally. IAH leadership also works with individual members who are in positions within their countries to advocate for greater attention to GWG.

3.2.3 Component 3: Definition of a shared vision and global framework for action on groundwater governance

- 63 Component 3 outcome:
- Based on Components 1 and 2, a Global Framework for Action on Groundwater Governance will raise global political awareness on the urgency of improved groundwater

¹⁰ Report of the 24th Session of the Committee on Agriculture (29 September–3 October 2014), Document number C2015/21 of the 39th Session of the FAO Conference, Rome, 6–13 June 2015, para 9.

governance by disseminating key policy messages, and fostering precautionary and proactive governance approaches to prolong the integrity of aquifers and their associated goods and services.

64 Component 3 outputs:

- Translate the shared vision for groundwater governance into key policy messages;
- Develop the “Global Framework for Action on Groundwater Governance” document.

65 The MTR recommended that the project begin developing the Vision early on by discussing it at the ECE RC in March 2013, and that side events be organized at other water and food security events to include more input for both the Vision and FFA. Neither of these approaches seems to have been followed. Instead, the Vision and FFA have emerged from a process of expert synthesis of the preceding documents. The process has moved from being a consultative effort up to the regional diagnostic stage, to becoming a more “in-house” exercise managed by a small discrete group of experts forming the CDT, with the close participation of the PSC to ensure that the perspectives expressed at the Inception Meeting and the RCs were integrated into the documents.

66 The Vision Document was intended capture the attention of the non-technical reader, and to convey key policy messages and recommendations for groundwater governance at global, regional and country levels. The first draft was available at the end of 2013, but internal debate and some wider review delayed finalization for another year.

67 The current printed version of the Vision document runs to 16 pages and contains a list of measures to be established by 2030 (the Vision itself), discussion of current problems, a description of the project, principles for GWG, the GWG definition and a Call to Action which represents an introduction to the FFA. This is too long for a document of this type. Ideally, it should be two pages, or at the most a four-page broadsheet with engaging design and graphics. The current version contains a great deal of contextual detail and information on how to achieve GWG that is also covered in the FFA. The ET believes that the highest impact on the desired audience would be achieved if the document were very brief, and focused on why a policy maker or government should care about GWG. The text could be simplified to focus on:

- Why care about the state of groundwater in 2030 – a statement of the main challenges in groundwater management and governance.
- What is governance – a general political economy definition and one that refers specifically to groundwater. There needs to be a clear distinction between governance and the institutional arrangements for management.
- Vision Statement - in no more than five points.
- How to achieve the Vision – briefly mention various contexts (key problems, climatic and socioeconomic settings, management issues) and refer to the FFA.

68 The **FFA** is the apex document of the project, designed to outline the types of actions required to achieve the Vision on Groundwater Governance. The project document specified that the FFA should be “a short and synthetic document directed to leaders in government, the private sector and civil society”. It was to consist of (i) an executive summary of the overall vision; and (ii) selected key policy messages and recommendations. Furthermore, it was expected that the document would be translated into all UN languages, while the supporting documentation would be offered only in English. This broad intent was endorsed by the MTR and the PSC response to the MTR.

69 The final draft of the FFA was a major achievement, representing the collective effort of the CDT and the PSC over a series of meetings, where text was at times discussed line by line. This seems to have been necessary primarily because the issue of to whom the FFA should be addressed was debated throughout the drafting period, rather than accept the original intention to produce a document directed to non-technical leaders in government, private sector and civil society. This lack of consensus created a compromise document that attempts to be comprehensive rather than selective, but also general so that a non-technical audience can understand it.

- 70 Even though the FFA is quite long, it gives insufficient space to the non-technical issues of GWG, such as the need for priority-setting among water uses, or issues of recognizing the relative power balance among users in order to achieve sustainable groundwater use and equitable benefits. The FFA also strongly favours a regulatory and institutional model that has been shown to be inadequate in certain settings, typically where there are massive numbers of individual pumpers. The alternatives to this model of laws, regulations, licensing, monitoring and government oversight, coupled with extensive public and stakeholder participation, have been given little weight or coverage. The FFA could have referred to examples from other water projects and – even more broadly, if necessary – included some of these non-technical issues for the benefit of those who will use this as a guide to developing national GWG.
- 71 Some PSC members indicated that it is perhaps not possible to develop a sharp, focused global document at the level of detail attempted by the FFA, given the specificity of each aquifer and its eco-social-economic context.
- 72 When interviewed for this evaluation, several CDT and PSC members acknowledged that the report preparation process was lengthy, but that it was a necessary cost to be able to thoroughly discuss issues of GWG that had heretofore not been resolved. This included technical issues, but in the case of the FFA, the style of presentation to the target audience is reported to have been the main stumbling point. Many CDT members still have reservations about the style of the outputs, including issues of brevity and language, especially in relation to their suitability for dissemination to high-level decision makers and non-groundwater people.
- 73 In February 2015, a High Level Expert Consultation Meeting was organized with a group of key high-level water specialists and policy makers from around the world, who possessed relevant knowledge and wide experience in water policy and governance. Unlike the originally proposed Advisory Panel, this group did not include representatives of civil society or non-agricultural user groups, nor experts on the socio-ecological context of GWG. The purpose of the consultation was to receive feedback on the Vision and FFA, and to discuss the process of strengthening GWG at the country level following the Vision and FFA, including required activities by the PSC members, and immediate next steps. Some changes were proposed to the documents, and the need to develop specific messages and graphic versions noted. The meeting endorsed further work at the country level in a pragmatic manner. One of the meeting participants interviewed by the ET noted that the participants introduced a note of realism in terms of what can actually be accomplished politically, in contrast to what is often proposed in documents of this type. The timing of the meeting, only two months before the planned official release of the documents, did not provide enough time to take such comments into account in the documents themselves.
- 74 The mismatch between the original intent of the FFA, as described in the project document, and the contents of the FFA in its final version is apparent to both CDT and PSC members. However, all believe that the FFA as it has been produced is a significant contribution to delineating the steps ahead to strengthen groundwater governance. On balance, the ET found that the FFA represents an important output of the project, which provides a good introduction to the issues of GWG and has many new ideas that will be useful in further work on GWG. All PSC members also agreed that it is still necessary to develop key messages oriented to the original target audience, in a length and format accessible to them. Some partners have already begun to do so for use within their own organizations. The ET strongly concurs with this assessment.

3.2.4 Component 4: Communication strategy and dissemination of the framework for action on groundwater governance

- 75 Component 4 outcomes:
- Systematic communication of the project's advancements and dissemination of project documents will strengthen public participation and catalyze action;
 - Strategic dissemination of the Framework for Action and of key policy messages at the political level will leverage action and investments on groundwater governance.

76 Component 4 outputs:

- Communication strategy defined and implemented;
- Outreach and dissemination of results.

3.2.4.1 Communication strategy

77 The project document anticipated that the project would be communication oriented:

"The success of the project, and the achievement of the key expected outcomes will in fact largely depend upon the ability of the project itself to effectively communicate its key messages, reaching out beyond the water sector, to leaders in government, the private sector and civil society, and to involve regional organizations, development agencies, IFIs and major NGOs".

78 The centrality of this component was subsequently confirmed during the inception meeting. A Communication Team was to be established, drawing on communications resources in FAO and UNESCO-IHP, and located within the Project Coordination Unit in FAO. A detailed plan of communication and dissemination activities was to be designed by the Team on a six-monthly basis, and discussed and approved by the project management.

79 A preliminary discussion on the communication strategy was held at the inception meeting in September 2011. It was agreed that messages: (i) should stress the benefit of and promote the FFA; (ii) should inspire rather than frighten, and propose solutions to problems; (iii) should be easily grasped and translatable; and (iv) be differentiated according to region and level.

80 The draft communications document produced by the project states:

"The objective of the communication component is to increase awareness among institutional stakeholders, decision makers and the public at large of the state of global groundwater governance and the solutions that can lead to long-term sustainability of groundwater resource use."

81 Although this document was never completed and formalized, it proposed a detailed schedule of activities from 2011 to 2013. It outlined the development of a project identity and a mix of intended activities, including the establishment of the website, the formation of the PCM, and the production of advocacy materials based on the technical reports (synthesis, GD, Vision and FFA); it foresaw the possibility of policy briefs, fact sheets, identification and support of champions, a call for commitment, and networking with non-agricultural and non-hydrogeologist stakeholders. It provisionally suggested some indicators that could be used by the MTR and final evaluation to assess its progress.

82 The draft communication strategy has not been updated since it was produced, although further discussions are recorded in PSC minutes. In the interim period, discussions and presentations were made on the style and illustration of materials to support the project and website design and identity. UNESCO also initiated a groundwater governance community of practice within IW-Learn. This is a mostly closed group within the GEF project community, although interested individuals can register.

3.2.4.2 The project consultation mechanism

83 As noted above in Section 2, the project document provided for a project consultation mechanism (PCM) to be a key component of the outreach strategy, and to create synergies with other relevant initiatives and thereby broaden the scope of the deliberations. PCM members were also expected to contribute ideas and comment on the GD, Vision and FFA drafts. It was ultimately created from the pool of attendees of the Regional Consultations, and therefore reflects the participation of those meetings, with a proportionately greater representation from academia and research, and a lower representation of higher level government officials (Table 2). The number of members has increased from around 140 to 188, and includes new members who were not involved in the RCs.

- 84 In practice, even within the water community, the PCM has not been used extensively. Although it has served as a sounding board for the drafts of the GD, Vision and FFA, the response rate was not high. This was probably due to the documents' length and complexity, which are not conducive to online consultation. It has served quite well as a source of feedback for the MTR, but less so for the final evaluation. The survey of PCM members by the final evaluation team yielded only a 25 percent response rate, as opposed to 50 percent at the time of the MTR.
- 85 The PCM has not fulfilled its intended potential to create an ongoing community of practice around GWG that would sustain dialogue among its members, and facilitate their input during the product formulation process. The PCM could have, conceivably, also played a role in building relationships with the private sector and national decision makers, if the communications capacity had been sufficiently strong.

Table 2: Composition of the PCM in 2015

Number of countries represented	67
Number of members	188
Members' affiliation (%)	
Government - Managerial (6.4) - Technical (9.6)	16
International organizations	18.1
NGOs	6.9
Academic and research	42.6
Private sector	6.4
Journalists	1
Others	9
Total	100

3.2.4.3. Outreach and dissemination of results

- 86 The main focus of the project's dissemination activities has been on making documentation available through the website, and on presentations at the project's international water meetings.

