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PROGRAMME COMMITTEE

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Evaluation of FAO's Role and Work Related to Water

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Acronyms

AGAL	FAO Livestock Policy Unit
AGNS	FAO Food Quality and Standards Service (previously ESNS)
AGPP	FAO Plant Protection Service
CAADP	Comprehensive Africa Agriculture Development Programme
CGIAR	Consultative Group on International Agricultural Research
EB/F	Extra-Budgetary Funds
ESW	FAO Gender, Equity and Rural Employment Unit
FIM	FAO Fisheries and Aquaculture Management Division
FOMC	FAO Forest Management Division, Forest Conservation Service
GAWI	Guidelines on Agriculture, Wetlands and water resources Interaction
GEF	Global Environment Facility
ICARDA	International Center for Agricultural Research for the Dry Areas
ICIMOD	International Centre for Integrated Mountain Development
IEE	Independent External Evaluation
IFAD	International Fund for Agricultural Development
IFA-WALS	Impact Focus Area on Water and Land Scarcity: reconciling competition in linked water and land systems
IFI/s	International Finance Institutions
ILRI	International Livestock Research Institute
IPTRID	International Programme for Technology and Research in Irrigation and Drainage
IWMI	International Water Management Institute
LEGN	FAO Development Law Service
LTU	Lead Technical Unit
MASSCOTE	Mapping System and Services for Canal Operation Techniques
	MDG/s Millennium Development Goals
NEPAD	New Partnership for Africa’s Development
NRC	FAO Environment, Climate Change and Bioenergy Division
NRL	FAO Land and Water Division in the Natural Resources Department, until 2007 called AGL
NRLW	FAO Water Development and Management unit, previously AGLW
OECD/DAC	Organization for the Economic Cooperation and Development; Development Aid Committee
OED	FAO Office of Evaluation, until 2009 called PBEE
PC	Programme Committee

RWH	Rain Water Harvesting
SIWI	Stockholm International Water Institute
SSC	South-South Cooperation
TCE	FAO Emergency Operations and Rehabilitation Division
TCI	FAO Investment Centre, the Division hosting the FAO-World Bank Cooperative Programme
TCOS	FAO Management and Coordination Service of the SPFS
TCP	FAO Technical Cooperation Programme
TF	Task Force
ToR	Terms of Reference
UNEG	United Nations Evaluation Group
UNEP	United Nations Environment Programme
UN-ESCAP	Economic and Social Commission for Asia and the Pacific
USD	Dollar of the United States of America
WHO	World Health Organization
WSM	Watershed Management

EXECUTIVE SUMMARY

Information about the evaluation

1. Over the last decade, FAO's Governing Bodies have frequently discussed issues related to water in agriculture, given its paramount importance. The Independent External Evaluation (IEE) of FAO concluded that FAO was in a weak position in the water sector. In light of this, the Programme Committee (PC) at its 100th Session in October 2008 endorsed among the topics proposed for initiation in 2009, the evaluation of *"FAO's work related to water, as this had been a significant discussion topic in the Committee of the Council for the IEE"*.

2. The evaluation was conducted in the period March-December 2009. The exercise was managed by the FAO Office of Evaluation (OED) and the evaluation team comprised experts in the different areas to be assessed. The evaluation report and FAO's Management Response will be discussed by the Programme Committee at its 103rd Session in April 2010. All documents will be publicly available on the OED website.

3. The terms of reference for the evaluation defined its purpose as follows: "*The evaluation will be forward-looking: its main purpose is to provide FAO's member countries and Secretariat with evidence- and lessons-based recommendations on the future role and scope of the Organization in its work related to water. The evaluation will also provide accountability to FAO member countries and Secretariat about the Organization's performance and comparative advantage in this area of work.*"

4. FAO's role and work related to water was defined as "*all activities conducted by the Organization for the conservation, development and sustainable utilization of water resources for agriculture, including the responses to global environmental challenges affecting food and agriculture*". All relevant activities in the period 2004-2008/09 were evaluated.

5. The evaluation methodology was based on the following elements:

- extensive consultation with FAO internal stakeholders throughout the process, including the terms of reference (ToR) and the final draft report, and with FAO clients, partners, donors and end-users of the Organization's services and products;
- assessment of evidence gathered against the OECD/DAC evaluation criteria, plus mainstreaming of gender and social inclusion and environmental sustainability;
- use of a range of quantitative and qualitative tools: interviews with FAO internal and external stakeholders and partners, at FAO offices and in member countries and international organizations; questionnaire surveys; analysis of project documents; review of auto evaluation and independent evaluation reports; direct assessment of normative outputs; and observation of field work;
- triangulation of gathered information and evidence; and
- compliance with UNEG Norms and Standards.

6. The countries visited balanced regional representation, cost effectiveness and resources available. Criteria for selection included: i) the total volume of water-related work by FAO; ii) diversity of work, priority being given to countries where different FAO units had been active; iii) countries where mandatory evaluations were required of ongoing or completed projects, including the Technical Cooperation Programme; iv) countries hosting an FAO Regional or Subregional Office, to allow interaction with decentralized FAO staff; and v) security conditions.

7. Visited countries were: China, Egypt, Ghana, Malawi, Mali, Morocco, Saudi Arabia, Thailand and Turkey. Afghanistan had been selected initially but the level of insecurity preceding the elections led to the decision to cancel the mission. Interviews were also conducted with Land and Water officers in the Subregional Office for Southern Africa and in the Regional Office for Latin America and the Caribbean.

8. An external panel of experts, composed of representatives of international organizations and individual experts, supported the evaluation process through three meetings to advise on the terms of reference and on the advanced and final draft report. The panel's final report is in Annex 3 of the current final evaluation report, which integrates some of the panel's suggestions.

9. Given the breadth of the work assessed and the length and complexity of the evaluation report, this executive summary aims at informing the busy reader only about the key findings and conclusions for each area analysed, and at linking these to each of the 35 recommendations formulated. Despite good achievements and results, identified weaknesses in performance led the evaluation team to urge in FAO a renewed commitment towards water in agriculture for the food security of the poor and a stronger cross-organizational coherence. Setting FAO's work on water on its appropriate course will require a boost to the depleted human resources, and new ways of working within the Organization, as well as with member countries and partners.

10. Last, the ToR asked the evaluation to set priorities for FAO's future work related to water. The team decided to clarify, based on its analysis of the evidence available and of current and future challenges, the areas of work where the Organization is effective and is producing outputs of high quality, and which require continuous or additional resources, and the areas where FAO does not currently have comparative advantage. Based on this report, FAO membership, including both recipient and donor countries, can discuss and agree with the Secretariat on their regional and subregional priorities in water and agriculture, as well as the resources made available to meet these needs.

Overview of FAO's work in water: responsibilities, organization and budget

11. FAO's work related to water is anchored in the Water Development and Management Unit (NRLW) which is part of the Division of Land and Water (NRL) in the Natural Resources Department of the Organization. In addition, 'water' is an important aspect of the work of several other units in FAO, namely: the Livestock Policy Unit (AGAL); the Food Quality and Standards Service (AGNS); the Plant Protection Service (AGPP); the Gender, Equity and Rural Employment Unit (ESW); the Fisheries and Aquaculture Management Division (FIM); the Forest Management Division (FOM); the Development Law Service (LEGN); the Environment, Climate Change and Bioenergy Division (NRC); the Emergency Operations and Rehabilitation Division (TCE); the Investment Centre Division (TCI); and the Management and Coordination Service for the Special Programme for Food Security (TCOS). The report refers to 'Water at FAO' when discussing work, suggestions and recommendations relevant to more than one unit.

12. Regular Programme budget resources for NRLW ranged from USD 6.5 million in the 2004-05 biennium to USD 7.9 million in 2008-09, at nominal terms. These figures represented on average 0.84 percent of the Programme of Work and Budget Net Appropriation. The unit suffered cuts in line with the rest of the Organization.

13. Extra-budgetary (EB) resources allocated to water-related work were in the order of USD 460 million, representing 20 percent of the total EB funds received by FAO in the period under evaluation. Of these, 67 percent were for technical cooperation projects and 33 percent for emergency and rehabilitation initiatives. In total, 238 initiatives were funded - 190 for technical cooperation and 48 under the emergency umbrella.

14. Data available does not allow an objective analysis of efficiency for work funded through the Regular Programme. Nevertheless, evidence collected showed that strategic decisions in NRLW to focus attention and resources on its global mandate and on normative outputs, coupled with cuts in budget resources and with about 11 major unplanned events, had serious consequences for the extent, quality and timeliness of the services delivered by the Organization to its member countries. A suggestion was formulated for more transparent allocation of tasks and resources.

FAO's role in water

15. FAO global goals include reducing hunger and food insecurity and sustainable use of natural resources, which correspond closely to two of the Millennium Development Goals, MDG1 and MDG 7 respectively. The Organization's commitment to gender equality makes MDG 3 one of its important objectives. The evaluation found that at the global level, the Organization's work related to water since 2004 has been relevant to the Global Goals and MDGs, though limited in the case of MDG3. At the country level, the effectiveness of the contribution of the 'water' field programme to FAO Global Goal 1 and MDG 1 was limited by both resource constraints and the absence of a framework for intervention beyond household food self-sufficiency objectives. Also, the effectiveness of the contribution at country level to MDG 3, gender equality, and MDG 7 has been mixed. Recommendation 1 aims at strengthening the contribution of FAO's unique combination of expertise in water and land resources for the improvement of food security for the poor and vulnerable.

16. FAO has a clearly defined role in water and agriculture and related issues of global relevance. The Organization is a major participant in international fora such as the World Water Forum and other international conferences, has for the last three years been chair of UN-Water, and maintains a variety of global databases, most notably AQUASTAT, which are recognized as primary sources of data for water-related analyses. FAO has contributed to raise the profile of agriculture in the international debate on water, as demonstrated by its visibility in international events and coordination bodies in recent years.

17. FAO continues to be a substantial advocate for food security and agricultural policies in general. Demand for FAO's services in the water sector is high, as the Organization is recognized as a reliable source of information, technical advice and support. The quality of advice and intervention is often good, but this is not uniformly the case and the development of a consistent 'FAO approach' to water issues appears necessary. In this context, water scarcity for food production has become the flagship driver of NRLW normative work and will become fully embedded in the Impact Focus Area on Water and Land Scarcity (IFA-WALS) from 2010 onward.

18. Much of FAO's work in the water sector is unique and recognized as such and the Organization's contribution to global knowledge and development is perceived as positive. Between 2004 and 2008-09, 'Water at FAO' produced more than 200 normative outputs. Most of them were assessed as satisfactory to good for technical quality, satisfactory for relevance to policy and to food security and they were well presented and written.

19. FAO's membership is diverse and complex in terms of needs and expectations. The water sector has proven particularly susceptible due to its complexity, as 'water' cuts across sectors and ministries, including agriculture, water resources, irrigation, energy, environment, forest and watershed management, health, municipalities. 'Water at FAO' contribution at country level, in itself less than fully coherent and coordinated, has not helped greater harmonization: Recommendation 2 calls for systematic engagement with all relevant ministries at country level.

20. In future, the Organization should give more space to water in its own global events, respond to signals from countries concerned about water scarcity, integrate water into responses to specific challenges such as climate change and the food price crisis and allocate its own resources in support of its strong advocacy messages on food insecurity.

21. The IEE in 2007 stated that FAO had 'no comparative advantage in water'. This evaluation concluded that FAO is clearly the lead institution within the United Nations system on water in the context of food and agriculture. Other UN agencies and particularly the CGIAR institutions generally have complementary remits to that of FAO. Nevertheless, despite the good efforts of UN-Water, the generalized constraints on resources will continue increasing some degree of competition with other players.

Assessment of FAO's work in water

Policy and legal advice

22. FAO's work in support of water policies and strategies is valuable. NRLW has emphasised production of normative products that demonstrate the central role of water in agriculture, and facilitate the negotiation of agriculture's access to water through valuation, production and productivity analysis, and basin resource planning. Gender and social inclusion perspectives are addressed in some work on policy but appropriate policy implementation tools remain to be identified.

23. In general, FAO's engagement in policy work at national level has been demand-driven and responsive to ongoing national policy reform. As might be expected, uptake and implementation by national governments has rarely been rapid or fully consistent with advice provided. Overall, however, the evaluation noted an improvement in FAO's policy outputs over time and demand is high in most regions of the world. Accordingly, more resources were recommended for this area of work (Recommendations 3 and 30); also, the absence of normative products on water and irrigation policy was noted (Recommendation 4) and a framework for policy analysis was suggested.

24. Policy recommendations related to expansion of irrigation were provided through irrigation investment briefs elaborated for the Sirte Conference in 2008. This area of work is supported more broadly by information coming from FAO AQUASTAT. FAO has also provided general policy advice on economic returns analysis, water pricing and cost recovery to the International Financial Institutions through TCI.

25. The area of water law and legislation included support to legislative reforms, capacity development, making organized information available to member countries, and technical advice to transboundary management of water resources. FAO's work has been of high quality, effective and highly appreciated by partners and participating countries. The evaluation noted that this organizational capacity risks disappearing for lack of timely measures to maintain the institutional memory and experience and this was included in Recommendation 30.

26. Work during the period under evaluation on Water Users' Associations was embedded in the field programme: its relevance and effectiveness ranged from excellent to average. The evaluation suggested that FAO contribute to the global knowledge on this topic in partnership with others.

Water in production systems

27. Technical assistance on water in production systems covered a wide range of topics and subjects. In the area of land and water interactions, work assessed was considered relevant and effective. Collaboration among units in FAO suffered from the Organization's re-structuring and cuts in resources, in particular on soil fertility. Recommendation 5 addresses this, indicating a need for increased attention to environmental concerns. The new Land and Water Division, with no separation between units, should contribute to closer collaboration in this area of work. Recommendation 6 provides further guidance on land and water work.

28. FAO's innovative work in Rain Water Harvesting (RWH) pre-dates the evaluation period. NRLW considers that in the Asia and Pacific Region there is no longer need for support in this area. In most recent years, work was mostly dependent on the personal commitment of some staff members in Africa: activities consisted of support to subregional networks and production of manuals and guidelines on the topic. RWH techniques have been diffused through field projects, but not on a systematic basis and usually excluding domestic uses. The evaluation formulated recommendations for better mainstreaming of RWH practices in FAO's work, in collaboration with ICARDA, and finalization of the normative manuals under preparation (Recommendations 7 and 8) as well as to increase resource allocation to this area (Recommendation 30).

29. The area of on-farm water use, productivity and efficiency for agricultural production has been a key activity for NRLW across the spectrum from rainfed to fully irrigated agriculture. The unit devoted efforts to replace the flagship tool CropWat, which was widely known and used, with a new product, AquaCrop, which has the capacity to estimate yield potential under any water supply conditions. This was prepared in collaboration and with contributions from a diverse set of institutions and individuals across the globe. AquaCrop is highly relevant and has a good potential for large uptake and impact. Along this line, the evaluation formulated Recommendation 9 to strengthen a water saving and water productivity culture in FAO.

30. Work in informal smallholder irrigation has mainly been carried out through the field programme, including emergency interventions, and lacked a fully coherent and systematic approach. Examples in various countries showed that this sector requires substantial support from FAO, also at the strategic and policy level, in consideration of its relevance for food security. Recommendation 10 stresses the need to pay particular attention to the potential and requirements of smallholder irrigation when contributing to water policies and strategies.

31. In the area of water and food security, normative work has been very limited and initiated only recently. FAO food information systems do not capture 'water' as resource, besides rainfall data. Nevertheless, some excellent publications have been produced on the topic.

32. The field programme included 76 'Water and Food Security' projects that represented 43 percent (approximately USD 200 million) of all water-related initiatives; 59 of these, funded through 80 percent of the resources, were conducted under the umbrella of the Special Programme for Food Security. Some of these projects showed positive results and impact, but only for restricted numbers of beneficiaries. Overall, these projects failed in improving access to water resources for agriculture and food security for many among the rural poor, and did not adequately address sustainable land and water management. Any positive impact may thus be short-lived. Shortcomings have occurred particularly in Africa, and internal management issues and unrealistic timeframes appeared to be among the main reasons for failures in implementation, although technical deficiencies also occurred. One suggestion was formulated on participatory approaches in irrigation work.

33. Work in the area of water and livestock consisted of one regional project in Asia that looks at water pollution from livestock and agriculture, a relevant issue in the region. At the time of the evaluation, the project looked likely to produce positive and sustainable results, as well as being replicable at wider scales. Suggestions were formulated on possible areas of further work in partnership with others.

34. Work on fresh water management for fisheries and aquaculture, under the leadership of FIM, consisted mainly of normative outputs. All have been assessed as highly relevant and of good technical quality. The evaluation agrees with one of the IEE's recommendations concerning the urgent need for FAO to develop a coherent strategy for its work in aquaculture (and fisheries), and for better integration of aquaculture within other crop and livestock production systems. The contribution to food security of aquaculture and of aquatic products, in particular for women and the poorer sections of the population, should be recognized better in FAO. Recommendations 11 and 12 reinforce the need for an inclusive concept of water for food production and for FIMA to take leadership in promoting the integrated management of aquatic resources.

System feasibility, design and technology, management and operation

35. FAO's work in the area of rehabilitation and modernization of large-scale schemes has been innovative, relevant and effective with the development of the Mapping System and Services for Canal Operation Techniques (MASSCOTE) tool. The substantial uptake by governments and International Financial Institutions in Asia is also promising for other regions of the world, where diffusion has started recently. Prospects for sustainability are linked to governments' interest and to the development of subregional capacity to provide services for the application of MASSCOTE. A suggestion was formulated for the extension of MASSCOTE to West Africa.

36. Other field work in this area included rehabilitation of large irrigation schemes in Iraq and Afghanistan. Outputs and results were heavily affected by the prevailing insecurity in these countries.

37. FAO's publications on irrigation systems are all in great demand, but many of these are somewhat out-of-date. Recommendation 13 addresses the need for updating a number of products, norms and standards as well as developing others, aimed at improving FAO's work in modernization and design of irrigation schemes.

38. Work in the area of groundwater has been limited due to resource constraints, but it appeared to be relevant and effective to a large extent, with excellent results in at least two cases. In some countries, FAO has been providing advice to governments, aiming at reducing unsustainable withdrawal from aquifers at high risk of depletion. Additional resources have been recommended for this area of work (Recommendation 30).

39. FAO's manuals on drainage and soil salinity are of global relevance and widely used. Overall, field work in this area was limited due to scarce resources, in particular in the Asia and Pacific Region. Nevertheless, what has been accomplished is highly relevant and of good technical quality. The evaluation considers this to be an area for continuous commitment by FAO.

40. The evaluation assessed the relevance and performance of the International Programme for Technology and Research in Irrigation and Drainage (IPTRID). The original objective of the programme is still highly relevant and valid, although financial instability and continual redefinition of IPTRID's strategy have disrupted its activities. Further, relations between NRLW and IPTRID have not always been easy. The evaluation considers IPTRID's role to be valuable and in the absence of additional external resources, recommends that FAO through Recommendation 14, absorb some of IPTRID's capacity development function.

41. Work in the areas of non-conventional water uses included mostly normative products, although recently some field programme initiatives have been initiated. NRLW has developed strong partnerships in this area, at global and regional levels, and outputs will likely have significant impact. Also, the work conducted has mainstreamed gender issues well and is highly relevant for the poor and marginal. The evaluation considers this to be an area for continuous commitment by FAO and has recommended additional resources (Recommendation 30).

Water and environmental issues

42. Within this broad theme, important work has been conducted on forest and water and watershed management (WSM), mainly at the normative level. A key activity was a review process, involving a large number of organizations around the world, through which previous experiences in WSM were analysed and discussed critically, Consensus was developed around a new paradigm underpinning watershed management at the global level and the process resulted in one flagship publication. The concept was further diffused through other publications. A key opportunity for application of the new vision will be a large GEF-funded initiative in West Africa, which also represents a unique occasion for bringing together all concerned FAO units, including the Regional and Subregional Offices, around an integrated initiative. Recommendation 15 flags this aspect. Other extra-budgetary funds have recently been allocated for further application of the concept and other initiatives are in the pipeline.

43. Other policy work has been in support of global processes, with limited effectiveness and visibility. Also, technical assistance work at country level had mixed results, mostly due to limited human resources. The evaluation considers there is opportunity for FOM to contribute to operational mechanisms of WSM service valuation. Recommendation 16 and a number of suggestions should guide FOM in revising its resource allocation in this area of work; and Recommendation 30 asks for additional resources.

44. FAO's contribution to the process for preparing the Guidelines on Agriculture and Wetlands Interactions, conducted in partnership with Ramsar and others, has been highly relevant and of high quality, though heavily constrained by lack of resources. This area of work is important for FAO and the evaluation considers that the Organization should renew its commitment by leveraging or making resources available: wetlands are important for the poor and livelihoods, conservation and agriculture need to be brought together in the same framework. Recommendation 17 urges for the GAWI process to be sustained.

45. FAO has conducted limited work on pollution from agriculture, besides the project on livestock pollution mentioned above. Some further work was conducted in Asia, as well as a recently started regional project in West Africa. However, pesticide contamination in irrigation channels recently emerged as a major obstacle to progress in the area of aquaculture-irrigation. A suggestion has been formulated for this area, strengthened by integrating it in Recommendation 23 on partnerships and Recommendation 30 on human resources.

46. FAO has an excellent reputation in the area of water and food safety, a leading role and very good partnerships across the UN, in particular with WHO. Key normative outputs included significant studies on arsenic pollution in groundwater, and are to be highly commended in terms of their scientific value and relevance for sustainable agricultural development. Food safety is an issue of great economic importance, linked to both the health and livelihoods of people within their own countries, to the economic value of their export crops, and highly relevant to FAO's mandate. The evaluation fully endorses continuous commitment by FAO to this area of work, with strengthened partnerships (Recommendation 23) and additional resources (Recommendation 30).

Information, knowledge and capacity development

47. FAO is recognized as a repository of knowledge in the water sector. Good numbers of its publications, in particular the older ones, are well known and used by governments, practitioners and academia. The Irrigation and Drainage Series, AQUASTAT and Waterlex are well known brand-names associated with FAO. However, products by 'Water at FAO' appear to be 'far too many' and a number of documents lack originality and adequate focus on gender and social inclusion issues. At the same time, the evaluation noted that in a number of publications, relevance for the field work is minimal, whereas 'grey documents' exist in staff's computers that would be very beneficial and relevant if published and disseminated. Recommendation 18 addresses the issue of prioritizing work on publications.

48. Undoubtedly, there is a high generic demand for FAO's water products but staff in governments and other clients and users often complained that old and more recent products are available only on the website, whereas preference is still for hard copies. Recommendation 19, complemented by a suggestion, addresses the need for strategizing distribution and dissemination mechanisms.

49. AQUASTAT is fully recognized as FAO's flagship information system in water, and serves a vital role in making baseline information available globally. Its very nature demands continuous improvement, which happens on a permanent basis at the cost of over-stretched human resources. Promising partnerships are also forthcoming. The evaluation fully endorses continuous commitment by FAO to AQUASTAT, with additional resources (Recommendation 30). A few suggestions were also formulated on technical aspects.

50. Capacity development has been a common element of many water-related initiatives. These ranged from training through IPTRID, to in-service capacity development through work on irrigation policy development and field projects, and included also specific initiatives for developing implementation capacity in the water sector. High demand for capacity development emerged in all regions through the questionnaire survey, in particular on technical issues. However, while there is much evidence of FAO's contributions to capacity development across its

core functions, the evaluation noted weak performance in dissemination, in institutionalizing training and capacity building; and to some degree, in building implementation capacity.

51. The evaluation fully endorses continuous commitment to this area of work, and formulated Recommendation 20 in which resources should be committed to the Africa Region in collaboration with the Comprehensive Africa Agriculture Development Programme, along with a suggestion.

Gender mainstreaming and social inclusion

52. Responsibilities in FAO on gender mainstreaming and social inclusion are distributed to different actors through several mechanisms. Some good normative outputs like publications and training material were produced and the analysis of seven irrigation and agriculture policies to which 'Water at FAO' has contributed, shows that issues and concerns of smallholder farmers and socially disadvantaged groups were taken into account and addressed adequately. Also, some praiseworthy initiatives at field level have been implemented or are ongoing.

53. However, 'Water at FAO' at large has failed to recognize social inclusion as a foundation of development and to adequately mainstream gender in its work, and outputs and results were short of requirements and expectations. There is no clarity as yet within FAO's work on water about two key concepts, namely, 'what is gender mainstreaming' and 'who should be responsible for gender mainstreaming'. Further, the evaluation considered that the current institutional set-up for mainstreaming gender in the work of 'Water at FAO', and in NRLW's work in particular was not effective, mostly due to the lack of human resources at the appropriate level of seniority.

54. The evaluation recommended that FAO should renew its commitment to gender and social inclusion in water through all its work, with Recommendations 21 and 22 and two suggestions. Recommendation 30 asks for additional resources also in this area.

Partnerships and alliances

55. Partnerships at global, regional and subregional levels are a key feature of 'Water at FAO' and of NRLW. Collaboration within UN-Water, as chairperson and member, has been successful and particularly appreciated by partners. The evaluation strongly supports continuous active engagement, promoting the importance of water to agriculture.