Website and outreach materials

- 87 The website has been revamped twice since its creation and has a strong, attractive visual identity. It is basically a repository for project-produced documents. All project outputs, including the regional consultations, regional diagnostics, case studies, thematic papers, synthesis paper, Global Diagnostic, Vision and Framework for action can be accessed. The site also tracks forthcoming and past meetings, and contains links to videos and webinars produced in relation to project activities, plus a few links to other water-related networks. Overall, the website structure is usable but it takes some effort to become familiar with it. Some improvements could be made to capture new readers/browsers with a strong front page, which then leads directly to the "about" page, which outlines project activities and links to sets of outputs on the remaining pages.
- 88 The website is still primarily focused on the hydrogeological community and would further benefit from:

- An expanded set of links to other Water Governance sites, and to organizations specifically dealing with groundwater and groundwater management and governance (for example Ground Water Management sites in the United States, Mexico, Australia and Europe);
- Links to the Urban/Water Supply/Environmental and Public Health communities;
- A forum page for non-hydrological people.

89 The videos presented on a dedicated “YouTube” channel and linked to the website have mostly been interviews providing information about meetings on groundwater governance. The numbers of views are very modest, which is to be expected with videos such as these that focus on meetings.

Flyers

90 The communications team has produced a series of flyers to introduce the project and the challenges of groundwater governance. These flyers have a distinct identity (design, palette and logos), and have mostly been distributed at meetings, although they can also be downloaded from the website. The ET found that the fourth flyer (2014) on groundwater management and governance issues and the scope of the project was the most succinct, informative and useful for awareness-raising among the target group. It could provide a good basis for the front page of the website.

IW-Learn

91 Early on in the project, the PSC recognized that IW-Learn, which is the GEF International Waters Learning Exchange and Resource Network could be crucial in extending the impact of the project. The IHP-based Coordinator of IW-Learn was considered a de facto member of the project communication team.

92 A groundwater governance chapter of IW-Learn was established early in the project, and was managed by the UNESCO Institute for Water Education (UNESCO-IHE). Unfortunately, IW-Learn has not been active for the past 18 months due to a hiatus in funding, and has not been useful for either consultation or more general outreach during the later critical phase of this project. GEF will re-energize IW-Learn in the coming year.

Outreach and document launch

93 The MTR reaffirmed the centrality of outreach and dissemination of the process and results of the programme, and recommended that it be scheduled alongside and linked into other activities. Although there were some reservations about costs of meetings, presentations about the project were made at approximately 15 international events. The Vision and FFA were endorsed at the high-level panel meeting in Paris in February 2015, following detailed discussion on the extent of information coverage and gaps, structure and presentation, as well as applicability of the FFA at field level (national and shared aquifer levels). Some modifications were made in the special issues printed for official launch at WWF 7 in Korea in April 2015, and further modifications were made later, in the final version that is currently under review.

94 A high profile side event was held at WWF7, which was opened and chaired by the CEO of GEF, Ms. Naoko Ishi, and facilitated by Prof. Aaron Wolff, a well-known academic commentator on water governance and transboundary water management. The Global Diagnostic, Vision and Framework for Action were presented to approximately 80 attendees. A quiz was used to pique interest in the topic, and a number of panel discussions were held. While the launch attendees were almost exclusively members of the water community, an important feature of the event was the formal commitment of the project partner organizations to continue to work on issues of GWG, and to incorporate it more closely into their ongoing programmes. Several participants in the launch noted this extraordinary commitment to the ET.

- 95 A special issue of Hydrogeology Journal (IAH) was considered, which would communicate the groundwater governance messages from this project to a readership of about 4 000 subscribers. Instead, a synthesis article has been prepared that will be included in a forthcoming issue, likely in 2016.
- 96 Dissemination has been most effectively targeted at the community of professional and technical groundwater specialists, working at management and national administrative levels, through international meetings, short flyers and other printed materials and de facto networks, such as IAH membership.
- 97 At the same time, the broader, non-agricultural, non-governmental project audience has not been significantly brought into the sphere of the project, nor have governmental decision makers been effectively reached.
- 98 The PSC would at times note the importance of additional work on communications and outreach; however there has been a persistent misunderstanding that no further budget remained for outreach to the larger project audience, whereas significant funds remain unspent under the communications budget head.
- 99 The ET found that the underperformance in outreach and dissemination is a substantial concern, given its centrality for attaining the overall objectives of the project.

3.2.5 Component 5: Project management, monitoring and evaluation

- 100 Component 5 outcomes:
- The project is executed within budget and according to an agreed work plan.
 - Management responses to the evaluation reports.
- 101 Component 5 outputs:
- Project administration services delivered.
 - Evaluation reports completed.
- 102 Project management and administration. Each member agency in the Programme Steering Committee identified two persons to attend the Programme Steering Committee, which provided substantial participation in the meetings, as well as good institutional memory from one meeting to the next. Over the life of the project, the Programme Steering Committee met at least eight times, either face to face or by teleconference. All of the PSC members remarked upon the commitment of the members to the project, the leadership of the PC, the high level of efficiency of the PCU and the collegiality among the members. That in itself is an important process achievement.
- 103 There were, however, substantial delays in project implementation as noted above, which need to be examined as a management issue. The two-year extension of the project seems to be due to two interrelated reasons: an underestimation of the time required for document preparation, and the fact that all personnel involved in the project, within the agencies and the consultants retained, had multiple responsibilities, and balanced project responsibilities with other work. For example, the thematic papers were originally scheduled to take two months to complete, but in fact they took over one year, until the end of 2012. This seems to be because neither agency staff nor consultants operated under strictly defined deadlines for either writing or reviewing the drafts. Timelines therefore slipped as other responsibilities in each member's workload were given higher priority.
- 104 Similar delays occurred in the preparation of major project outputs: the Global Diagnostic, Vision and Framework for Action. A secondary factor that came into play was the intense

internal discussion about the appropriate format and presentation of the work for its intended audience. CDT and PSC members have noted the benefits of a truly collaborative five-way partnership, especially in terms of ownership of the final products; however, the number of partners also increased the time needed for review.

- 105 **Monitoring.** Members of the PSC reported that the PSU efficiently supported their work administratively. Six-monthly progress reports were produced regularly, as well as the annual Project Implementation Reports (PIR). PIRs were submitted on time to the FAO GEF unit, which was responsible for project monitoring on behalf of the GEF Secretariat. Both the FAO Lead Technical Unit and the FAO GEF Unit consistently provided satisfactory ratings for the project, with Highly Satisfactory ratings in FY 2014-15. Neither unit, however, noted that delays were occurring, or the under-implementation of Component 4 as originally conceived.
- 106 CDT and PSC members interviewed by the ET felt that delays were not a problem if the resulting outputs were of high quality and agreed and endorsed by the member organizations. They also noted that all members contributed considerably more than their allocated time. Many respondents were more concerned, in different ways, about the decreased outreach.
- 107 **Evaluation.** The MTR was conducted from November to December 2012, with the final report issued in February 2013, effectively mid-way through project implementation. The final evaluation was originally scheduled for April 2015, although project activities were still very much under way at that time. The evaluation only began in early October, due to delays in identifying hydrology expertise that had not already been involved in the project in some way. While later than planned, the evaluation was completed before project end.

3.3 Financial resource management (value for money)

- 108 The PCU has carefully monitored project expenditures. As of June 2015, there was a balance of USD 348 152, primarily due to under-expenditure in Component 3 Vision/FFA (USD 65 000), Component 4 Communications (USD 217 000) and Component 5 Management (USD 66 000) (Table 3). This surplus primarily represents the cost of document publication, the under-implementation of the activities needed to expand the GWG dialogue to include non-agricultural users and decision makers, and the outstanding evaluation. Although FAO PCU has distributed budgets and expenditure statements periodically, it was evident to the ET that all PSC and CDT members were unaware that substantial funds remained within the outreach component. This limited the PSC's ability to play a larger role in this vital and as yet under-implemented area.

Table 3: Budget comparison by component ('000 USD)

Component number	Brief description	2011	2015	Total spend to June 2015	Remaining funds as of June 2015
Component 1	Thematic papers	230	271	271	0
Component 2	Diagnostics	821	861	861	0
Component 3	Vision/FFA	226	154	89	65
Component 4	Communications/outreach dissemination	354	321	104	217
Component 5	Management	119	143	77	66
Total		1 750	1 750	141	348

- 109 In-kind contributions consisted of professional staff time, plus short-term consultants, and knowledge products. Table 4 provides a breakdown of this amount by agency for each project component.
- 110 Although the original in-kind budgets were never modified, each agency reported that they had exceeded their original in-kind commitment to project activities, some as early as the first year of the project's work. This is clearly the case in those agencies that only contributed to Component One, for example, as they continued to be active members throughout the life of the project.

Table 4: In-kind contributions by each agency, by project component ('000 USD)

Component number	FAO	IAH	UNESCO	World Bank
Component 1: State of groundwater	50	150	400	850
Component 2: Global diagnostic	566	65	450	0
Component 3: Vision/FFA	0	65	0	0
Component 4: Communication & dissemination	72	0	0	0
Component 5: Project management	162	0	0	0
Total	850	280¹¹	850	850

- 111 The value and magnitude of the in-kind contributions became a secondary issue to the PSC members, as their commitment to the work began to drive both time allocation and, in some cases, other resources from their agencies. This commitment is laudable, and in the case of one partner represented a relatively major contribution. The partners' commitment is surely one of the reasons for the success of the project in creating a highly effective, multi-agency team that has been able to produce valuable outputs. It could, however, have been even more effective if the true scope of the work had been more thoroughly discussed, with a view to making decisions as to the best use of the consultants' time and the PSC to achieve the project results.

3.4 Institutional arrangements

Finding

The commitment of the PSC and the PC to the project has been exemplary, and the PCU supported the project very well. However, neither of the two mechanisms designed to broaden the dialogue on GWG (the PCM and the Advisory Panel) have functioned as intended; nor have they served to include input from a wider group of water users or decision makers during the implementation phase of the project.

- 112 As described above, four specific organizational entities are listed in the project document: the Project Steering Committee, the Project Coordination Unit, the Permanent Consultation Mechanism, and an Advisory Board. The PSC has been exemplary in terms of the inter-agency collaboration toward achieving the project results. The PCU and Project Coordinator have provided very good support to the PSC, and were widely praised for their work.
- 113 The Permanent Consultation Mechanism has functioned only sporadically, and primarily for document review. Its broader objectives¹¹, as described in Section 3.2.4.1, were not achieved.

¹¹ IAH in kind contributions updated during evaluation period.

¹² Building knowledge, support for GWG among a diversity of stakeholders.

- 114 Nominations to the Advisory Panel on Groundwater Policy were discussed in the first PSC meeting in February 2011, with the intent to create a Panel to advise the PSC. The Panel was to have a mix of technical experts, as well as policy and decision makers, to support communication to the outside world. Nominated members came from NGOs, academia, government and international organizations, and had expertise in water utilities, law, investment finance, valuation, environment, political economy and capacity development.
- 115 115. The PC was not able to mobilize the Advisory Panel, which may be due to the voluntary nature of their intended contribution. When initial efforts to call on members failed, no steps were taken to replace members and continue with the concept of such a panel. This diminished the input from a variety of experts who could have broadened GWG perspectives. The failure of the panel was all the more significant as the PSC members were all technical water specialists working in the technical units of their organizations. Without the Advisory Panel, however, they were not always in a position to provide their expert input.

3.5. Analysis of the project's contribution to results

Finding

Almost all of the output level results have been achieved, although there are shortcomings in their orientation to the intended target audiences. In terms of outcome level results, the project made a significant contribution to Outcomes 1 and 2, related to increasing the knowledge base on GWG. Outcomes 3 and 4 (regarding the definition of a shared vision and global framework for action, as well as outreach activities during the development and production of the final product) have been only partially fulfilled. Although the documents have been prepared, they are not sufficiently oriented to the target group to raise political awareness on the urgency of GWG or other key issues, although these findings can be extracted from the documents (Outcome 3). In their present form, the documents' dissemination is unlikely to improve public participation or catalyze action (Outcome 4i), or to generate local support for further investment (Outcome 4ii). It must be noted, however, that the partners have increased their own investments in GWG, which is a notable achievement.

- 116 The evaluation launched a survey of the PCM members to ascertain their views regarding the achievement of project results. The responses from this survey indicate that 85 percent of the respondents agree that the project has made a credible scientific diagnosis of groundwater governance and management, and that there is broad agreement on the scientific and economic issues (63 percent), leading to stronger linkages among those concerned with GWG (73 percent). Many, predominantly in academia, have integrated the principles of the FFA into their work (65 percent). In general, the respondents did not feel that the project broadened dialogue among the water community and beyond, or that good linkages have been made with non-agricultural water users and stakeholders (26 percent); only 33 percent feel that more national level work is being undertaken as a result of the project's work. A number of individual commenters suggested the production of more succinct outputs that could be used with decision makers. See Annex 5 for the complete responses to the survey.
- 117 Table 5 below provides a comprehensive assessment of the achievement of project results. As a whole, the ET found that most of the output-level results were achieved or partially achieved.
- 118 The project has made a positive contribution to all three lines of action adopted by the project: Building the knowledge base, strengthening partnerships and mainstreaming GWG into the PSC members' own work. These contributions have, however, centered on technical aspects of knowledge, and with technical partners rather than the broader water user community or with decision makers. The partnerships undertaken with other organizations to broaden groundwater dialogue beyond its technical aspects were not a strong result. The communication and dissemination strategy was also not finalized, nor were communication activities sufficient to reach the target audience. Presentations

to international organizations at their meetings and conferences have helped to raise awareness about the project, and in some cases also served to gather views on the key messages or principles of GWG. The PCM and the Advisory Panel were not successfully implemented. This was a shortcoming.

- 119 The five participating agencies have taken major steps to mainstream GWG into their own work programmes, surpassing the mainstreaming result specified in the project document (which focused only on the GEF programmes). The partnership between the five participating agencies was an outstanding process result of the project.
- 120 Outcome level results have been satisfactorily achieved with respect to achieving broad agreement on the issues related to GWG and proposing a way forward (Outcome 1). Likewise, the amount of information available as a result of the technical reports, case studies and the regional consultations is an important contribution to the knowledge readily available on GWG (Outcome 2).
- 121 Because the focus of the project became almost entirely technical, Outcome 3 has been only partially fulfilled. Although the documents were produced, they are not consistent with the interests of national high-level decision makers, making it unlikely that significant political awareness will be generated. At the technical level, there are some complementary national level initiatives associated with the project, which have benefitted from the increased attention to GWG resulting from the project. Of particular note are the upcoming FAO pilot projects on GWG and aquifer management in Tunisia, Morocco and Jordan, and the decision of the Government of Uruguay to provide training in GWG at the UNESCO Regional Centre for Groundwater Management for Latin America and the Caribbean in Montevideo, Uruguay, with DFID support. The ET did not find strong evidence that public participation or greater action on GWG at the national level has occurred, except for a small number of letters of endorsement of the project's work. It is not realistic to expect to find evidence of local support for greater investments in GWG at this time, although the increase in groundwater project portfolios by the World Bank may lead to this in future (Outcome 4).

The GEF Secretariat six-point scale system, used in Table 5 and Table 6, applies the following global environment objective/development objective ratings:

Highly satisfactory (HS): Implementation of all components is in substantial compliance with the original/formally revised implementation plan for the project. The project can be presented as a "good practice".

Satisfactory (S): Implementation of most components is in substantial compliance with the original/formally revised plan, except for only a few that are subject to remedial action.

Moderately satisfactory (MS): Implementation of some components is in substantial compliance with the original/formally revised plan, with some components requiring remedial action.

Moderately satisfactory (MU): Implementation of some components is not in substantial compliance with the original/formally revised plan, with most components requiring remedial action.

Unsatisfactory (U): Implementation of most components is not in substantial compliance with the original/formally revised plan.

- 122 The Evaluation Team's assessment of the attainment of the project's results in the GEF tabular format is presented in Table 6 below.

Table 5: Status report on project results attainment

Outcomes	Outputs	Output status at time of final evaluation	Output progress rating
Component 1: Compilation of the state of groundwater governance in relation to groundwater supply and demand (quantity and quality)			S
Outcome: Broad agreement on the scientific and economic issues in relation to groundwater management and a consensus on the scope for future action; and enhanced cooperation and synergies among UN Water Agencies, major IFIs and key NGOs professional associations and client countries. Outcome Status: Satisfactory. While the audiences reached are more limited than those listed in the outcome, the work done to generate and make available analysis of groundwater issues was substantial and much appreciated.	1.1. Governance Definition meeting report	Definition not agreed. A variety of definitions were used throughout the project period.	S
	1.2 Approval of Case Studies selection and reports by the Steering Committee.	Number of case studies undertaken was reduced to 3, in view of the number already available	S
	1.3 Thematic Papers completed	All thematic papers and their digests completed and on website. The papers are now expected to be printed.	S
	1.4 Synthesis Document	Synthesis Document undergoing final editing.	S
Component 2: Development of a global/regional groundwater governance diagnostic integrating regional and country experiences with prospects for the future			
Outcome: A Global Groundwater Diagnostic is informed by regional consultations (including private sector interests) and is projected globally by mainstreaming viable groundwater management practice in GEF programmes and projects and across focal areas. Outcome status: Highly satisfactory The Regional Diagnostics are an excellent resource. Mainstreaming into the work of the participating agencies has exceeded what was anticipated.	2.1 Regional Consultation reports including recommendations for the Global Diagnostic and visioning process.	Reports for all five Regional Consultations are online. www.groundwatergovernance.org	HS
	2.2 The Global Groundwater Diagnostic prepared.	Global Diagnostic released in provisional version in April 2015. Now under finalization.	S
	2.3 GEF Groundwater Conference	The intention to undertake specific mainstreaming into the GEF project portfolio was superseded by a more general commitment on the part of all participating agencies.	HS
Component 3: Definition of a shared vision and Global Framework for Action on Groundwater Governance			
Outcome: A "Global Framework for Action on Groundwater Governance" based on Components 1 and 2 will raise political awareness globally on the urgency of improved groundwater governance, and by disseminating key policy messages fostering precautionary and proactive governance approaches, to prolong the integrity of aquifers and their associated goods and services. Outcome status: moderately satisfactory The documents are not oriented towards the target audience, which reduces the likelihood that they will increase awareness or mobilize action.	3.1 Minutes of the Final Meeting confirming consensus on key messages.	February 2015 meeting discussed the documents with a High Level Panel, which provided additional comments. Reports were revised to include elements of this discussion.	MS
	3.2 The document "Global Framework for Action on Groundwater Governance" published and validated by the SC.	Released in a provisional version in April 2015. Now under finalization. The documents contain some very good information, and represent an important step forward in defining the principles of GWG, and the steps needed to strengthen GWG at the national and local levels. The documents are not, however, oriented to the intended target audience, nor has their preparation thus far raised political awareness. This is work that is still outstanding.	MS

Outcomes	Outputs	Output status at time of final evaluation	Output progress rating
Component 4: Communication strategy and dissemination of the Framework for Action on Groundwater Governance			
Outcome: Systematic communication of project's advancements and dissemination of project documents will strengthen public participation and catalyze action. Outcome status: moderately unsatisfactory There is no evidence that public participation has been strengthened, or that there is significantly more action at the national level on GWG because of the project.	4.1 Website established and functioning; published materials and record of communication and public participation events.	The communications/ dissemination component has only fulfilled the minimum requirements by establishing a website and supporting the launch and limited dissemination of the project products. The more critical elements, of establishing a communication strategy aimed at expanding the dialogue on GWG beyond the water community has not been effectively addressed.	MU
Outcome: Strategic dissemination of the Framework for Action and of key policy messages at the political level will leverage action and investments on groundwater governance. Outcome status: moderately satisfactory Much more needs to be done to disseminate key messages at a national level to achieve support for higher investment levels.	4.2 Outreach Conferences attended for results dissemination	Provisional versions of the documents were launched in April 2015 at WWF 7. Outreach at other Conferences has been carried out and a record is available. This has served to increase awareness of the project, but it is not clear that key messages on GWG have been widely disseminated.	MS
Component 5: Project management, monitoring and evaluation			
Outcome: The project is executed within budget and according to an agreed work plan. Outcome status: moderately satisfactory	5.1. Annual and quarterly implementation and financial reports submitted on time. PSC minutes issued.	The project has been executed within budget and work plans have been regularly updated. PSC minutes are regularly prepared. Financial information has been provided, but there have been misunderstandings nevertheless about available resources, which have prevented further outreach and advocacy activities.	MS
Outcome: Management responses to Evaluation reports Outcome status: moderately satisfactory	5.2 Evaluation reports produced on time.	The project orientation has diverged from a focus on preparing materials and engaging with decision makers in a position to influence GWG. The intention to make such a change was not formally documented or agreed among the partners and the funding agency.	MS