56. Constraints limiting FAO's capacity to partner more widely relate to corporate culture, unfriendly procedures, heavy bureaucracy and control, and lack of clear agreements with a number of partners on issues of logos and acknowledgment of contributions. The Organization is developing a new strategy for partnerships that should help in tackling some of these issues.

57. Recommendation 23 calls and provides guidance for the identification and intensification of complementarities with UN- and other agencies. Two suggestions were formulated on internal FAO procedures.

Modalities of FAO's operational work in water

58. In the period 2004-2008 the water-related work of FAO Investment Centre with IFIs represented 17 percent of TCI's total work. Of this, 89 percent was for the World Bank and included mostly supervision of ongoing operations and identification/preparation of investment projects. Internal Bank procedures have affected the form of collaboration and currently TCI's inputs are distributed along the whole project cycle. This makes an evidence-based assessment of its effectiveness virtually impossible. Nonetheless, TCI's contribution is highly appreciated by World Bank staff for several reasons, including high competence and independence of judgment of staff and consultants. Suggestions have been formulated to address issues of human resources within TCI and compatibility of information management systems between TCI and FAO.

59. Emergency work was an important part of the water-related field projects during the period 2004-2008. TCE managed 48 projects with important water components, for a total of

USD 150 million, which represented 14 percent of the total emergency funds and 33 percent of the total water-project funds. This was concentrated in few countries, with Iraq and Somalia being the largest interventions. Initiatives ranged from distribution of pumps to major rehabilitation of pumping stations to establishment of complex water and land information systems. Interventions had often development aims, despite the 'emergency' circumstances of implementation. Most were relevant, however the complexity of water-related work was not taken in due consideration and projects' effectiveness suffered to a large extent. Inconsistent involvement of NRLW in the role of backstopping unit also contributed to poor results in a number of cases. A suggestion was formulated on a specific joint NRLW-TCE product.

60. The evaluation also analysed the Technical Cooperation Programme (TCP), which showed positive results as a modality of funding and implementation when used in the context of water policy and capacity development. Conversely, the TCP modality proved unsuitable for implementing field projects with water management components. Recommendation 24 urges FAO to use the TCP in the water sector mostly for policy and capacity development work.

61. The analysis of South-South Cooperation (SSC) in the water sector showed that this modality of collaboration suffered significantly from cultural and linguistic obstacles and was short of its potential effectiveness. A suggestion was formulated for an in-depth analysis of the whole SSC in FAO.

62. Further, the evaluation assessed how procedures, rules and regulations for project implementation were properly followed in the water-related projects. Several weaknesses that had a negative impact on the effectiveness of the field programme were noted, in particular in relation to the respect of the LTU principle, functioning of project task forces, and provisions for technical backstopping and clearances. Recommendation 25 urges clarity, proper budgeting and adequate time frames for water-related field projects. Recommendations 26, 27 and 28 are addressed at FAO for projects in general, and tackle the project task force and the internal market mechanisms, as well as the development of procedures for national execution of projects and programmes, respectively.

"Water at FAO": Resources and organizational set-up

63. The evaluation's assessment of current human resources in the water sector, against the actual and potential needs for assistance by FAO to its member countries, shows that the Organization is seriously under-staffed at both headquarters and in the decentralized offices. Although some improvements in delivery could be obtained with improved internal management and capacity development of FAO staff, as formulated in Recommendations 31 and 32, FAO is below critical mass of staff for both the water-related normative and field programme. Recommendations 29 and 30 provide guidance on principles underpinning allocation of human resources and the specific areas of work that require strengthening.

64. Collaboration among units shows a very mixed picture, from excellent to non-existent. The evaluation also identified gaps in the feedback and synergy loop between the normative and field programme, in particular between the work by NRLW and units in the Technical Cooperation Department. This, in a number of cases, represented a loss of opportunity and limited the effectiveness, impact and comparative advantage of the Organization in its water-related work at country level.

Conclusions and recommendations

65. The evaluation was mandated to conduct a thorough assessment of FAO's work on water from 2004 to 2008-09. Throughout its analysis, the evaluation referred to the goal and mandate of FAO '*towards food security for all*' as its overarching benchmark, and assessed how the work of the Organization related to water had contributed to it.

66. The analysis confirmed that FAO's mandate is as relevant as ever and that water is a significant aspect of many of FAO's activities, including: improving food security at household

and global levels; implications for forestry and fisheries; establishing international norms and standards for water safety; planning and designing for investments; and emergency operations which have restoration of water services as a priority. Even where there is no apparent direct connection with water, for example when improving the chain of activities from the farmer's field to marketed consumer products, there are significant implications for the productive benefit to society of water use in agriculture.

67. Globally, FAO has played a strong role in the debate on 'water scarcity' amid the topics of climate change and increasing global food needs. FAO has high visibility in international conferences, regional and national water-related forums and the Organization is well recognized and appreciated by peer international organizations. Collaboration on global flagship publications as well as for work at country level are appreciated and of good technical quality. The chairmanship of UN-Water has undoubtedly contributed to FAO's credibility and visibility among peer organizations.

68. FAO's contribution to assist planners and managers in many countries, and its support on legal aspects including on international transboundary issues, has been substantive and recognized and should continue. Equally, its normative and operational work on modernization and management of irrigation systems, water productivity, water resources management, ranging from groundwater to RWH and land and water management, was highly relevant and effective to a good extent.

69. Positive results, mainly at the normative level, were achieved in the areas of water quality, the interface between freshwater management and aquaculture, watershed management and there is potential, if resources are made available and appropriate partnerships developed, in the work on agriculture and wetlands interaction and on water pollution from agriculture.

70. FAO has a name as an information and knowledge broker and its support for capacity development is highly demanded. The quality of many of its publications is good. AQUASTAT, the only existing database on water resources, is widely known and used. However, poor feedback from field experience into new products, lack of strategic planning for the production of NRLW normative outputs, and lack of attention to member countries' constraints in the access to FAO's products, may all contribute to undermine the important role the Organization can play with its products and knowledge.

71. This evaluation found that FAO is the only institution with explicit mandate for global and country level work on the interface between food, agriculture and water, combined with the political mandate of the UN to address this on behalf of its member countries. FAO should exploit its corporate body of knowledge and field involvement to derive a set of messages and approaches that would constitute an 'FAO approach to water' to the pressing water-related issues within its mandate. Every activity should be an opportunity to bring FAO's skills to bear in a coherent manner. This would mean adopting a consistent approach to the identification of constraints and priorities in the water sector, exploiting FAO's contributions to the world water conferences, its analytical and information-based expertise at headquarters, and its wide range of field operations.

72. With such a diversity of actors and activities within the Organization, the need for coordination is clear. Although this usually comes at a cost of time and resources, it bears potential for strong added value. The ongoing FAO reform offers opportunities for improvement, but this may not be enough on its own. The evaluation sees urgent need for a major shift of attention and focus as well as a formal supporting mechanism – a FAO Water platform – that underpins the promotion of FAO's strategic vision for water and greater operational effectiveness.

73. Operationally, a coordinating mechanism would ensure enhanced feedback between the normative and field programme as well as among units and organizational locations. This in turn will improve approaches and confirm relevance and applicability. Better balance between the resources needed for technical backstopping and the planned volume of field work should be achieved. As confidence and knowledge grow, quality will benefit and the 'FAO approach to

water' will become clearer. Once that happens and is recognized, countries who seek FAO input will have a much clearer idea what they can expect to get and staff working for FAO, whether permanent or consultants, can be exposed to characteristically FAO ways of working.

74. There is no doubt that water will become increasingly important in future. A dominant theme of this evaluation has been that resources are insufficient to meet demand and the evaluation has recommended a substantial increase in the human capital of the Organization. Partnerships can help, and should be pursued, but maximizing complementarity among units and different organizational levels who work in the water sector will also be critical to improve FAO's impact at local, regional and global levels of food security.

75. Meeting these challenges and deriving the potential benefits outlined above will require decisions and guidance from the Assistant Director-General's level, coordinated between headquarters and the decentralized offices. The evaluation formulated Recommendation 33 as the first step in this direction and proposed the creation of a FAO Water Platform. Recommendations 34 and 35 provide guidance on the set-up and functioning of the Water Platform, along with some suggestions. The adoption of a renewed mission statement as set out in Recommendation 1 should be the building block for the Water Platform.

76. The recommendations formulated by the evaluation can be implemented independently from each other. Nonetheless, the evaluation considers that the recommendations are complementary and that all are required to improve FAO's performance in the water sector. Recommendations that call for renewed attention to FAO's core mandate and the set-up and functioning of the Water Platform will play a particular role in this endeavour, should be considered as 'first among equals' and have been grouped under the heading 'Foremost recommendations' here below. All other recommendations have been grouped by addressee: 'Water at FAO', considered the virtual pre-cursor of the Water Platform; NRL, the new Land and Water Division; and FAO as a whole. The numbering that appears in the main report has been maintained.

FOREMOST RECOMMENDATIONS

Recommendation 1 To 'Water at FAO'

FAO should define its mission statement for its work on water and land, centred on food security. This should be formulated to include the following concepts: *"Food security is a prime objective in the work of FAO. To realize this objective, FAO should strengthen the efforts to ensure that the policies, management and use of water and land resources are coordinated to the extent necessary and feasible. The purpose must be to improve and stabilize the productivity in the use of these resources in a long-term perspective, i.e. to meet an expected increase in demand for food and other goods and services from the agricultural sector. This can only be achieved by taking the different capabilities of women, men and youth into account. Special attention must be paid to the inclusion of poor and vulnerable groups. This approach should be the basis of the design of the technical, financial and institutional arrangements."*

Recommendation 21 To 'Water at FAO'

a) 'Water at FAO' should develop tools to support member countries in preparing agricultural water policies that are gender sensitive and socially inclusive;
b) 'Water at FAO' should recognize in all its work, normative and operational, that farming is a household enterprise, often passed down through generations and drawing on traditional knowledge, based on teamwork, where tasks are complementary and not competitive;

c) 'Water at FAO' should update 'old' benchmark publications progressively, introducing new material, improving relevance to different farming households, and integrating gender concerns.

Recommendation 30 To FAO

FAO should ensure full-time capacity in the following areas and locations:
a) Irrigation engineering capacity at subregional levels in East, Southern and West Africa and in the Near East/North Africa;
b) Strengthen water management capacity to support the Technical Cooperation Department in its work, with NRL staff based at the most appropriate location.
c) Create a post for social development and gender expert with specific experience in agricultural water and land management at middle/senior level (P4/P5) in NRL at headquarters;
d) Strengthen capacity at headquarters in NRL on: groundwater management; water harvesting; water statistics and information systems;
e) Strengthen capacity on waste-water management and related topics in Latin America, Asia and the Pacific and in the Near East;
f) Strengthen capacity on water policies at the regional level, to match requests from member countries;
g) Strengthen capacity on: water-related issues in AGNS and on agricultural pollution in AGPP;
h) Establish capacity on Forest and Water and Watershed Management in Central Asia;
i) Sustain the credibility and performance of LEGN by strengthening its human resources in the water sector.

Recommendation 33 To FAO

FAO's Assistant Director-General for Natural Resources, in collaboration with concerned Assistant Directors-General in headquarters and in the Regional Offices, should develop a strategy for water in FAO. This should define an official internal coordination mechanism, called FAO Water Platform, and reflect the importance of water in FAO's mandate as well as the objectives of the Organization in the water sector.

Recommendation 34 To FAO

The FAO Water Platform should become the organizational mechanism that connects work on water to the Strategic Objectives. Key elements of its structure and role are as follows:
a) The Chair should be the Assistant Director-General for Natural Resources level and should report to the two Deputy Directors-General of FAO on progress and constraints of the Platform mechanism;
b) The Platform should develop a four-year programme for the Impact Focus Area-Water and Land Scarcity and other Impact Focus Areas to which work on water is relevant; the programme should include priorities, responsibilities, areas for partnerships and required human resources for its implementation;
c) The Platform should function through regular joint decision-making meetings among FAO unit managers and regional senior staff with strong responsibilities for water work, including NRL, ESW, FIMA, FOMC and the Technical Cooperation Department and others, as appropriate.

Recommendation 35 To FAO

The FAO Water Platform should ensure:
a) Clarity on the context and principles of collaboration between NRL, ESW, FIMA, FOMC and units in the Technical Cooperation Department, defining responsibilities and roles, resources, allocation and sharing procedures and compliance with technical requirements of projects and initiatives;
b) Close coordination between all members of the Water Platform on all steps of project preparation, from discussions with donors to project approval and adequate planning for resources for backstopping and technical clearances.
c) Improved two-way linkages between technical staff and consultants working for all members of the Water Platform, as sources of information and means to disseminate and test ideas.