Table 6: Project performance against GEF assessment criteria

Criteria	Assessment	Rating
<i>Achievement of objectives</i>	Substantial progress has been made toward increasing knowledge about the importance of groundwater governance, as well as in laying out a step-by-step framework to begin governance work at the national and local levels. Many of the partners are already using the project products in their own work, which is a notable achievement. The project did not make substantial headway in raising the awareness and understanding of decision makers about the need for better groundwater governance, which was a primary objective of the project. Recommendations for follow-up to complete this critical objective are provided in this report.	MS
<i>Attainment of outputs and activities</i>	Project result outputs have been accomplished for the most part, although there is a divergence between the substance and intent of these documents from what was originally envisaged. The documents produced emphasize the technical aspects of GWG and do not address social and political aspects of governance. The documents are, consequently, not geared toward awareness raising and advocacy with decision makers, as called for in the project document. The communications/outreach component has been under-implemented, which has created another serious gap in awareness raising, particularly among key target groups beyond the technical audience.	MS
<i>Progress towards meeting GEF-4 & mainstreaming GWG into GEF portfolio/focal area priorities & objectives</i>	GWG has been effectively mainstreamed into the GEF portfolio, with the inclusion of a programme on managing water governance, and a conjunctive programme for surface – underground water. The project has also been very successful in mainstreaming the results of the project into the work of the other agency partners.	HS
<i>Cost-effectiveness</i>	The project has accomplished a great deal well within the budget. It is not possible to assess cost-effectiveness rigorously, as a major component was under-spent. The in-kind contribution has also been substantially higher than the figure contained in the documents.	S
<i>Impact</i>	It is too early to assess the impact, but there is good potential for substantial impact, both in terms of the created knowledge products being rigorously used, and in terms of follow-on activities to apply the principles and processes contained in the FFA. The ET's recommendations address the above-noted lacuna in implementation up to this point, which could enhance impact, particularly beyond the technical stakeholders.	S
<i>Risk and risk management</i>	The risks of this project as described in the Project Implementation Reports are: INTERNAL: Divergent priorities of project partners; and EXTERNAL: Regional divergence of policy needs, and the possibility that the global FFA would not be taken up. The Evaluation Team finds that, despite some divergence in priorities among the group, it has not impaired their ability to work together. The project is a model of inter-agency collaboration. The major risk remaining is that the global FFA will not be tailored to the target audience, and that effective dissemination to this group will not take place. Recommendations have been formulated to address this risk.	S
<i>Sustainability</i>	Recommendations on how to carry on the groundwater governance promotion beyond 2015 are contained in this report. While there have been gaps in implementation, the project nonetheless has made a substantial contribution to putting groundwater on the development agenda.	S
<i>Stakeholder participation</i>	The project engaged a large number of stakeholders during the regional consultations. Some stakeholder groups have not been effectively reached, notably the private sector, high-level government decision makers and civil society. Initial efforts were made to engage through the Advisory Panel, and the Private Sector Roundtable in 2013, but neither of these was followed up adequately.	U
<i>Country ownership</i>	As noted above, outreach to national decision makers has not been a strength of project implementation, and recommendations to begin a dialogue process at this level are provided in the report. Among the technical stakeholders at the country level, the Regional Consultations created an excellent basis for further, specific work. This will also be an important area for follow-on activities in groundwater governance.	MS

Criteria	Assessment	Rating
<i>Implementation approach</i>	A strong point of the project is the alliance of five organizations in a common Steering Committee. Roles of different partners in the project changed from the original plan, but in spite of this the working relation between partners has remained good, which is commendable. The approach of agency staff members undertaking the responsibility for this project in addition to their other duties has created the conditions for this sound alliance, which can live beyond the life of the project. This is a tremendous benefit, although there have been costs in implementation delays, and in under-implementation of the dissemination/outreach component.	S
<i>Financial planning</i>	The financial planning of the project could have benefitted from a stronger role by the PSC to make necessary decisions as to the best use of the resources available during the life of the project. The in-kind contributions were originally under-estimated. Member agencies have contributed over and above their original commitment, which made it possible to achieve the project results; however, closer accounting would have helped to understand the commitment required, and possibly allowed the agencies to organize their work more effectively.	MS
<i>Replicability/ Adoption</i>	The project is unique and not intended for replication. The aim is that its products and approaches are disseminated and adopted by others. As noted in this report, there are important gaps in project products and in communications that require remedial attention for adoption to be successful. The organizational synergies developed during the project could provide the basis for follow-on work.	MS
<i>Monitoring and evaluation</i>	Reporting has been on time and substantial. The MTR provided important guidance to the PSC.	S
<i>Overall</i>	Project implementation has been exemplary in building an interagency team, which has collaborated very well and managed to achieve a substantial increase in knowledge products in a previously neglected area. There are gaps in its achievement in terms of focus on the target audience, and tailoring the project products to this group, which need to be addressed.	S

3.6 Analysis of cross-cutting issues and sustainability

Finding

Gender and equity issues among water user populations were not adequately addressed in the project documentation. This represents a missed opportunity and could result in the continued neglect of water access issues in the application of GWG principles. The partnership among the implementing partners was exemplary. Much remains to be done, however, with regard to building partnerships outside the project and beyond the traditional technical water community. As noted above, the project has already increased participating organizations' attention and interest in GWG, which in itself is an important achievement.

3.6.1 Gender and equity dimensions

123 Gender is rarely mentioned in the knowledge products, except in relation to the Integrated Water Resources Management principles in Thematic Paper #5, *Groundwater Governance and Policy*. The terms gender or women appear once each in the Global Diagnostic, and the term equity is found 19 times. Gender and equity are not explicitly treated in the Vision, nor are they mentioned in the FFA where there are only three references to equity. This is a significant omission in terms of the objectives of the project and the inclusion of stakeholders and local management. Experience in many countries has clearly demonstrated the benefits of including both women and men in full consultation and management roles in community-based water management.

124 At the minimum, the documents should have noted the importance of analysing men and women's role in water use decisions, as it is unlikely that women's perspectives in water use

and management will be understood without explicit attention. Regarding equity, the FFA should discuss the importance of stakeholder analysis by ethnicity, age and religion in order to understand different needs and requirements and incorporate these considerations into governance provisions.

- 125 This lack of attention to the various groundwater users in establishing governance systems represents a missed opportunity. The promotion and application of the principles of the FFA heightens the risk of perpetuating gender discrimination and inequity among groups, whereas it should be contributing to their alleviation.

3.6.2 Partnership and alliances

- 126 The partnerships established within the PSC and the CDT are exemplary, and bode well for continued collaboration to take the learning and application of the project forward on an inter-agency basis. Much remains to be done, however, with regard to alliance building beyond the technical water community, as noted above.

3.6.3 Sustainability, ownership of results of follow-on activities

- 127 Project activities are not designed to be sustainable in a strict sense, as they were focused on developing knowledge products and awareness raising among national decision makers. While outreach to national decision makers has not been entirely successful, the speed with which the principles of the FFA have been integrated into the work of the PSC agencies is an indication of the project's success.

- 128 As noted above in Section 3.2.3, the GEF has effectively mainstreamed groundwater governance into its own programme. The FAO Committee on Agriculture has endorsed a new focus area for groundwater governance work within the Organization, with components for the elaboration of a global Code of Conduct for groundwater governance, and support for national pilot initiatives for improved groundwater governance. Initial work has already started in Tunisia and Morocco. UNESCO-IHP plans to continue to integrate the FFA principles into its present programme on groundwater governance in transboundary aquifers and is seeking to expand its work in groundwater governance with a number of new partners. The IAH has already begun to disseminate information and advocate for the use of the Vision and FFA in strengthening groundwater governance as a part of its global, regional and national meetings, as well as through its individual members, many of whom are in a position in their countries to advocate for strengthening governance at the national and local levels. IAH has also established a new Commission related to groundwater governance.

- 129 Groundwater governance has become a priority within the World Bank since its involvement in the project. Principles and approaches of the FFA are being incorporated into new project development. At present, the Bank is developing programmes in South Asia, Africa and the Middle East/North Africa regions. It anticipates that its portfolio in groundwater projects will exceed USD 1 billion in one to two years, of which about one-third will focus on governance and related institutions.

- 130 The ET's findings on the evaluation questions were as follows:

Q1: Were the stated outcomes or outputs achieved? To what extent has the project reached a broad agreement on the scientific and economic issues in relation to groundwater management, as well as a consensus on the scope for future action, and enhanced cooperation and synergies among major global stakeholders?

- 131 The documents listed as outputs in the project document have been produced. Broad agreement has been reached on the scientific and technical issues in relation to groundwater management and governance. Insufficient work has been done on economic and GWG issues; a consensus was not reached on the scope for future GWG actions. Cooperation and

synergies were excellent among the participating partner organizations. Synergies among major global stakeholders have not increased significantly as a result of this project.

Q 2: Extent to which the project has established an up-to-date baseline of science, policies, practices and experience on groundwater that effectively demonstrates governance gaps and triggers the urgent need for action.

- 132 The Regional Diagnostics and the GD provided a baseline and indicated governance gaps. Interaction with the project target audience has been too low to trigger a sense of urgency regarding GWG.

Q 3: Extent to which the project has created global political awareness on the urgency for improved groundwater governance, mobilizing relevant stakeholders, and using effective tools, approaches and processes.

- 133 The project has not been able to create global political awareness on the urgent need for improving GWG. This is due to the under-implementation of the communication component and a tendency during implementation to focus on the technical aspects of GWG rather than the perspectives and priorities of the target audience.

Q 4: Extent to which the project has demonstrated the need for groundwater governance and facilitated effective links among the main actors and themes, including land use planning, urban development, mining and food security.

- 134 The FFA notes the importance of linking with these non-agricultural water user groups, but does not discuss in detail how to facilitate those links.

Q 5: Extent to which the project's communication and outreach strategy has been efficient in engaging stakeholders, disseminating materials and catalyzing action and investments in groundwater governance.

- 135 The communication and outreach strategy has not sufficiently engaged stakeholders or catalyzed national action and investments in GWG. Investments have increased, however, due to the direct intervention of PSC members within their agencies.

- 136 While not all of the project components have been implemented fully, there is still scope within the project's remaining resources to address this gap; to extend the project's reach to audiences beyond the water community; and to implement follow on activities applying the FFA at national and local levels. These options are discussed below in the Conclusions section.

4. Conclusions

Conclusion 1: Particularly in its early years, the project produced valuable documentation on the issue of GWG. The later documents – the Vision and the Framework for Action – were not oriented toward the original target audience, and are therefore unlikely to have the desired effect unless remedial action is taken.

Conclusion 2: The project's original intention was to raise the awareness of a broad spectrum of water users and decision makers about the need for GWG. The focus shifted, however, to concentrating on the more technical aspects of GWG.

Conclusion 3: The partnership among participating agencies was an important achievement, which should serve as the basis for further collaborative work on GWG while addressing the shortcomings of the present project phase.

- 137 During the first few years of the project, a number of technical documents were produced which considerably expanded the existing knowledge base on groundwater management and governance at both regional and global levels. Through this work, the project has produced a credible, scientific basis for GWG. The majority of people interviewed who had been involved in the project implementation expressed satisfaction with the quality of the documents produced. Likewise, the project has been a model in collaborative, collective work across agencies, which represents an excellent process result. The PSC partners also confirmed that their own work in groundwater management and governance had grown over the life of the project. This was due in part to the documents produced and the synergies among participating agencies. The mainstreaming results exceeded those originally foreseen, and are also an important outcome. CDT members also noted that general awareness of groundwater is increasing in all sectors, and that international organizations and professionals are becoming more aware of the need for better governance.
- 138 The project's original intention was to involve a wider representation of the development community in its deliberations so that the products would reflect both the technical and socio-economic challenges to GWG. Moreover, the documents were intended to reach audiences beyond the water community to those who influence the direction of development within their countries. The Vision and the Framework for Action primarily reflect the views of the technical groundwater community, and both the length and the content render them of limited use outside of this group. As a result, the dissemination of these documents could encourage investment into technocratic solutions without due regard for the larger social, economic and political contexts. Various respondents noted the need for guidelines through which to apply FFA principles in specific countries and regions.
- 139 Management issues may have contributed to the project's overly technical focus. In-kind contributions were made by allocating the time of existing staff, rather than assigning or recruiting personnel dedicated only to certain activities. While this had the advantage of making senior expertise available, the project activities were often not prioritized over the staff's own work. In addition, the option was discussed to hire either part-time or dedicated personnel for the non-technical facets of the project (such as communications and advocacy, or socio-ecological aspects of GWG). Although this was not pursued due to perceived funding constraints, there remained in fact a substantial budget balance.
- 140 Notwithstanding the above shortcomings, there is much to build upon to further strengthen support for GWG, and to test the application of the FFA across countries. All project members support and are interested in continuing this work, and in moving to a more country-focused phase. The project has built a core team of international organizations that are in an excellent position to carry their work further, build upon their organizational capital, and coordinate further detailed investigations and synthesis. UNESCO has strengths in learning, knowledge sharing and advocacy. FAO and the World Bank have complementary expertise and presence at country and aquifer level, through country-level pilots and investment, respectively. IAH has an extensive network of professionals in both government and the private sector. The ET's recommendations to capitalize and

strengthen GWG work are provided below. The ET also suggests that it would be productive to broaden the membership of the group if there is a follow-on project – particularly to include organizations with mandates in public health, urban development and water supply and sanitation. Better engagement or partnerships with the private sector (possibly through the World Business Council for Sustainable Development), national decision maker representatives and NGOs are also important.

5. Recommendations

- 141 The project has produced sound technical documentation on GWG. In order for this information to form the basis of more effective governance, additional steps are needed to strengthen outreach to decision makers, raise awareness and increase understanding of the process and components of GWG (Recommendation 1). There is also a need to take stock of present and potential GWG activities within each of the partner agencies, to promote GWG from within, and to determine whether there is scope for a coordinated programme of pilot projects to test the FFA (Recommendation 2); if so, a subsequent phase of the GWG project should be undertaken (Recommendation 3).

Recommendation 1: To FAO. The ET recommends that in order to reorient the materials to reach the intended target audience, the project should be extended for six months beyond 31 December 2015, using existing funds to prepare materials for outreach to national decision makers. If resources within FAO or UNESCO are committed elsewhere, the PSC should consider contracting a communications specialist for three to four months.

Suggestions

- The revised version of the Vision should be two to four pages in length, containing the components described in Section 3.2.3.
- A brief, decision maker oriented version of the FFA should be limited to a four to eight page summary, explaining why improved management and governance is needed, the principles of GWG, the importance of local context, and outlining practical steps to strengthen GWG. The document could include explicit reference to water-user participation in all phases of GWG formulation and implementation, including both men and women and other identifiable user groups presently drawing upon the aquifer. Reference could also be made to the full FFA, GD and relevant regional diagnostics, with additional details included in the complete documents.
- These brief documents should be available in UN working languages. A limited print run of 1 000 to 1 500 copies would be sufficient.
- Identify specific target audiences and begin discussions for GWG promotion, including G77 groups at partner agencies and decision makers in selected countries where partners are already implementing (or planning to implement) GW-related projects.

Recommendation 2: To FAO. Organize mainstreaming meetings within partner agencies and among partner focal points and operational units to (i) identify opportunities for the inclusion of GWG components in ongoing and pipeline projects, as well as other promotional activities, in order to promote GWG widely; and (ii) identify specific programmes that could form the basis for continued interagency collaboration and learning on the application of the FFA in a variety of socio-ecological contexts.

Recommendation 3. If the project is extended as recommended by the ET, a second phase is recommended in order to implement aquifer-based pilot projects, with a specific focus on the management and governance issues linked to higher level national initiatives.

- 142 This second phase would build a reference base of successes and failures in the governance and management of groundwater, and effectively “test” the FFA with a view to refining it. Pilot projects included in the programme should have the possibility of replication within the same aquifer, and also generate experience applicable to other socio-ecologic contexts. Some elements to consider in designing this phase are:

- Identify and possibly incorporate trans-sector interest and activity. This could include urban development and/or building a strong environmental dimension into country/ aquifer diagnostics.
- Gender and equity should be fully incorporated into groundwater governance pilot projects, as well as the associated design and development of community-based, stakeholder managed aquifers.

- Pilot projects should have both local and national/provincial level actions, which facilitate connections between aquifer level activities and broader GWG elements. Complementary studies of the political economy of groundwater management and governance should also be undertaken.
- Elaborate the costs of improving management and governance, and develop strategies to increase financing for groundwater governance initiatives beyond pilot projects.
- Pilot projects should include guidelines for applying the FFA in specific country and aquifer contexts, including transboundary aquifers.
- Expand partner representation on the PSC to include (i) expertise in advocacy and facilitating high-level policy dialogue; (ii) representatives of the target groups; and (iii) socio-ecologic expertise on GWG.
- Establish a Community of Practice for Groundwater Governance to promote experience sharing.

6. Lessons learned

- 143 The ET offers the following observations, which would be applicable to other projects with a collective implementation modality drawing largely on partner staff rather than contracting individuals to carry out project activities.
- 144 **The consequences and benefits of assigning project implementation to partner organizations' staff.** Although the project benefited by relying on partner organizations' technical units and permanent staff (e.g. by drawing on their expertise and experience), it often created unrealistic workloads for those involved. This led to delays in project implementation, particularly if specific timelines were not carefully set and adhered to. Time management becomes particularly important in these cases, and technical units should carefully assess whether they have personnel with the requisite technical and managerial skills to carry out all of the additional responsibilities implicit in this project implementation approach.
- 145 **Project supervision in multi-partner implementation.** In projects where a steering committee is responsible for leading the project, the responsibility for supervising their work should be explicitly identified, and a robust system of internal reviews established. This will help to ensure that project partners regularly reflect on their work relative to the agreed upon plan. Formal agreements should be made with the financing agent if project revisions are necessary.
- 146 **Multi-disciplinary approaches and technical units.** When technical units implement multi-disciplinary projects, there is a risk that the personnel involved will act primarily from their technical role, even when the project calls for a broader perspective. In such cases, steps need to be taken either at the partner or steering committee level to augment available expertise and ensure that all aspects of the project are implemented properly.

Appendices

Appendix 1: Final independent evaluation of Groundwater Governance: A Global Framework for Country Action – terms of reference

Background of the project

The project 'Groundwater Governance: A Global Framework for Action GCP/GLO/277/GFF', henceforth referred to as the Project, is a GEF-funded initiative, executed by FAO, jointly with other agencies. Within FAO, the Land and Water Division (NRL) implement the Project, in partnership with UNESCO-IHP, the International Association of Hydrogeologists (IAH), and the World Bank, with support from GEF STAP and International Waters Program. Core funding is provided by the GEF (USD 1 750 000) with co-financing – in the form of essentially in-kind but also financial contributions – from FAO, UNESCO-IHP, IAH and the World Bank. These co-financing contributions, equivalent to USD 2 720 000, brought the total budget to USD 4 470 000. In addition, regional consultations were co-funded by the countries hosting them. The project started in 25 January 2011 and will end on 31 December 2015.

The project has five components:

- 1 Compilation of the state of groundwater governance – through thematic papers and country case studies, to be summarized in a synthesis document
- 2 Make a global/regional diagnostic – through five regional consultations culminating into a diagnostic document
- 3 Development of a Shared Vision and Global Framework for Action on Groundwater Governance
- 4 Communication and Dissemination of the Framework for Action
- 5 Project Management, Monitoring and Evaluation

The project objective is to develop a Global "Framework for Country Action" (comprising region specific policy, institutional and investment options), to advocate improved governance of groundwater resources at the country/local levels. The project will (a) provide global visibility at the political level to the vital role of groundwater in the provision of water services and to the urgent need to act to address its management challenges; (b) elevate the awareness at the country level, of the value of groundwater as a critically important resource, and simultaneously, provide best management tools to facilitate development of social, economic and ecological opportunities that sustainable groundwater development and management provide for the provision of key water services, including meeting the MDGs in selected countries, (c) develop linkages with other GEF focal areas (Climate Change, Biodiversity, Land Degradation, and POPs) and (d) explore a full range of opportunities for harnessing the optimal benefits of groundwater as adaptation options for water supply and irrigation.

The expected Impact of the project is predicated on the observation that much thinking about water management has not caught up with the rate of depletion and degradation of aquifers. Hence the project will attempt to involve and influence a new set of players and researchers and a set of beneficiaries with limited exposure to groundwater governance issue – municipalities, agricultural agencies, and environmental agencies. This impact will be underpinned by the accumulated technical and scientific knowledge generated by the community of groundwater water resource managers and hydrogeological science.