Recommendations to 'Water at FAO'

Recommendation 2 To 'Water at FAO'

'Water at FAO' should advocate for institutional arrangements in member countries that systematically engage all relevant ministries (agriculture, irrigation water resources, the environment, urban development, power, etc.) in issues related to water resources management for agriculture and food security.

Recommendation 3 To 'Water at FAO'

'Water at FAO' should allocate resources for work on water and irrigation policies to meet rising demand from member countries, through the TCP or other funding modalities.

Recommendation 4 To 'Water at FAO'

'Water at FAO' should develop a new normative product informed by experience and lessons learned illustrating steps and processes that can facilitate national policy development processes. This product should also set clear criteria and conditions under which FAO is in a position to provide meaningful policy assistance.

Recommendation 5 To 'Water at FAO'

'Water at FAO' should, in formulating field interventions, pay increased attention to environmental concerns, including soil fertility, aquifer depletion and downstream impacts of increased local water consumption.

Recommendation 6 To 'Water at FAO'

'Water at FAO' in its work on the development of land and water strategies, should always (a) consider the spectrum of land/water options from rainfed through to full irrigation; and (b) overtly address relevant gender and social inclusion dimensions.

Recommendation 7 To 'Water at FAO'

In partnership with ICARDA and others 'Water at FAO' should evaluate the potential to incorporate Rain Water Harvesting practices into water resources development for rural livelihoods improvement.

Recommendation 8 To 'Water at FAO'

The pending NRL publications on Rain Water Harvesting should be expanded to include a decision-support tool based on rainfall data to assess yield, assurance of supply and economics at the level of households and administrative units. They should be completed, published and disseminated as a matter of urgency.

Recommendation 9 To 'Water at FAO'

'Water at FAO' should set out an institutional view on water accounting and establish a culture 'of water saving and water productivity' for dissemination in all its work.

Recommendation 10 To 'Water at FAO'

While contributing to member countries' water policies and strategies, 'Water at FAO' should pay particular attention to the potential of smallholder irrigation and its requirements for specific technical, legal and extension support.

Recommendation 11 To 'Water at FAO'

'Water at FAO' should reinforce the integrated concept of water to sustain both aquatic and terrestrial crop-based food production, to ensure maximum benefit for the poor and disadvantaged.

Recommendation 12 To 'Water at FAO'

'Water at FAO', under FIMA's leadership, should promote integrated management of aquatic resources, aquaculture in irrigation systems and wetlands-agriculture interactions.

Recommendation 15 To 'Water at FAO'

'Water at FAO' should engage in the Fouta Djallon Project to make it an example of organizational achievement through intensive collaboration across departments, both at headquarters and in decentralized units.

Recommendation 17 To 'Water at FAO'

'Water at FAO' is strongly urged to take immediate action to sustain the process for the Guidelines on Agriculture and Wetlands Integration, through the mechanism of the Ramsar Thematic Work Area, and to seek funding for this activity.

Recommendation 19 To 'Water at FAO'

'Water at FAO' should develop a distribution and communication strategy for its publications and normative products, to facilitate knowledge and access to these among governments, academia and other stakeholders beyond the posting on FAO's website.

Recommendation 23 To 'Water at FAO'

'Water at FAO' should identify and intensify specific complementarities with UN-agencies and other international organizations. Specific areas for partnership should be:
a) water in food safety and on wastewater with WHO;
b) livestock with ILRI;
c) agricultural pollution with UNEP;
d) agriculture and wetlands interactions with Ramsar and others;
e) research on water and food with the CGIAR system, in particular with IWMI.

Recommendation 24 To 'Water at FAO'

The use of the TCP modality in the water sector should be mostly in support of national processes of policy and strategy formulation and of capacity development.

Recommendation 25 To 'Water at FAO'

FAO project documents for interventions in the water sector should clearly indicate budget requirements for long- and short-term human resources, including for technical backstopping and clearances, as well as ensure reasonable timeframes.

Recommendation 29 To 'Water at FAO'

It is recommended that:
a) Experts with stronger specialization and competences in broad strategic issues should be based in FAO headquarters; support from this to the other levels should be available upon call;
b) Experts with stronger engineering and field experience and with solid operational and problem-solving capacity should be based at regional and subregional levels;
c) Competences should match regional/subregional needs, instead of the current standard set of competences across all subregions;
d) At least two water officers, one or more of each discipline, should be located in FAO decentralized offices where water and land issues are a priority, to properly deal with the management of water and land resources, jointly and separately, to ensure synergies and back-up mechanisms;
e) FAO Representations should recruit national technical specialists at country level, in particular in large countries like China and India and where competent expertise is available.

Recommendations to FAO units

Recommendation 13 To NRL

NRL should:
a) Update its normative products that are relevant to some of the modernization efforts in various countries, especially pumped schemes in Africa.
b) Develop and assist in the introduction of the design-for-management concept to improve the manageability of irrigation schemes by user organizations.
c) Update norms and standards for equipment and design parameters suitable to agro-socio-ecological conditions as necessary; and
d) Develop guidelines for application by local agencies (public and/or private, as appropriate) to evaluate irrigation systems.

Recommendation 14 To NRL

If reliable and substantial multi-year external support is available, NRL should continue hosting IPTRID within a clearly defined framework of collaboration, with active future participation of the programme in the proposed FAO Water Platform. Otherwise, NRL should absorb aspects of IPTRID's mandate and role on capacity development within its own Regular Programme of Work and Budget.

Recommendation 16 To FOMC

FOMC should contribute to 'Water at FAO' by:
a) reducing existing institutional commitments by matching resources to realistic timeframes;
b) giving particular attention to 'scalability ' of interventions when conceptualizing and designing projects, including pilot initiatives;
c) invigorating advocacy and policy contributions through UN platforms;
d) seeking and developing active partnership opportunities, and
e) developing operationally-relevant WSM related normative products.

Recommendation 18 To NRL

NRL should prepare a 4-year publication strategy, aimed at scaling-back output to fewer publications and addressing priority gaps. New proposed publications should specify ex-ante the target audience and proposed plan of dissemination.

Recommendation 20 To NRL

NRL should commit resources in the Africa Region, in collaboration with CAADP, to:
a) Introduce practical training courses based on the irrigation design manual into the curricula of regional training institutions, to improve capacity for the major irrigation development foreseen;
b) Broaden the content of the irrigation design manual to include the norms and standards on irrigation design and irrigation equipment including Rain Water Harvesting approaches and techniques for informal/individual water control development options for smallholders;
c) Develop and incorporate engineering aspects of informal smallholder irrigation into the curricula for irrigation engineers and related professions.

Recommendation 31 To NRL

NRL should act urgently to:
a) develop a NRL common vision and strategy, by involving staff at all levels and locations;
b) improve team work, collaboration, coordination and sharing within NRL across all levels and locations, including through annual meetings for all staff, regular and frequent virtual meetings, visits by senior managers to decentralized offices, etc..

Recommendation 32 To NRL

NRL should give priority to conducting capacity development events for FAO water staff from all locations and all concerned units, in particular TCI, on all its new products, and 'Water at FAO' should accommodate these efforts making staff available for training. AquaCrop and MASSCOTE represent areas for urgent action.

Recommendations to FAO on procedures

Recommendation 22 To FAO

Any future FAO project and programme appraisal mechanism, that will take the role of the Project and Programme Review Committee, should ensure that project designs are strengthened towards mainstreaming gender and social inclusion and integrated approaches that consider the wider constraints of farming households as enterprises.

Recommendation 26 To FAO

The mechanism of the project task force should be applied systematically and throughout the complete life of all projects, including emergency interventions, in particular when projects are multidisciplinary. Monitoring of project implementation should be part of the TF responsibilities.

Recommendation 27 To FAO

FAO should revise its internal market mechanisms and rates, to ensure they do not act as a disincentive to collaboration between projects and operational units and technical departments, and prevent dissemination and testing of normative concepts.

Recommendation 28 To FAO

FAO should urgently develop procedures for national execution of projects and efficient and effective tools for substantial project supervision and monitoring, beyond financial delivery.

ANNEX 1: TERMS OF REFERENCE

1. Background for the evaluation

Water is a key area for FAO. The third Global Goal of the FAO Strategic Framework 2000-2015 is "The conservation, improvement and sustainable utilization of natural resources, including land, water, forest, fisheries and genetic resources for food and agriculture." The Strategic Framework includes water scarcity, pollution and salinization and integrated natural resources management, within Strategic Objective D1: Integrated management of land, water, fisheries, forest and genetic resources.

Throughout this decade, FAO's Committees have repeatedly emphasised water use and management for sustainable agriculture, forest and food security efforts. In particular, the Committee on Agriculture (COAG) in 2007 discussed a proposal by FAO/NRL[1] on Agriculture and Water Scarcity and "welcomed the proposal for multidisciplinary integrated framework to address water scarcity"; the Committee on Forestry (COFO) in 2003 focused on the theme 'forest and water' and has stressed its importance since; the Committee on World Food Security (CFS) also repeatedly stressed that FAO should pay particular attention to water scarcity and drought.

The Independent External Evaluation of FAO (IEE) conducted between 2005 and 2007, commissioned a 'Background working paper on Water Management and Irrigation'. The main conclusion on water and irrigation in the final report was: "FAO continues to have a lead role on water databases and is respected for its work on agricultural water management. If hunger, poverty and chronic malnutrition are to be overcome, especially in Africa, increased water control is a prerequisite for any green revolution and for continuing agricultural development in Asia and the Middle East. Many water networks exist but are often biased against agriculture. FAO is currently in a weak position. The competency mix and the wide dispersion of the few human resources remaining in the Organization would need to be addressed as an initial imperative for the Organization to exercise leadership in macro-policy issues at global and regional levels."

The IEE core recommendation for water focused on the need for: i) a significant realignment of existing resources together with the securing of new ones, both human and financial; and ii) a different strategic approach which would enable FAO to contribute to integrated policies and programmes which bring together engineering, tenure, economics, management and legislation.

The IEE report and the respective Management Response by the Organization triggered in FAO a complex reform process that is still ongoing. The first step was the preparation of the Immediate Plan of Action (IPA) for the follow-up to the IEE, which was discussed and approved by the 35th Special Session of the FAO Conference in November 2008: it defined FAO's Vision and Global Goals and 11 Strategic Objectives. Water appears again in the third Global Goal and in one of the Strategic Objectives, along with land and genetic resources.

The reform process includes the preparation of the new Strategic Framework of the Organization: in this document, the sustainable management of natural resources, including water, is at the forefront of progress toward food security and in addressing conflicts by "recognizing the cross-sectoral character of integrated natural resources management at the local scale, and linking local management to the complexity and variety of instruments that address different aspects of the environment at the global scale"[2]. A very recent and important development in this context is the formulation of one out of seven, Impact Focus Areas[3] on water scarcity, namely "Coping with

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1 NRL: Land and Water Division

2 Draft Strategy Note Environment, Climate Change and Natural Resources Management, CoC-IEE, 8 May 2008

3 Impact Focus Areas aim at effectively grouping Organizational Results, from one or more Strategic Objectives, that relate to the same theme or cross-cutting issue considered a priority for 'flagship' treatment and advocacy to mobilise extra-budgetary funding. The IFA concept is part and parcel of the new Strategic Framework of FAO, but themes for focus can change over time.

scarcity of water s and land resources" (IFA-WALS). This should help 'mobilize resources, progressively enable pooled and less rigidly tied funding, primarily address issues of priority.' The thrust of the IFA is on the need to 'increase land and water productivity in a sustainable manner while negotiating water allocations with other users as a matter of priority'.

In this context of sustained dialogue between the member countries and the senior management of FAO, the Programme Committee (PC) at its 100th Session in October 2008 endorsed, among the topics proposed for initiation in 2009, the evaluation of "FAO's work related to water, as this had been a significant discussion topic in the CoC-IEE[4]." The evaluation report is expected to be presented to the PC in its Spring 2010 session.

2. Water in FAO

This chapter illustrates the main areas and type of work related to water within FAO. This information was gathered and elaborated through the Evaluability Assessment conducted by the FAO Evaluation Service; all concerned units had the opportunity to comment and verify factual details.

2.1 How FAO works

FAO main areas of activity are identified in: i) putting information within reach; ii) sharing policy expertise; iii) providing a meeting place for nations; and iv) bringing knowledge to the field.

The Organization's work, likewise in other international organizations (IOs), is also usually categorized as 'normative' or 'operational'[5]. The first meets the 'global normative role' of the UN and of FAO, and includes work of international interest and use, e.g. technical papers, global debate and conventions. It is funded mostly by the Regular Programme (core) budget (RP) of the Organization, although increasingly extra-budgetary (EB) resources are allocated to it. The RP is structured in programme entities (PE).

The operational work, alternatively called Field Programme, includes all initiatives, projects and programmes that "respond to the needs of the member countries[6]". These projects and programmes are funded to the largest extent[7] through extra-budgetary resources, although the Regular Budget finances the Technical Cooperation programme. Projects and programmes can be global, interregional, regional and national and can be under the responsibility of budget holders (BH) and lead technical units (LTU) located throughout the decentralized structure of the Organization: FAO headquarters (HQ), regional, subregional or national FAO Representations (respectively RO, SRO, FAOR).

The Organization's repository and sources of information about operational and normative products and initiatives are separate and provide very different types of information. The corporate Field Programme Management Information System (FPMIS) contains detailed and comprehensive information on the Field Programme and a great deal of information is available on budgets, inputs, timelines, activities and outputs, etc.

This is not the case for the normative work, which is funded through the Regular Budget of the Organization. The low level of detail in outputs and outcome indicators and targets for the programme entities (PE) as illustrated in the Programme of Work and Budget (PWB) and in the corporate Programme Implementation Report until now, entails that no information is easily retrievable on the inputs and process leading to the production of the normative outputs of the Organization, nor on results intended as use or adoption of these products by clients. Further, there is no single repository or record of the 'normative' products of FAO, which tend to be

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4 Committee of the Council-Independent External Evaluation

5 The difference is considered to be artificial by many, including the Member Countries, and more recent trends are for a focus on the continuum and synergies between different types of activities. Still, this dichotomy permeates the language and culture of the Organization.

6 From the website of the Technical Cooperation Department

7 Currently, EB resources represent 90% of the Field Programme according to FPMIS.

dispersed across the very complex corporate website. This should be kept in mind when analysing all work by FAO, and the water-related activities are no exception.

2.2 FAO's work in water

The 'FAO's Programme in Water' is anchored in the Division of Land and Water of the Natural Resources Department of the Organization. It closely reflects the main areas of FAO's activity mentioned above and is articulated as follows[8]:

a) Information and knowledge on water: this includes multi-scale information base on water at different levels, contribution to global studies and to international processes (e.g. UN-Water); it is usually defined as 'normative work' and it is funded through both Regular Programme[9] (RP) and Extra-Budgetary (EB) resources;
b) Policy advice: this area involves providing assistance to member countries on water management within agricultural policies, as well as the development of specific policy information tools; it is funded through both RP and EB resources;
c) Technical support to countries and their constituents: this area consists mainly of projects at the country or regional level including in emergency context, ranging from development of small-scale irrigation schemes to modernization of large-scale schemes, watershed management, wastewater treatment, etc. It is mostly funded through EB resources for development, emergency and investment initiatives although staff members responsible for these activities are mostly funded through the RP budget.

FAO also had and has a number of mechanisms for cross- and multi-disciplinary work, called Priority Areas for Interdisciplinary Action (PAIA), or Inter-Departmental Working Group (IDWG). Water was and is a cross-cutting topic in a number of these and the units concerned with water contribute to them as required. Main ones appear to be:

- the current Multidisciplinary Area Food for the Cities, which worked on issues of wastewater and water quality and at urban/rural competition for water use and at urban/peri-urban agriculture and water use;
- the IDWG on Biosecurity, again concerned with water quality issues;
- Multidisciplinary activity on Sustainable Management of Mountains;
- Multidisciplinary activity on Global Perspective Studies;
- Multidisciplinary activity on Spatial Information Management and Decision Support Tools (ex PAIA SPATTLE); and
- IDWG for Climate Change.

Within these broad lines, water is a substantial theme of work for a number of departments and units in FAO: a short summary is provided below of the areas of activity on water of all concerned units during the period under evaluation.

2.2.1 *FAO Water Development and Management Unit*

The 'traditional' focal point for water in FAO is the Water Development and Management Unit (NRLW), part of the Land and Water Division (NRL): the division was within the Agriculture Department, until it was integrated in the newly created Natural Resources Department in January 2007, as part of the FAO Director-General's reform[10]. The unit, as most other FAO technical units, has staff located in HQ and in the Regional and Subregional Offices.

NRLW leads and conducts virtually all FAO's normative work related to water and acts as lead technical unit (LTU) for many projects related to water management and development. NRLW

[8] Water at FAO, Information Note, FAO, 2009.
[9] The budget of the Regular Programme of the Organization also funds the Technical Cooperation Programme (TCP).
[10] The reform process of FAO started by the Director General in 2005 was mainstreamed in the reform process following the Independent External Evaluation.

also supports projects with water-related component run by other units, as a member of their task forces, though not all (see Section 2.5).

All the work of NRLW is on the different aspects and perspectives of water management and development in relation to agriculture; its main areas of focus and modality of action are described here:

- AQUASTAT is FAO's global information system on water and agriculture: it collects, analyses and disseminates secondary data and information by country and by region. The information system consists of databases, maps, tables, and country and regional profiles. AQUASTAT is a member of the Inter-Agency Working Group on Statistics. The Evaluation of FAO's role and work in Statistics in 2008 conducted an in-depth assessment of this work;
- Irrigation systems: development of new maintenance and modernization systems and approaches (MASSCOTE), update of old and preparation of new technical publications and training material, capacity building, technical assistance to field projects and contribution to formulation of investment projects; work in Asia (India and China), expansion to Central Asia and Near East regions; modules of MASSCOTE for fish and rice;
- Drainage systems: development of new systems and approaches for drainage and salinity control, technical publications (4 since 2000) and technical assistance to field projects; collaboration with ICID and ALTERRA-ILLRI;
- Water policy: advocacy work at international level; assistance to countries through field projects; work on water and poverty with IFAD;
- International waters and transboundary river management: collaborative management projects, e.g. the Italian-funded Nile Basin project, the GEF-funded Okavango basin project and the up-coming Master Plan of the Mesopotamian Basin; the focal points for the GEF International Waters Focal Area are in NRLW and FIMA;
- Water quality: this includes development of systems and approaches, technical publications and technical assistance to field projects on various sub-themes, including water re-use, waste water, arsenic contamination, reclamation of polluted areas, non conventional water resources, issues of salinity in the post-tsunami recovery;
- Water scarcity and environmental aspects linked to water: advocacy work, technical publications, technical assistance to field projects and development of systems and approaches on various sub-themes, including improvement of water use efficiency; payment for environmental services on water and watersheds; contribution to Virtual Water/Water Footprint network;
- Economics of water resources management: technical publications;
- Crops and water: contribution to development of water-efficient cropping systems, e.g. System of Rice Intensification; studies (paddy irrigation in monsoon areas); technical assistance to field projects; models and decision support tools (DST) for crops and water, e.g. AQUACROP; collaboration with CGIAR organizations, e.g. ICRISAT, ICARDA, CIMMYT[11], etc.;
- Wetlands: collaboration with Ramsar Convention, UNEP and IUCN on the sustainable agricultural development in wetlands; technical publications;
- Water resource assessment: production of spatial information, models and databases on water resources for projects and global and regional resource assessments;
- Contribution to international processes on water: chairing of UN-Water in the period 2007-2009; hosting of UN-Water task force; organization of the Netherlands Conference on Water in 2006 and of the Sirte Water and Energy Conference 2008; collaboration with IWMI; participation in international fora, e.g. the World Water Forums, the World Water Week, with presentations, stands, etc.;

[11] ICRISAT: International Crop Research Institute for the Semi-Arid Tropics; ICARDA: International Center for Agricultural Research in the Dry Areas; CIMMYT: International Maize and Wheat Improvement Centre.

- Contribution to international publications on water, e.g. Water for Food, Water for Life, published by IWMI in 2007;
- Contribution to FAO's flagship publications and perspective studies, e.g. World Agriculture: towards 2030/2050; water resource assessments, State of Land and Water 2010, etc.;
- Information and communication: set-up, maintenance and update of the FAO Water website, including statistics on use; set-up of website for Tsunami on Water; information products on water; assistance to and capacity building in projects on information systems; World Water Day; maintenance of mailing lists on water; collaboration with IFAD in general for publications; and
- Advocacy work and resource mobilization on water, agriculture and food security.

A few normative products have been produced or are work in progress in collaboration between NRLW with other units in the NR Department, e.g. NRL, NRR.

2.2.2 *Food Quality and Standards Service*

The Food Quality and Standards Service (AGNS) is mostly involved at the normative level with water-related issues. Products are guidelines for water safety under the umbrella of the Codex Alimentarius and the Microbiological Risk Assessment Series. In addition, capacity building on issues of water use and water quality is conducted in partnership with the World Health Organization (WHO) and the World Organization for Animal Health (OIE).

The network of partners is rather wide and includes WHO, IWMI, IDRC, universities, CGIAR, IRRI, RUAFS (Resource Centre on Urban Agriculture and Food Security), WFP, UNICEF, IUCN, Ramsar Convention, etc.

In the Tsunami case, there was collaboration with UNICEF on ground-water quality. Mention was made of the need for better collaboration among UN agencies on water at the interface of human, animal and agricultural consumption, including water sanitation and re-use of waste-water.

2.2.3 *Fisheries and Aquaculture Management Division*

FAO's work on aquaculture in freshwater systems is within the boundaries of the Evaluation Assessment, being a direct form of water management and use in the same sense as crops and livestock with all related issues of availability, competitive uses and quality. Equally, the impact of agriculture and livestock activities on inland and coastal fisheries appears relevant to the scope of the evaluation. Furthermore, the Fisheries and Aquaculture Department (FI) have solid experience in the biodiversity dimensions of freshwater ecosystems. FAO's work on marine waters and all work on fisheries resources are excluded.

The mission of the Fisheries and Aquaculture Department of FAO is to facilitate and secure the long-term sustainable development and utilization of the world's fisheries and aquaculture. The visibility of this area of work is very limited across the Organization; further, the human resources in the area of inland fisheries have been cut heavily over the last decade, although efforts are currently being made to rebuild some of this lost capacity.

Before the period under evaluation, FAO had an IDWG for the follow-up to Chapter 18 Freshwater of Agenda 21 after the Rio Conference in 1992. However, as early as 1999, the topic did not feature any more in the documents by the Organization on the relevant follow-up.

During the period under evaluation there has been some collaboration between staff in both the Fisheries and Aquaculture Management Division and the Fisheries and Aquaculture Economics and Policy Division with NRLW on a number of products including the World Water Development Reports, the African Water Resource Database, expert workshops etc. Recently, NRLW and FI have decided to collaborate more closely on the Guidelines on Agriculture-Wetlands Interaction initiative. Most of this collaboration, met with high appreciation in NRLW, has been limited by the limited human resources available and the fact that this has not been a priority under the Programme of Work and Budget (PWB) of the Fisheries and Aquaculture

Department. The main drive for it to happen has been the personal initiative and commitment of staff in FI.

At the same time, there have also been FI initiatives, with limited input from other FAO water units, covering thematic reviews and expert meetings on dams and fisheries in collaboration with the World Commission on Dams; fisheries in irrigation systems in arid zone of Asia, in collaboration with the Interstate Coordination Water Commission (ICWC) of Central Asia; and hydropower, flood control and water abstraction – implications for fish and fisheries in Europe.

With freshwater fisheries production and biodiversity under increasing pressure from land-based activities and considering additional pressures imposed by climate change, there seems to be clear opportunity and need for more intensive and formal interaction between FI and NRLW on clearly defined programmes and outputs.

2.2.4 *Forest Management Division*

The Forest Management Division's Forests and Water Programme covers a broad range of water-related issues within forest hydrology, mountain ecosystems, watershed management and upstream/downstream linkages.

Normative products emerging from this division include a stocktaking exercise of international watershed management activities, conferences and workshops on forest and water issues as well as a number of publications, such as UNASYLVA and FAO Forestry Papers.

There are a number of field projects mainly covering watershed management activities, concentrated in Eastern Europe and Central Asia. A large GEF-funded project is starting at the time of writing these ToR, on the Fouta Djallon massif in West Africa.

The Forest and Water Programme has been engaged in many partnerships (ICIMOD, the European Forestry Commission, Mountain Partnership, Mekong River Commission, etc.) and has been an active participant at a number of conferences (5th World Water Forum, Barcelona Conference, European Forest Week etc.) highlighting issues of forests and water.

One of the issues raised by FOM was the limited human resources available for this area of work at the moment. There is lack of human resources in the decentralized offices as well.

2.2.5 *Development Law Service*

The Development Law Service (LEGN) is involved at normative, field programme and international levels in water-related issues. At normative level, guidelines, training manuals, policy notes and legislative studies have been produced on water legislation, water rights, water user organizations, sustainability, conservation and protection of the water resource base and transboundary aquifers. At field programme level, LEGN covers legal components within projects covering policy and strategy (both in irrigation and water resource management), the water and land rights interface, access to land and water and transboundary issues.