- 1 The project's global environmental objective (GEO) is: to accelerate the accrual of global environmental benefits (goods and services) that are generated through improved groundwater resource governance at transboundary, national, and local levels. This, in the face of rising human demand, overall water scarcity and the anticipated impacts of climate change, will contribute to the GEF's objectives and feed into Millennium Development Goal 7: to ensure environmental sustainability.

- 2 The project development objective (PDO) is to extend the life set of livelihoods reliant upon groundwater and related aquifer services. This objective is consistent with FAO's mission to raise levels of nutrition, increase agricultural productivity and improve the lives of rural populations. It will also help these countries to meet Millennium Development Goal 1: to eradicate extreme poverty and hunger. The emphasis on this objective will largely come from national Ministries of Water, Health and Agriculture and the related World Bank and UN agency projects that will co-finance this GEF project. The relevance of this objective to the GEF will be in efforts to increase the environmental sustainability of activities in the productive sectors that this project will support.
- 3 The project has the following outcomes:
 - Outcome 1: Broad agreement on the scientific and economic issues in relation to groundwater management and a consensus on the scope for future action; and enhanced cooperation and synergies among UN Water Agencies, major IFIs and key NGOs professional associations and client countries;
 - Outcome 2: A Global Groundwater Diagnostic is informed by regional consultations (including private sector interests) and is projected globally by mainstreaming viable groundwater management practice in GEF Programs and projects and across focal areas;
 - Outcome 3: A "Global Framework for Action on Groundwater Governance" based on Components 1 and 2 will raise political awareness globally on the urgency of improved groundwater governance, and by disseminating key policy messages fostering precautionary and proactive governance approaches, to prolong the integrity of aquifers and their associated goods and services;
 - Outcome 4.1: Systematic communication of project's advancements and dissemination of project documents will strengthen public participation and catalyze action
 - Outcome 4.2: Strategic dissemination of the Framework for Action and of key policy messages at the political level will leverage action and investments on groundwater governance.
 - Outcome 5: The project will have ensured administrative services and budgetary control for the project duration. All monitoring and evaluation activities will have been planned and delivered by the project
 - Outcome 5.1: The project is executed within budget and according to an agreed work plan; and
 - Outcome 5.2: Management responses to Evaluation reports.
- 4 The main achievements of the project up to date have been:
 - Five regional consultations with 70-120 participants each Outputs: five peer reviewed reports; follow-up e-forums
 - Twelve thematic papers (themes covered in Annex 1). Outputs: 12 peer reviewed full reports and 12 digests; A Synthesis Report combining the findings of the 12 papers
 - Global Diagnostic on Groundwater Governance
 - Global Shared Vision 2030 on Groundwater Governance
 - Framework for Action to achieve the vision 2030.
- 5 Moreover, the dissemination of the project's main outputs (Global Diagnostic, Vision and Framework for Action) was launched at the 7th World Water Forum, held in South Korea, in April 2015. The same products have also been disseminated within the framework of the project outreach strategy afterwards.

Purpose of the evaluation

- 6 The purpose of the Independent Final Evaluation (FE) is to assess the achievements of the project and the achievements made towards its expected outputs and outcomes. The evaluation also aims to recommend follow-up actions as required. The FE is expected to assess the potential for up-scaling action and lessons to be learned for the formulation and execution of other similar projects. The evaluation would build on the mid-term evaluation carried out in 2013.

- 7 The main audiences of the evaluation with whom the findings and recommendations will be shared are the Programme Steering Committee (PSC) and their respective organizations and entities that were involved in the project implementation, such as GWP, IGRAC, etc. The evaluation report will also be shared with the organizations that may benefit from the project findings, such as GEF, UN Water partners (FAO, International Atomic Energy Agency, UNDP, United Nations Environment Programme, UNESCO, United Nations Children's Fund, World Health Organization and World Meteorological Organization), and the IUCN and the Ramsar Secretariat.

Evaluation scope

- 8 The focus of the Final Evaluation will be on the results achieved, including intermediary outputs, the implementation process, as well as the extent of the main outcomes, and the likelihood of their uptake after project closure. In particular, it will:
- assess the relevance of the Project at the current final stage of implementation;
 - review the effectiveness, efficiency and timeliness of project implementation;
 - assess the relevance, efficiency and effectiveness of partnership arrangements;
 - review the relevance and technical quality of the deliverables produced by the Project, including technical and thematic reports, checklists and memoranda;
 - evaluate the relevance, quality and extent of the achievements of the project outcomes at the term of project implementation and the potential for their continuous implementation after project closure;
 - identify the strengths, weaknesses and lessons learnt from the project that could serve for follow-up action by stakeholders;
 - make recommendations for potential follow-up by the project stakeholders, with specific reference to the project partners.

Objective of the evaluation and questions

- 9 The specific objectives of the final-evaluation are:
- a. assess the appropriateness of the project's approach and process, including its initiative to:
 - The GEF IV-International Waters – Strategic Objective Number 2 "To play a catalytic role in addressing transboundary water concerns by assisting countries to utilize the full range of technical assistance, economic, financial, regulatory and institutional reforms that are needed" and Special Programme Number 3 – "Balancing overuse and conflicting uses of water resources in transboundary surface and groundwater basins";
 - The development of priorities and needs for sustainable governance and the management of groundwater at country-level;
 - The Project Partners' mandates, visions and strategic objectives and global goals;
 - FAO's Strategic Objective 2 - Increase and Improve provision of goods and services from agriculture, forestry and fisheries in a sustainable manner; particularly Output 2.1: Countries are supported to analyze governance issues and options for sustainable agricultural production and natural resources management.
 - FAO's ongoing programme on water scarcity
 - b. assess the project's achievements vis-à-vis its intended objective, outcome and outputs;
 - c. assess the actual and potential impact of the project; and
 - d. identify lessons learned from the project that could feed into and enhance the implementation of future groundwater projects.
- 10 The evaluation will be guided by the following overarching questions:
- Were the stated outcomes or outputs achieved: to what extent has the project reached a broad agreement on the scientific and economic issues in relation to groundwater management and a consensus on the scope for future action; and enhanced cooperation and synergies among major global stakeholders;

- extent to which the project has established an up-to-date baseline of science, policies, practices and experience on groundwater that effectively demonstrates governance gaps and triggers the urgent need for action
- extent to which the project has created political awareness globally on the urgency for improved groundwater governance, using effective tools, approaches and processes and mobilizing relevant stakeholders;
- extent to which the project has demonstrated the need for effective links between groundwater governance and main players and themes in land use planning, urban development, mining, food security, etc. and sensitized for the establishment of such links;
- to what extent has the project's communication and outreach strategy been efficient in engaging stakeholders, disseminating materials and catalyzing action and investments in groundwater governance.

11 The evaluation will also assess the following aspects:

- Gender and equity dimensions¹²
 - Has the project considered gender and equity dimensions during its design and implementation phase?
 - To what extent did the project support positive changes in terms of gender equality?
 - How did the project take into account the needs of the most vulnerable and disadvantaged populations, during its design and implementation phase?
- Partnerships and alliances
 - How did the project engage in partnerships and to what extent were these partnership modalities conducive to the delivery (or non-delivery) of the project outputs?
 - How effective have the project's partnerships been in contributing to the achievement of the outcomes?
 - What are the opportunities, challenges and/or constraints for expanding/strengthening partnerships to sustain and upscale groundwater project's partners?
- Sustainability
 - Did the project develop and implement an exit strategy? Has the project considered the associated risks?
 - What is the potential uptake of the project strategy recommendations, by national governments?
 - What are the prospects of sustaining and up-scaling the project's result by the beneficiaries, partner institutions, and national governments after the termination of the project? What are prospects for the uptake by GEF financing agencies (i.e. World Bank, ADB, AfDB IADB etc.) not just the uptake by national governments?

Evaluation methodology

12 The evaluation will adhere to the UNEG Norms & Standards as well as ethical guidelines for evaluations.

13 The key evaluation questions will guide the overall assessment. Sub-questions will be further elaborated in an **evaluation matrix** in order to answer the main questions. The evaluation will use the following tools to collect primary data and evidence that answer the evaluation questions:

- desk-review of existing project documents and reports, including related FAO water management and governance publications - annex 2
- semi-structured interviews with key informants, stakeholders and participants – annex 3 - (face to face for the parties visited and by phone for those not visited), supported by check lists and/or interview protocols to be developed at the beginning of the evaluation mission.

12 In alignment with FAO Gender Policy, particular attention will be devoted to the four FAO's Gender Equality Objectives attainable at the level of initiative or thematic area: i) Equal decision-making; ii) Equal access to productive resources; iii) Equal access to goods, services and markets; iv) Reduction of women's work burden

- 14 The evaluation will adopt a consultative and transparent approach with internal and external stakeholders throughout the evaluation process. Triangulation of evidence and information gathered will underpin its validation and analysis and will support conclusions and recommendations.
- 15 The evaluation will make use of the following methods and tools: review of existing reports, semi-structured interviews with key informants, stakeholders and participants, supported by check lists and/or interview protocols; direct observation during field visits; surveys and questionnaires.

GEF rating of the project

- 16 In order to facilitate comparison with routine reporting to GEF and contribute to the GEF programme learning process (LD portfolio), the evaluation will rate the success of the project on the GEF six-point scale system: Highly Satisfactory (HS), Satisfactory (S), Marginally Satisfactory (MS), Marginally Unsatisfactory (MU), Unsatisfactory (U), and Highly Unsatisfactory (HU).
- 17 Each of the items listed below should be rated separately, with comments and then an overall rating given.
 - Achievement of objectives
 - Attainment of outputs and activities
 - Progress towards meeting GEF-4 focal area priorities/objectives
 - Cost-effectiveness
 - Impact
 - Risk and Risk management
 - Sustainability¹
 - Stakeholder participation
 - Country ownership
 - Implementation approach
 - Financial planning
 - Replicability
 - Monitoring and evaluation.