In terms of international processes, LEGN has contributed to UN Water, the 3rd WWDR, cooperation with UNESCO, training and capacity building related to water rights and law, as well as drafting articles on the Law of Transboundary Aquifers. Initially a cooperation with WHO on water legislation and water standards, WATERLEX, was expanded and is now a database containing legislative and regulatory frameworks for water and their analysis.

LEGN underlined its close collaboration with various units within FAO, including NRLW and TCI, and with international organizations on water-related topics. The senior officer in LEGN who managed all water related work has recently retired: institutional memory of the past work exists and the unit stated that tasks have been redistributed.

2.2.6 *Emergency Operations and Rehabilitation Division*

During the period under evaluation, TCE has managed 42 projects including a water component, with a total budget of USD 124 million. The types and sizes of interventions vary according to

region and specific country contexts with Iraq, Somalia, Pakistan, West Africa and the West Bank and Gaza being the main beneficiaries.

The emergency and rehabilitation interventions are wide ranging, including small-, medium- as well as large-scale irrigation rehabilitation, irrigation development, watershed management, water harvesting, wastewater treatment and re-use, livestock water holes, soil desalinization, information projects and river management.

Some of the work by TCE in Iraq on water pumping stations appeared to be beyond the traditional mandate of FAO: the unit responsible was however able, in collaboration with AGS (Rural Infrastructure and Agro-Industries Division), to select and contract a suitable service provider. Through this work, norms for similar assignments have been prepared.

A large number of emergency projects with water components, namely in Iraq, tsunami-affected areas, Pakistan, Somalia and the Horn of Africa, have been evaluated recently either as individual projects or within the framework of large emergency programme evaluations.

2.2.7 *FAO Investment Centre*

The FAO Investment Centre (TCI) collaborates with multilateral institutions such as the World Bank, regional development banks and international funds by assisting developing countries to identify and formulate effective and sustainable agricultural policies, programmes and projects. The unit hosts and is largely funded through the FAO-World Bank Cooperative Programme; in addition, it also uses funds from FAO's Regular Budget, for example through TCPs. In this framework, TCI contributes to formulate and implement projects mobilizing very large financial resources.

An initial rapid assessment of TCI's work on irrigation and drainage investments indicates that in the period under evaluation, TCI contributed to 42 projects with a total budget of USD 4 billion, by engaging approximately 15 percent of its total staff time. This estimate does not include work on watershed management and water and environmental issues: the total support to the IFIs on this theme and to the World Bank in particular, appears to be very substantial and the evaluation should explore it more in depth.

TCI staff stated that there is a regular and frequent use of some of NRLW products, such as Crop-WAT.

2.2.8 *Management and Coordination Service for the Special Programme for Food Security*

TCOS is responsible for the management of the SPFS, that includes more than 100 field projects and/or national programmes for food security in Africa, Asia and Latin America. Water management is one of the four core components of the SPFS and small-scale irrigation featured in the planning of virtually all projects funded in the first round of the SPFS in the late 1990s. Over time, the SPFS has become more tailored to local needs and circumstances and has often evolved in national programmes of food security, wherein the policy and institutional component has become more important.

The Evaluability Assessment has identified 37 SPFS projects with a significant water-related component. They are mostly concentrated in West Africa, with some initiatives in Haiti and in Asia. In particular, Spain has been funding initiatives in a number of West African countries with a strong attention to water management aspects within the umbrella "Programme Eau pour l'Afrique".

2.2.9 *Others*

The Evaluability Assessment shows that some work has been conducted on gender and social equity in water related contexts, in particular on gender disaggregated statistical data in Africa (e.g. AQUASTAT).

The Livestock Policy Unit (AGAL) conducted a number of studies on livestock-environment issues through their Livestock-Environment and Development Programme, wherein

contamination of water was a key issue. The most relevant recent product of this unit on water-livestock issues is the publication "Livestock's long shadow". Work is ongoing in Asia on livestock waste management and pollution (GEF Project) and there is collaboration with RAP officers. AGA contributed to the Netherlands Conference on Water.

In the Agriculture Department, it appears that the most relevant water-related initiative is a newly started large programme in West Africa in collaboration with the Oregon State University and funds from the GEF, implemented in close collaboration with a regional project funded by the Netherlands on IPM and Farmer Field Schools. The new project aims at reducing dependence on Persistent Organic Pollutants (POPs) and other pesticides through the introduction of an innovative water quality monitoring device, capacity building for a network of national and regional laboratories, etc. The project started in March 2009 and has a long time horizon. Collaboration with NRLW exists at the informal level. No other initiatives were identified during the Evaluability Assessment.

Particular mention is made of the Science Council Secretariat of the CGIAR, hosted by FAO that is also one of the CGIAR donors. The Secretariat has conducted assessments and work on water issues, including the review of IWMI and the External Review of the Water and Food Challenge Programme, both in 2007. The extent and form of potential collaboration between FAO and CGIAR's Secretariat on water issues may be of interest for the evaluation.

2.3 Water in the FAO Programme of Work and Budget and Medium-Term Plan

During the period under evaluation, the Regular Programme of FAO was articulated and budgeted through "programme entities" (PE). For ease of reference, the main PEs are indicated in Box 1 below.

Programmes and Programme Entities related to water since 2004

Major Programme/Programme/Chapter MTP 2004-09	**Programme Entity**
PWB 2004-05	
2.1 Agricultural Production and Support Systems, 2.1.1. Natural Resources	211A1 Agricultural Water Use Efficiency and Conservation
	211A3 Integrated Land, Water and Plant Nutrition Policies, Planning and management
	211A5 Land and Water Quality Improvement
	211P7 Land and Water Information System
	211P8 Knowledge Management and Partnerships
2.4.1. Forest resources	241A7, Forests and Water
2.5.6: Food Production in Support of Food Security in LIFDCs	256P2 and 256P3, SPFS Formulation and Implementation
3.3.3, Emergency Operations and Rehabilitation	33300, Emergency Response Operations
PWB 2006-07 and PWB 2008-09	
2K Sustainable Natural Resources Management	2KA01 Agricultural Water Use Efficiency, Quality and Conservation
	2KA06 Integrated Land, Water and Plant Nutrition Policies, Planning and management
	2KP02 Land and Water Knowledge management, Information systems, Databases and Statistics
	2KA07, Forests and water
4C: Food security, poverty reduction and other development cooperation programmes	4CP01, Management and Coordination - SPFS/NPFS/RPFS/SSC/pro-poor small projects
4D, Emergency and post-crisis management	4DS01, Implementation of emergency programme

Source: NRLW, FOM and PBEE

2.4 Projects on water or with water-related components

The Evaluability Assessment based the selection of 'operational' activities on two criteria: i) the implementation period: projects had to be operational between 1 January 2004 and 31 December 2008; ii) 'water-related' work was part of projects' objectives, results and/or outputs. An additional twelve projects started after 1 January 2009 have been included under a separate heading.

In total, 226 projects[12] have been identified as relevant to the evaluation thrust, 44 of these classified as Emergency as mentioned above. Their total budget amounts to USD 436 million: this represents 19 percent of FAO's delivery through the Field Programme in the period 2004-2008. The budget of Technical Cooperation initiatives represents a larger proportion within the water-related projects than within FAO's overall delivery figures, 70 percent against 53 percent. Conversely, emergency initiatives within the water-related projects are less than within FAO in general (29 percent against 47 percent).

The great majority of the projects were national in scope: only 16 were interregional projects, 9 regional and 4 global; also among TCP, 7 were regional and 1 interregional and only one emergency project had a regional scope.

The budget of the 226 projects was accrued to as follows: 29 percent of the funds were used for emergency projects, TCP projects represented 4 percent and EBF Technical Cooperation initiatives represented 67 percent. In terms of number of projects, 20 percent of the projects were in emergency, 28 percent within the TCP and 52 percent funded from EB resources.

Within the Technical Cooperation projects, TCP were 5 percent of the budget and 36 percent of the number of projects, whereas projects funded through EB resources represented 95 percent of the budget and 64 percent in number of projects. Projects in support of the normative work of the Organization in water represented 8 percent of the Technical Cooperation budget, against 92 percent going in support of the Field Programme. In terms of numbers, 14 percent of projects were normative and 86 percent field programme.

Within the total number of water related projects (226), 52 projects have budgets above USD 2 million[13], for a total amount of USD 338 million (77 percent of the budget); 19 were emergency and 33 non–emergency projects. Emergency projects with budgets above USD 2 million were proportionately more in number than Technical Cooperation projects with similar budget (43 percent and 18 percent respectively).The average budget was slightly larger in the case of Technical Cooperation projects, USD 6.7 million against USD 6.0 million in the case of emergency interventions. Out of the 52 projects for which an evaluation is mandatory as an independent exercise or as part of a larger evaluation, according to FAO's evaluation policy, 29 have been evaluated in the past.

Major donors were the United Nations Development Group Office (UDG) in the case of emergency, FAO for TCPs by definition[14], and Italy as EB resource provider for Technical Cooperation. The UK Department for International Development (DfID) is an important donor to UN-Water, although this does not appear in FAO's information systems.

It appears that NRLW or FOM have been involved in the formulation and/or backstopping of most water-related projects. However, procedures and practice in the Organization for the set-up

[12] The total number of projects currently in operation by FAO is stated in the order of 1,500 excluding TeleFood projects. However the two figures cannot be fully compared as they refer to different time-frames.

[13] This is the budget threshold above which a project is subject to mandatory independent evaluation according to FAO policy, see Methodology.

[14] The TCP programme is funded exclusively through the FAO's Regular Budget.

and functioning of project task forces (PTF), resulted in approximately 50 initiatives with substantial water-related components, implemented without any consultation or involvement of NRLW. These were mostly emergency and Special Programme for Food Security interventions.

Last, as in other thematic and programme evaluations, the recurrent corporate problem in linking projects to the 'appropriate' programme entity in the PWB is at the basis of a possible oversight of relevant projects. The Evaluability Assessment checked the first list of projects with relevant units, however the possibility of a few gaps can never be excluded completely. This also entails that a number of projects linked to the 'water PE' had to be excluded as they did not include 'water activities' in their thrust.

2.5 Issues that emerged during the evaluability assessment

The issues described below have emerged during the first phase of the evaluation, through meetings with FAO stakeholders, research work in FAO's information systems, website and databases and a rapid analysis of official documents and previous evaluation reports. They have been captured in the list of areas to be assessed by the evaluation, presented in Section 5 of the ToR.

Following the analysis of the IEE summarized above, it appears that the evaluation should aim at a clear definition of the role of FAO on water, food and agriculture, by assessing the niche and the comparative advantage of FAO in the current global water institutional architecture.

To a certain extent, some lack of clarity and shared agreement about what FAO should do on water seems to exist also within the Organization itself, in relation to what should be its priorities and modalities of work, including the balance in NRLW between normative and operational focus. The evaluation should contribute to define better the thrust, the resources and the institutional mechanisms required for FAO to meet its corporate mandate and the needs of its membership, while building on its current and future comparative advantage.

Overall resources in FAO have been on a diminishing trend for many years now and this has affected the staff and non-staff resources from both the RP and EB sources: work on water has been affected as well. Both FOM and NRLW mentioned the impossibility of meeting all requests with the currently over-stretched human resources. This was confirmed by TCE and TCI, who consider that the well appreciated technical assistance by NRLW to their work in emergency and investment is very much affected by the limited human resources of NRLW at all levels. In the case of TCE, demand has been mostly for an irrigation engineer: the post in NR has been vacant for a few years, and the recruitment process was ongoing at the time of writing this document. TCE compensated the lack of expertise in FAO by re-assigning a field expert in one country to provide assistance to a project in another country. The example was also mentioned of the collaboration in the past between TCE and NRLW through the Oil-For-Food Programme in Iraq, whereby the programme contributed to the costs of an irrigation engineer in NRLW. Equally, obstacles to full collaboration between NRLW and TCOS seem to exist also due to NRLW over-stretched human resources.

These issues will require more in-depth analysis by the evaluation, based on evidence made available about requests and workloads. One of the tasks of the evaluation would be also to assess whether the 'water' area of work has suffered from budget cuts similar or different to the average for the Organization as a whole, as well as the evolution of EB resources for this area.

There is some evidence that NRLW has achieved a functional link between the normative and operational streams of work for the work under its full responsibility. The evaluation should include this into its assessment, along with the analysis of the existence of a feedback loop between the existing corporate knowledge on water-related matter and the work and experience of field projects and programmes. This may or may not be related to the absence of formal and substantive involvement of NRLW in a number of FAO field projects with water-related components which are managed by divisions in the TC Department.

There seems to be a demand for assistance which is not currently met. The main reason mentioned by those requesting support is the lack of human resources on the supply side. On the other side, it appears that the modality of the requests are incompatible with the management of a unit with a fixed number of staff, all with full work plans, in terms of lack of planning, urgency, scope and duration, etc. Contributing factors could be the corporate procedures or their interpretation for the set-up and running of project task forces and attribution of LTU responsibility. The evaluation should explore these aspects at length, in particular how they affect the quality of the field programme, if at all, and the efficient and effective us of resources available.

More at the normative level, collaboration between NRLW and some other units in the Organization appears positive overall, e.g. with AGNS and LEGN, although it appears there would be room for closer cooperation and synergy development with Fisheries, Agriculture and Climate Change. Collaboration between FOM and NRLW appears to be frequent and constructive at the level of international events, with presentations and side-events; it is more limited at the level of project backstopping, given the specificities of the "forest and water' theme.

The absence of a coordinated approach and institutional mechanism in FAO to deal with water, along the lines proposed to COAG in 2007, was mentioned as an obstacle. Also, there seems to be good room for improving collaboration with the Agriculture Department and with the Gender Unit in FAO, in particular taking into account the IFA's attention to scarcity and access issues. The evaluation should analyse these weaknesses and gaps, along with the ongoing organizational reform and the new PWB structure, and contribute to identify potential steps for improvement, including institutional mechanisms if necessary.

Technical areas that were mentioned as possibly requiring more attention were: transboundary water issues; the interface between freshwater management and fisheries resources; water-related adaptations to climate changes; water contamination, including from agriculture and livestock. Above all, the paramount challenges are water scarcity, access to it and its efficient use.

3. Purpose of the Evaluation

The evaluation will be forward-looking: its main purpose is to provide FAO's member countries and Secretariat with evidence- and lessons- based recommendations on the future role and scope of the Organization in its work related to water.

The evaluation will also provide accountability to FAO member countries and Secretariat about the Organization's performance and comparative advantage in this area of work.

4. Scope of the Evaluation

The evaluation defines 'FAO's role and work related to water' as all activities conducted by the Organization for the conservation, development and sustainable utilization of water resources for agricultural development, including the responses to global environmental challenges affecting food and agriculture. This definition excludes all work related to marine waters and all kind of fisheries resources, as well as any work that **does not relate** to the management and development of the water resource.

Within this definition, the evaluation will assess all the work by AG/NR-LW, the work by FOM on Forest and Water and watershed management, and the work by other units in the Organization on water resources, outlined in Section 2 above. It will comprise all activities funded through Regular Budget and EB resources, including normative products, development and rehabilitation projects, support to investment in agriculture and contribution to international processes on water. The detailed areas and issues that will be assessed through the evaluation are specified later in the ToR.

The period of analysis will be from 2004 up to ongoing and planned commitments. A longer-term perspective will be adopted, whenever relevant for understanding the context of the activity and trends for the future. This will be the case, for example, when analysing the contribution to long-term international processes and partnerships on water, as well as for projects that started before

2004 and were completed during this period, or that started only recently and open up new paths of action.

The evaluation will formulate its recommendations taking into full account the changing national and international demands in relation to water, food and agriculture, including the global drivers and crisis on energy and finance. Further, due attention will be given to the ongoing reform process in FAO and to the role and resources assigned to the water sector in the Organization in the strategic and planning documents under preparation.

5. Evaluation criteria, areas for assessment and issues

The evaluation will utilize for its assessment the standard OECD/DAC and UNEG criteria for evaluation as well as a few additional ones, listed below, applied as appropriate:

- relevance;
- efficiency;
- effectiveness;
- impact;
- technical quality;
- institutional and environmental sustainability; and
- contribution to gender equality and social inclusion.

For ease of analysis, the technical areas briefly described in Section 4 by unit, are listed within clusters here below:

I	**Policy, Legal and Economic**
A	Water policies and Strategies
B	Bringing potential (physical and economic) irrigable areas into production
C	Water law, legislation and regulations
D	Local water management institutions
E	Water management linked to water availability and scarcity, including agricultural withdrawals within river basin management (including associated (multi-purpose) storage and conveyance infrastructure)
F	Economic returns, water pricing, and cost recovery
II	**Water in Production Systems**
A	Land and water interactions (including reclamation of contaminated land)
B	On-farm water use, productivity and efficiency for agricultural production
C	Water and Food Security
D	Water and livestock
E	Fresh water management for aquaculture
III	**System Feasibility, Design and Technology**
A	Irrigation potential and new irrigation schemes
B	Rehabilitation and modernization of irrigation schemes
C	Groundwater irrigation
D	Water harvesting
E	Drainage and (de-)salinization
F	Non-conventional water use, notably water quality, waste water re-use, desalinized water and urban/peri-urban water use
IV	**Environmental**
A	Water and Forest and watershed management
B	Environmental services
C	Agriculture and wetlands interactions
D	Sustainability of agricultural water use in the context of competing water uses and climate change
E	Pollution from agriculture, including from pesticides, fertilizers and heavy metals, on ecosystems
F	Water and food safety
V	**Information Systems**
A	Water Information Systems, models and decision-support tools, including AQUASTAT and AQUACROP

The key aspects and issues to be assessed through the evaluation criteria and in relation to the technical areas are listed below.

A. FAO's role in water

a) FAO's mandate and visibility in meeting global, regional and national needs with respect to water, food and agriculture, among the relevant international organizations (IOs);
b) FAO's role and comparative advantage, actual and potential, as a knowledge organization and as a provider of policy and technical assistance in relation to water, food and agriculture, at the global, regional and national levels;
c) FAO's advocacy, guidance and leadership role at global, regional and national levels on water, food and agriculture;
d) FAO's clients and target groups in water, at global, regional and national levels, including their awareness and expectations about the Organization.

B. FAO's work in water

B.1 *Overall*:

a) Contribution of FAO's work on water to the Organization's Global Goals in the Strategic Framework 2000-2015, including in terms of scale and geographic balance;
b) Contribution of FAO's work on water to the Millennium Development Goals number 1, 3 and 7;
c) The strategic and technical priorities of FAO on water in the period under evaluation as expressed in the strategic and planning documents of the Organization, and the process and mechanisms for their identification;
d) Flexibility, adaptation and responsiveness of FAO to a changing context of social and economic and social issues around water (notably growth, employment, trade, securities, conflict avoidance and environment) and to emerging international crises;
e) FAO's response to member countries' needs and requests on water issues: process, modality and contents;
f) Monitoring and reporting by FAO to its membership on water related issues; and
g) Synergy, balance and feedback loops between normative and field programmes in FAO's work on water.

B.2 *Information and knowledge:*

a) Accessibility of FAO as global repository of knowledge on water, food and agriculture;
b) Global and specific technical, information and resource assessment products;
c) Quality control and assurance of products;
d) Demand for FAO's water related products;
e) Diffusion mechanisms of FAO's water related products;
f) Knowledge and use of FAO products on water by external clients at global, regional and national levels;
g) Knowledge and use of FAO products on water by FAO users for support to the field programme and to investment initiatives; and
h) Source, extent and quality of contributions on water, food and agriculture to FAO and other organizations' flagship publications.

B.3 *Policy and technical assistance:*

a) Policy and technical assistance to regional, international and transboundary processes on water, food and agriculture;
b) Policy and technical assistance at the national level on water, food and agriculture, through the Technical Cooperation and Emergency field programme, as well as through investment projects; and

c) Development of regional and national capacities on policy and technical aspects related to water, food and agriculture.

C. *Partnerships and alliances:*

a) Partnerships with international, regional and national organizations on water-related themes, including assessment of the rationale for selection, purposes, added-value and sustainability;
b) FAO's role in UN-Water, including resources allocated and specific products;
c) Collaboration with the CGIAR system; and
d) Transaction costs and resources for partnerships and alliances.

D. *Organizational set-up for water:*

a) Roles and responsibilities on water within FAO, extent of collaboration among units, strengths and weaknesses, gaps and areas for improvement;
b) NRLW as 'Water focal point' in FAO for initiatives managed by other units;
c) Work planning mechanisms, including volume and origin of unplanned requests;
d) Mechanisms and resources for inter- and intra-departmental and multidisciplinary collaboration on water;
e) Links, collaboration and synergies between headquarters and the decentralized structure for NRLW and other units in relation to water; and
f) Mechanisms of collaboration with and integration of embedded arrangements (e.g. IPTRID) in the 'water structure' of FAO.

E. *Resources and financing*

a) Past and current programme entities and allocations of staff and non-staff resources to water issues;
b) Competencies and mix of staff, work loads for NRLW and other units on water related issues;
c) Sources and patterns of funding across modalities (Technical Cooperation, emergency, Regular Budget, TCP, EBF, etc) for work on water;
d) Resource planning modality and fund raising strategy; and
e) Assessment of desirable resources and foreseeable sources.

F. *Focus on specific aspects and issues:*

The expert panel at its 1st meeting in June 2009 stated that the "the current draft of ToR of evaluation was so comprehensive that it is difficult for the panel of experts to pinpoint focus of evaluation vis-à-vis expectations from Management and the Programme Committee".

Nevertheless, the expert panel has stressed the importance of certain aspects and issues for the evaluation, which will be given particular attention during the evaluation process:

i) the recommendations of the Independent External Evaluation of FAO on the water sector;
ii) the work and role of FAO through partnerships and alliances with other organizations;
iii) the evaluation's conclusions and recommendations should be formulated taking into due account the evidence and lessons stemming for the past work and the challenges and opportunities represented by the FAO's reform process, the current global issues, both as challenges and opportunities and the relevant projections for the future;
iv) the evaluation should focus on the larger lessons learned, rather than on specific project details, in respect of FAO's evaluation policy;
v) the evaluation should pay due attention to gender equality and social inclusion in FAO's work, including aspects such as empowerment, Gender and Water, mainstreaming of a gender approach in FAO's projects and normative products, etc.;
vi) trends over time in the allocation of EB and RP resources to the water sector in FAO, across modalities of delivery;

vii) drivers for interventions by donors and ownership at the recipient country level;
viii) the critical mass of water expertise in FAO, its geographical distribution and mix in the decentralized structure, to respond to needs and allow a pro-active role by the Organization in this area;
ix) how FAO responds to emerging issues in the water sector;
x) perspectives within AQUASTAT for overcoming the paucity of data at country level;
xi) regional differences in needs, requests and assistance provided in water-related interventions;
xii) the evolution of the focus and resources to the water sector in FAO, across the past and future strategic and planning documents;
xiii) the analysis of the strengths and weaknesses of interdepartmental working groups and similar mechanisms as an opportunity for the water sector in FAO to become a cross-cutting entity, including incentives for internal cooperation;
xiv) the actual and potential role of a people-centred approach, e.g. food security and the Special programme for Food Security, in FAO's work related to water;
xv) priority areas of assessment should be: water policies and strategies; water control and management; water productivity and efficient management; water and land sustainable management; transboundary water management; and
xvi) existence of any link at national level between food security and water security policies, plans and programmes.

The evaluation team will be free to add any other aspect or activity that may appear as relevant during its assessment.

6. Evaluation approach and methodology

6.1 Roles and responsibilities

The FAO Evaluation Service is accountable to the FAO Secretariat and member countries for managing the evaluation and delivering the evaluation report within time-schedule. It is also responsible for drafting the terms of reference of the evaluation, of the individual team members and of the expert panel; for selection and recruitment of the team members and for organizing the expert panel. The service also has a quality assurance role on the final report, in terms of presentation, compliance with the ToRs, timely delivery, quality of the evidence and analysis done.

The evaluation team is responsible vis-à-vis the FAO Evaluation Service for the technical and substantive contents of the evaluation. More specifically, the team leader contributes to drafting the terms of reference and specific tools for the evaluation, guides and coordinates the team members in their specific assessment work, discusses their findings, conclusions and recommendations and prepares the final draft and the final report, with inputs from the team members. The team members participate in briefing meetings, discussions, preparation of evaluation tools, contribute to the evaluation following their individual terms of reference and contribute with written inputs to the final draft and final report.

The expert panel is an integral part of the evaluation process, with an advisory role aimed at enhancing the quality of the evaluation. In the early stages of the process, the panel has an advisory role for the finalization of the evaluation's scope and methodology. The present final version of the ToR integrates the recommendations and suggestions of the expert panel. At the end of the evaluation process, the panel reviews the final draft report and formulates comments and suggestions for its finalization. The panel will appoint its chair from among its members.

The FAO Secretariat contributes to the evaluation by providing information and documents and by participating in interviews and meetings with the evaluation team and through comments and suggestions on the evaluation terms of reference and the final draft report. It prepares a management response to the final evaluation report, in which it expresses its overall judgment of

the evaluation process and report and accepts, partially accepts or rejects each recommendation. For accepted recommendations, responsibilities and timetable for implementation are also indicated; for rejected recommendations, a justification should be provided.