Roles and responsibilities

- 18 The **Office of Evaluation (OED)** will draft the ToRs, identify the consultants and organize the team's work in close consultation with the programme management and the EC. OED is responsible for the finalization of the ToRs and the team composition. It shall brief the evaluation team on the evaluation methodology and process and will review the final draft report for Quality Assurance purposes in terms of presentation, compliance with the ToRs and timely delivery, quality, clarity and soundness of evidence provided and of the analysis supporting conclusions and recommendations. OED also has the responsibility in following up with the BH for the timely preparation of the Management Response.
- 19 The **Programme Management**, which includes the FAO Budget Holder (BH), the Lead Technical Officer (LTO), is responsible for supporting the evaluation team mission planning and mission agendas, including meeting arrangements with the project partners. They are required to participate in meetings with the team, make available information and documentation as necessary, and comment on the draft final terms of reference and report. Involvement of different members of the programme management will depend on respective roles and participation in the project. The BH is also responsible for leading and coordinating the preparation of the FAO Management Response and the Follow-up Report to the evaluation, fully supported in this task by the LTO. OED guidelines for the Management Response and the Follow-up Report provide necessary details on this process.

- 20 The ET is responsible for conducting the evaluation, applying the methodology as appropriate and for producing the evaluation report. All team members, including the Team Leader, will participate in briefing and debriefing meetings, discussions, field visits, and will contribute to the evaluation with written inputs for the final draft and final reports. The evaluation team and the OED Evaluation Manager will agree on the outline of the report early in the evaluation process, based on the template provided in Annex I of these ToRs. The ET will also be free to expand the scope, questions and issues listed above, as well as develop its own evaluation tools and framework, within the available time frame and resources. The team is fully responsible for its report which may not reflect the views of the Government or of FAO. An evaluation report is subject to clearance by OED. The team members will also be responsible for completing an anonymous and confidential questionnaire requested by OED at the end of the evaluation to get their feedback on the evaluation process. The ET will submit records of meetings held with stakeholders to the Evaluation Manager.
- 21 The Team Leader guides and coordinates the team members in their specific work, discusses their findings, conclusions and recommendations and prepares the final draft and the final report, consolidating the inputs from the team members with his/her own. As a contribution to the OED Knowledge Management System, the Team Leader will be responsible for completing the OED quantitative project performance questionnaire, to be delivered at the same time with the final evaluation report.
- 22 It is recommended to hold a briefing workshop with the evaluation stakeholders? to corroborate the findings, quality of the conclusions and the feasibility of the recommendations to ensure maximum ownership of the evaluation and to optimize the utility of the evaluation recommendations.

Evaluation team

- 23 Mission members will have had no previous direct involvement in the formulation, implementation or backstopping of the project. All will sign the Declaration of Interest form of the FAO Office of Evaluation.
- 24 The evaluation team will comprise the best available mix of skills that are required to assess the project, and as a whole, will have expertise in all the following subject matters:
- Good understanding of groundwater issues and policy processes specifically 'groundwater governance' at global, regional and national levels;
 - Substantive knowledge and experience on the role of normative public goods;
 - Good understanding of the respective roles and comparative advantages of FAO and other project partners and stakeholders in supporting groundwater governance;
 - Familiarity with the objectives of the GEF International Waters programme, particularly as it relates to transboundary waters (Strategic Objective 2 and Special Programme 3);
 - Skills in conducting evaluations and in leading strategic evaluations;
 - Substantive knowledge and experience in FAO corporate-level strategic planning and project management would be an advantage;
 - Drafting and communication skills in English and communication skills in French
- 25 Furthermore, to the extent possible, the team will be balanced in terms of geographical and gender representation to ensure diversity and complementarity of perspectives.

Evaluation deliverables

- 26 The key evaluation deliverables the evaluation team will be accountable for producing are:
- Draft evaluation report: OED will review the zero draft of the evaluation report submitted by the evaluation team to ensure it meets the required quality criteria. The draft evaluation report will then be circulated among key stakeholders for comments before finalisation; suggestions will be incorporated as deemed appropriate by the evaluation team.

- Final evaluation report: should include an executive summary and illustrate the evidence found that responds to the evaluation issues and/or questions listed in the ToR. The report will be prepared in English with numbered paragraphs, following OED template for report writing. Supporting data and analysis should be annexed to the report when considered important to complement the main report. Annexes should include, but are not limited to: TORs for the evaluation, profile of the team members, list of institutions and stakeholders interviewed by the evaluation team, list of project's outputs, and the final evaluation mission schedule. Translations in other languages of the Organization, if required, will be FAO's responsibility.
- Evaluation brief and other knowledge products or participation in knowledge sharing events, if necessary

Evaluation timeframe

- 27 The evaluation will take place from the period September – November 2015. The main evaluation mission to Paris to take place during the month of September. This will include a preliminary briefing in Rome.
- 28 The timetable below shows a tentative programme of travel and work for the evaluation team. It will be finalised upon the recruitment of the evaluation team.

Table: Tentative timetable of the evaluation

Task	Dates	Duration	Responsibility
ToR finalization	30th August	1 month	NRL/OED/TCI??
Team identification and recruitment	June-September		OED/NRL
Mission organization	September-October	3 weeks	OED
Reading background documentation	September	2 weeks	ET
Briefing	October	2 days	OED
Travel	October	10 days	OED/NRL
Mission to Rome	September-October	5 days	OED/NRL
Mission to Paris (UNESCO)	October	3 days	
Draft report	November	3 weeks	OED/PTF/ET
Final report	December	2 weeks	OED

Appendix 2: Evaluation matrix

	Questions	Indicators	Methods and sources*
Impact and effectiveness	<p>Were the stated outcomes or outputs achieved:</p> <p>1.1. Has the project generated a credible, scientific diagnosis of groundwater governance and management?</p> <p>1.2. Has the diagnostic been communicated and discussed?</p> <p>1.3. Has it led to broad agreement on the scientific and economic issues that need to be addressed to improve governance of groundwater?</p>	<p>1.1.1. Peer review of thematic papers or other assessment of their quality.</p> <p>1.1.2. Positive assessment by evaluation expert.</p> <p>1.2.1. Number of meetings where the diagnosis, vision and FFA were presented.</p> <p>1.2.2. Number of participants at meetings (also who they are)</p> <p>1.3.1. Feedback given to the documents from project and external meetings & committees, PCM.</p> <p>1.3.1. Other indicators of consensus? (proposals reflected in other literature?)</p>	<p>(1) Desk study overview of documentation from projects</p> <p>(2) Stakeholder interviews (project partners)</p> <p>(3) Interviews with Expert Panel members, drafting team???)</p> <p>(4) Survey to PCM, Panel of Experts.</p> <p>(5) Interviews with or written query (survey) to managers of other water networks.</p>
	<p>2. To what extent has the project made effective links between groundwater governance and main players and themes in land use planning, urban development, mining, food security, etc. and sensitized for the establishment of such links?</p>	<p>4.1. Personnel from groups present in Programme meetings</p> <p>4.2. Presentations about GG issues in their fora.</p>	<p>(1) (2) (4)</p>
	<p>3. To what extent has the project's communication and outreach strategy been efficient and effective in engaging stakeholders, disseminating materials and catalysing action and investments in groundwater governance?</p>	<p>3.1. Explicit strategy prepared, discussed and agreed in PSC.</p> <p>3.2. Reports on strategy implementation to PSC.</p> <p>3.3. Number of communication "hits" on website, publications disseminated, (other metrics possible in terms 1) who (affiliation, determined through web address) doing the hitting?; 2) numbers of publication downloads; 3) numbers of publications views;</p> <p>3.4. Queries received from stakeholders.</p> <p>3.5. Evidence that information has catalysed action towards GG.</p>	<p>(1) (2)</p>
	<p>4. Do the FFA and Vision effectively promote greater awareness of the need for action on GG within the following groups:</p> <p>Partners (WB, Unesco, FAO, IAH, GEF)</p> <p>Professional constituency (Permanent Consultation Mechanism members)</p> <p>Professional constituency (Panel of experts)</p> <p>Constituencies in related areas: mining, urban planning and development, land use planning and management, etc.</p> <p>Policy and decision makers</p> <p>Groundwater managers</p>		<p>(1), (2), (3), (4), (5)</p>

	Questions	Indicators	Methods and sources*
	5. Were these documents sufficient for you to integrate their findings into your work? Partners (WB, Unesco, FAO, IAH, GEF) Professional constituency (Permanent Consultation Mechanism members) Professional constituency (Panel of experts) Constituencies in related areas: mining, urban planning and development, land use planning and management, etc. Policy and decision makers Groundwater managers		(1), (2), (3), (4), (5)
	6. Did you integrate these findings into your work? Did your work change because of these findings? Partners (WB, Unesco, FAO, IAH, GEF) Professional constituency (Permanent Consultation Mechanism members) Constituencies in related areas: mining, urban planning and development, land use planning and management, etc. Policy and decision makers. Groundwater managers.		(1), (2), (3), (4), (5)
	7. Are there enhanced cooperation and synergies among major global stakeholders?	7.1. Evidence of working together or modifying ones work because of others' experience	(2), (3)
Sustainability of results	8. To what extent have gender and equity dimensions been incorporated into the diagnosis, FFA and Vision?	8.1. Mention of gender and equity in the documents. 8.2. Information on discussion of gender and equity by project management and PSC.	(1) (2), (3)
	9. Has the project triggered more activity in groundwater governance at the national or local level? 9.1. In the Partners' own work? 9.2. In the work of those who have been reached by the projects communication work?	9.1 More national/local activity	(2), (3)
	10. Does the project have a follow on strategy and has it been pursued?	Whether an exit strategy was prepared If so, whether it was followed	(1), (2)
	11. Is there a recognized need for further work in GG? At what level? Global? Regional? National? Local?	Project and partner staff interviews and proposal outputs.	(1), (2), (3)
Management	12. Have resources been made available by the Partners as envisaged?	Project Budgets Obtaining assessments of in kind contributions	(1), (2)
Efficiency	13. Do the project outputs and impact represent "value for money?"	Cost per output Assessment of value for money by evaluation team.	(1), (2)
	14. What proportion of your time did you devote to the project? (For partners)	Estimates from project staff	(1), (2)
	15. Timeliness of implementation (For partners) 15.1. Were there project delays? 15.2. If yes, what caused them? 15.3. Could they have been avoided?	1. View of partners. 2. PSC records 3. Budget revisions	(1), (2)

*Tri-angulation of data collection will be ensured through combining data from available documentation with interviews with implementing stakeholders regionally and nationally and receiving stakeholders in recipient institutions and beneficiary groups and communities

Appendix 3: Profiles of team members

Dr Maxine Olson, a national of the United States, served as an international civil servant for various United Nations agencies for over 30 years. Her last position was as UN Resident Coordinator and UNDP Resident Representative to India (2003-2008). She also served as Acting Director of UNDP's Regional Bureau for Asia and the Pacific on an interim basis. Prior to this, she held the position of UNDP Resident Representative in several Asian countries and as Division Chief for Country Operations for Asia and the Pacific in UNDP Headquarters. From 1995 to 1998, Dr Olson was Deputy Director of the United Nations Development Fund for Women. She served in a number of capacities with the United Nations Office to Combat Desertification and Drought (UNSO) from 1979-1985 and 1991-1995, culminating in the position of Deputy Director. Dr Olson holds a PhD in Agricultural Geography (University of Michigan). Since retirement from UNDP in 2009, Ms. Olson worked as a Senior Advisor in the UNDP Division for Environment and Energy for the preparations for the Copenhagen Climate Change Conference and various other assignments. She has also served as Team Leader and Senior Adviser on the FAO Evaluations of the Decentralized Offices in Africa and Asia and the Pacific respectively, in 2012-13, and as Team Leader for the FAO Independent Review of FAO Governance Reforms, in 2014.

Dr Hugh Turrall, an Australian citizen, is a water resources and irrigation engineer, with more than 30 years of experience, mostly in developing countries. From 1982-1990, he undertook field-based project work in Nepal (hill irrigation and village water supply), Pakistan (recharge dams, karezat, infiltration galleries and flood water spreading) and Indonesia (groundwater irrigation and village water supply). In 1993, Hugh completed a PhD in Civil and Environmental Engineering at the University of Melbourne, Australia, and then worked as a Research Fellow at the Overseas Development Institute in London, on water policy and the emerging competition for water between established agriculture and growing cities. From 1995-2001, he was a Research Fellow at the University of Melbourne, undertaking and supervising research on irrigation management (Vietnam and China), irrigation modernisation, environmental management, water allocation, river management and water markets (Australia). In 2001, he joined the International Water Management Institute and was theme leader for Basin Water Management (IWMI's research theme #1) from 2003 to the end of 2007. Responsibilities included research into groundwater management in China, India, Tunisia and Central Asia. Since 2008, Dr. Turrall has worked as an independent consultant and researcher.

Appendix 4: Persons interviewed during the evaluation

Project steering committee members

Mohamed Bazza, Project Co-ordinator, FAO Senior Officer NRL
Nicoletta Forlano, Communications Officer, FAO Information Officer
Alice Aurelli, UNESCO-IHP Chief Water Systems
Marina Rubio, UNESCO-IHP
Marcus Wijnen, World Bank Water Resources Specialist
Jacob Burke, World Bank Water Resources Specialist
John Chilton, IAH Head of Secretariat
Shammy Puri, IAH Secretary General
Astrid Hillers, Senior Environmental Specialist, International Waters, GEF

Project co-ordination unit

Corinne Spadaro, Administrative Clerk, NRL, FAO
Rezza Najib, Operations Clerk, NRL, FAO
Marta Rica Izquierdo, Consultant, FAO

GEF Liaison Office, TCID, FAO

Jeffrey Griffiths, Head, FAO GEF Unit
Genevieve Braun, GEF Liaison Unit
Chris Dirkmaat, GEF Liaison Unit

Core drafting team

Stefano Burchi, Consultant
Stephen Foster, Consultant
Andrea Merla, Consultant
Jac van der Gun, Consultant
Frank van Steenberg, Consultant

Other persons interviewed

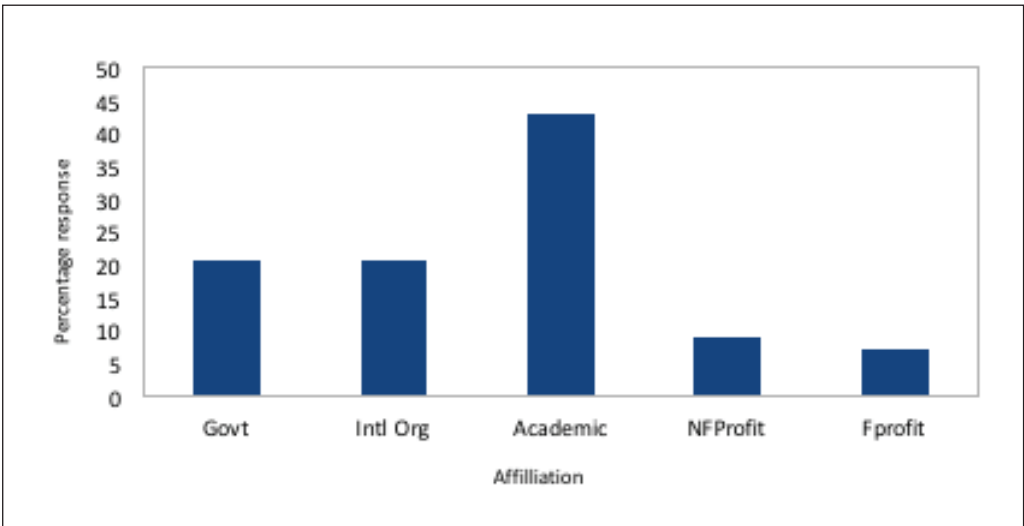
Olcay Unver, Deputy Director, Land and Water Division, FAO
Luisa Belli, Project Evaluation Co-ordinator, OED, FAO

Appendix 5: Survey methodology and results

Methodology

A questionnaire was formulated to capture the views of the members of the Programme Consultation Mechanism about the achievements of the project. It was sent to all 188 members of the PCM in October 2015. 44 members responded in all, of which 27 provided replies to most of the questions. The Survey was framed using the classic Likert scale of 6 levels of agreement from “Strongly Disagree” to “Strongly agree”; plus a “do not know” option. The survey results to the questions below are presented as “Agree” and “Disagree”, which is an aggregation in each case of the strongest two responses. The “mildly” agree/disagree responses are disregarded.

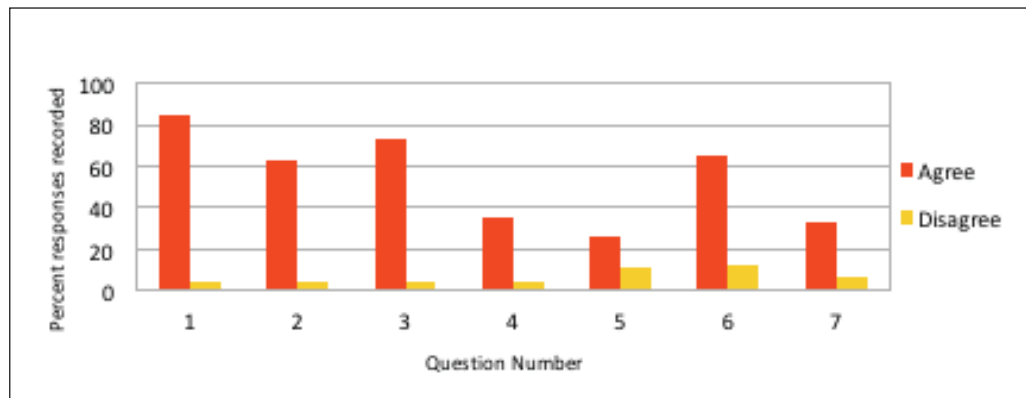
The survey was also sent to a broader water-related network, CapNet; however so few results were obtained from this request that it did not provide meaningful information and was not used in this report.



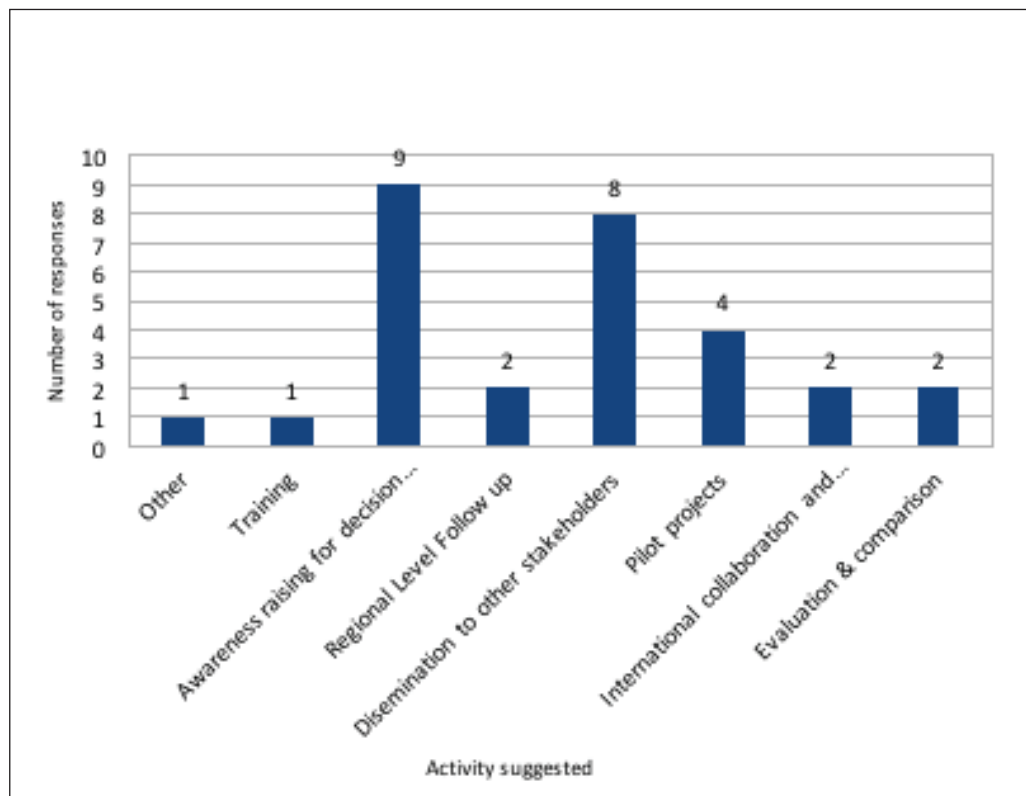
Affiliation of PCM survey respondents

Questions

- 1 Project has generated a credible, scientific diagnosis of groundwater governance and management.
- 2 Because of project, there is now broad agreement on scientific & economic issues that need to be addressed to improve GWG
- 3 Project has considerably strengthened links between among people concerned GWG
- 4 Project has considerably strengthened links between groundwater management and non-agricultural water stakeholders
- 5 Project has reached and Influenced Decision makers at political and administration levels
- 6 Respondent has integrated principles of FFA in his/her work
- 7 There is more national level work on GWG because of the project



PCM Questionnaire responses



Suggested further work



**Food and Agriculture
Organization of the
United Nations**

OFFICE OF EVALUATION
www.fao.org/evaluation