6.2 Methodology

The evaluation will adopt a participatory approach, seeking and sharing opinions with stakeholders at different points in time and assessing FAO's role and work also from the point of view of clients and users of its products and services and of its partners. Triangulation by evaluation team members of information across stakeholders will be a key tool for the validation of evidence gathered. In addition, the team members will apply their own technical judgment in the assessment of, for example, the quality of normative, project and process outputs. Independence and rigour of analysis will underpin the whole evaluation process.

Stakeholders will include:

- FAO staff in HQ and at the decentralized offices;
- Staff of governments and relevant institutions in member countries, at decision-making and at implementation level;
- UN organizations, International Financial Institutions, CGIAR members, international NGOs; and
- National NGOs and civil society organizations, and ultimate beneficiaries as relevant.

The evaluation will use a wide range of quantitative and qualitative tools and methods, including stakeholder consultation through workshops, group and individual semi-structured interviews; check lists; surveys; analysis of publications, guidelines and manuals, databases, etc.; desk studies and country visits. The evaluation team will choose the methods and tools most suitable and effective to tackle the evaluation issues and questions. An evaluation matrix will be prepared in draft format and finalized after the first expert panel meeting, relating issues and questions to methods and tools, indicators and sources of information.

The Sustainable Livelihoods Framework[15] will be used as the reference for assessing contributions to poverty alleviation, gender mainstreaming, social and economic changes, environmental sustainability, etc. The Strengths, Weaknesses, Opportunities and Threats (SWOT) framework will be one major analytical tool for assessment of programme results[16].

The evaluation team will visit a sample of countries, to assess the profile of FAO on water-related issues among national stakeholders, the field programme and the use of some selected normative products. Visits will be carried out to some FAO Regional and/or Subregional Offices. Contacts will be made in the visited countries with all relevant national and international institutions, as appropriate.

The main criterion for the selection of the countries to be visited will be the concentration of work, funded through RB or EB resources and the number and size of projects that should be evaluated, as per FAO evaluation policy[17]. Countries hosting an FAO Regional or a Subregional Office will be included in so far as relevant and possible in the sample. The projects to be assessed directly will be selected depending on their state of progress, representativeness, travel

[15] The Sustainable Livelihoods Framework identifies five different capitals (human, social, natural, financial, and physical), each including different assets. It helps in improving understanding of livelihoods, in particular of the poor. For more information, among others: http://www.livelihoods.org/info/guidance_sheets_pdfs/section2.pdf

[16] SWOT is a widely used strategic planning tool, useful also in analysis of projects and interventions, to assess their strengths and weaknesses and perspectives in the future. It is particularly used in focus group, but it can be adapted to individual interviews as well.

[17] The Charter for the Office of Evaluation (May 2009) states that all projects with a budget above USD 4 million should be evaluated independently once in their lifetime; all projects with a budget between USD 2 and USD 4 million can be evaluated through a thematic or country evaluation. In addition, Technical Cooperation projects (TCPs) are also evaluated through thematic or country evaluations.

arrangements, and cost and time constraints. Country visits will offer also the opportunity to canvass the opinion of national stakeholders at the different levels, on the whole of FAO's work related to water, including its normative products.

All national TCPs (projects under the Technical Cooperation Programme) and projects with a budget above USD 4 million in the countries selected for a team visit will be assessed in detail; a brief separate report for each will be prepared, following a specific outline[18], to be presented as an annex of the main evaluation report. All other relevant projects in the sample countries will be assessed in terms of their overall relevance and contribution to the country's development goals in the water sector and for any specific issue that may arise in the discussions at country level with key stakeholders.

The TCPs with water-related components in countries not visited by the team, will be assessed through a desk review, aimed mainly at drawing conclusions on their area of focus, role as delivery tool of FAO's technical knowledge and as leveraging instruments for other funds and modalities of support.

The opinion of government stakeholders and other national and international institutions in countries that will not be visited directly by the evaluation team will be captured through one or more surveys, based on questionnaires circulated on-line or by email. The possibility of using pre-existing mailing lists (e.g. L-Water) will be explored, to reach a larger number of informants and users of FAO's water-related products. Furthermore, arrangements will be set-up to allow interaction with NRLW and other FAO units' staff in the non–visited decentralized offices.

Individual terms of reference will be prepared for each team member, indicating areas of technical expertise and specific evaluation issues. Further the evaluation team members will have an internal briefing session, to allow all team members to have access to information on FAO as a global organization, on evaluation methods and approaches and on their respective tasks in the team.

At the end of the data and evidence-gathering phase, the evaluation team will present and discuss its preliminary results and recommendations in a debriefing session with key stakeholders in FAO HQ.

The following outputs will be prepared by the Evaluation Service as background material on a CD-ROM for the evaluation team:

- Background information on FAO and the evaluation function in FAO;
- The inventory of water-related FAO normative products issued since 2001;
- The inventory of water-related projects implemented by FAO since 2004;
- Project documents and reports for all the projects in the sample countries, all non-evaluated projects with budget above USD 2 million, all TCPs and other most significant projects;
- Evaluation reports for water-related projects already evaluated and a synthesis of their findings and conclusions;
- The Code of Conduct and Ethical Guidelines for Evaluators, adopted by the United Nations Evaluation group and subscribed by FAO Evaluation Service (PBEE);
- The document "Principles and considerations for the respective responsibilities and working relationships of Evaluation Service Staff acting as evaluation managers and for evaluation team leaders on major evaluations, including corporate evaluations"; and
- Other documents that may be of interest.

[18] The outline includes: Background (not scored); Relevance; Design; Implementation; Results/effects; Sustainability and impact; Effectiveness of capacity building; Effectiveness of partnerships; Effectiveness of participation; Gender mainstreaming. Each criterion will have to be scored on a six-point scale

All main outputs of the evaluation, in particular the ToR and the final draft report will be circulated among FAO stakeholders and to the expert panel members, for comments and suggestions.

6.3 The Evaluation Report

The evaluation report will illustrate the evidence found responding to the evaluation issues and meeting the evaluation criteria, namely relevance, effectiveness, efficiency, quality, impact, sustainability, gender equity and social inclusion of the work conducted during the evaluation period. The report will be as clear and concise as possible, will focus on findings, conclusions and recommendations and include an executive summary. Supporting data and analysis should be annexed to the report when considered important to complement the main report and for future reference.

The structure of the report should facilitate in so far as possible the links between body of evidence, analysis and formulation of recommendations, that will be addressed to the different stakeholders: they may be strategic and operational and will have to be evidence-based, relevant, focused, clearly formulated and actionable.

The evaluation team leader and the team will agree on the outline of the report early in the evaluation process. The report will be prepared in English, with numbered paragraphs.

7. Organization of the Evaluation

7.1 Operational aspects

The first step in the evaluation process was the Evaluability Assessment, conducted by PBEE with the collaboration in its final phase of the evaluation team leader. It produced the current terms of reference. This phase of work included discussions with staff in FAO HQ, a desk review of relevant evaluation reports, of the Medium-Term Plans (MTP) and Programmes of Work and Budget (PWB) and of FAO Field Programme Management System (FPMIS), and the compilation of all FAO's normative products related to water since 2001. The Evaluability Assessment also allowed progressing in the identification of a number of evaluation issues, on the selection of the countries and projects to be visited, the identification of the evaluation team members and of the key stakeholders and all the subsequent steps of the evaluation process.

In particular, the following documents were made available:

- the evaluation matrix, illustrating issues, evaluation criteria, indicators, sources of information and methods; and
- the list of countries and projects that will be assessed directly by the evaluation team: tentatively, the sample will include Armenia, Afghanistan or China, Egypt, Ghana, Malawi, Mali, Morocco, Saudi Arabia, Thailand and Turkey.

A list of internal and external stakeholders whose opinions should be canvassed by the evaluation team will be circulated to FAO concerned units for suggestions and contacts. Tentatively, it will include:

- FAO staff in HQ and at the decentralized offices, from NRLW and other units responsible for water-related work;
- Staff of governments and relevant institutions in member countries, at decision-making and implementation level;
- UN-Water partners, International and national NGOs, CGIAR members, International Financial Institutions and other international stakeholders in the water sector; and
- Project staff and consultants.

The evaluation in the past of water projects, conducted as single project evaluation or in the framework of country, thematic and major emergency operation evaluations, will constitute the evidence already available for the assessment of 29 projects, implemented by NRLW, TCE and TCOS. Whenever available, information stemming from project monitoring systems will also be taken in due account.

In particular, water-related work has been evaluated in the framework of the following major evaluations:

- the Evaluation of FAO's work in Tajikistan (ongoing);
- Evaluation of FAO cooperation with India 2003-2008 (2009);
- Evaluation of the FAO response to the Pakistan earthquake (2009);
- Evaluation of FAO's role and work in statistics (2008);
- Evaluation of FAO activities in the Democratic Republic of Congo 2003-2007 (2008);
- Independent External Evaluation of FAO (2007);
- Evaluation of FAO's Emergency and Rehabilitation Assistance in the Greater Horn of Africa 2004-2007;
- Real-Time Evaluation of the FAO emergency and rehabilitation operation in response to the Indian Ocean Earthquake and Tsunami (2006-2007);
- the Evaluation of FAO activities in Cambodia (2002-2007);
- the Evaluation of FAO activities in Mozambique (2001-2005); and
- the Evaluation of Strategic Objective D2, Conservation, Rehabilitation and Development of Environments at Greatest Risk.

Further, NRLW and FOM conducted two and one auto-evaluation respectively, whose reports also are available. information on previous evaluations was made available on a project by project basis and PBEE will prepare a synthesis of all relevant evaluation reports, highlighting water-related findings and conclusions.

The evaluation team will consider the possibility of conducting an institutional mapping analysis, to define FAO's future desirable role at the global level, based on its mandate and comparative advantage in the different areas of water related work.

7.2 Composition and Profile of the Evaluation Team

The evaluation will be led by a senior external consultant, supported by a multidisciplinary team of external consultants. Gender equity and geographical balance were pursued in so far as possible in the team composition, to ensure diversity of perspectives.

The evaluation team will bring together the following areas of expertise:

- 'Water and Development", at the policy and technical levels, in particular in relation to water, food and agriculture;
- global processes and partnerships on water, including conventions and treaties;
- watershed management and water in forest issues;
- environmental aspects related to water, including water quality issues, water issues in a context of climate changes, inland freshwater ecology;
- irrigation engineering and operations, irrigation maintenance systems, drainage, etc.;
- water scarcity, water use efficiency and productivity;
- water and irrigation management institutions and organizations;
- gender and social development issues in water management;
- investment programmes in water-related areas;
- emergency interventions;
- capacity development;
- information systems; and
- institutional and management issues.

Within the thematic areas of specialization, the team as a whole also will have experience and competence in the areas of capacity building, normative work and field programme activities, including interventions in emergency context and support to investment programmes.

The FAO Evaluation Service will assist the evaluation team through the evaluation manager, who will provide information and guidance on issues relating to FAO structure, working mechanisms and procedures, project and programme management and evaluation methodology and will be a

full-time member of the evaluation team. A research assistant in PBEE will collaborate through desk studies, survey management and preparation of synthesis documents.

7.3 Composition of the Expert Panel

The expert panel was to be composed of representatives of international organizations, and of experts in their personal capacity. The following organizations were invited to participate in the expert panel: Asian Development Bank, ESCAP, Gender and Water Alliance, ICIMOD, IFAD, IUCN, IWMI, NEPAD/CAADP, SIWI, UNEP, UNESCO and World Bank. Organizations unable to attend were the Asian Development Bank, IUCN, UNESCO and the World Bank.

7.4 Evaluation Time Schedule

The evaluation work will be organized as per the timetable below. The detailed work-schedule including travel destinations outside FAO HQ will be defined and agreed by the end of June 2009.

1. March-early May 2009: Evaluability Assessment;
2. Mid-May 2009: circulation for comments of the draft ToR;
3. Second half of June: briefing of the evaluation team in FAO HQ; evaluation expert panel (17-19 June); finalization of the ToR and of the evaluation design; preparation of questionnaire/s for survey/s and recipients, detailed plan of work and country visits;
4. July-August 2009: data gathering, telephone interviews, analysis of documentation, analysis of survey results;
5. September – October 2009: missions to countries, institutions and FAO HQ; debriefing in FAO HQ;
6. October-November 2009: report writing;
7. 9 November 2009: circulation to stakeholders of the final draft report;
8. 1-3 December 2009: 2nd meeting of the expert panel;
9. 11 December 2009: circulation of the final report;
10. December 2009-January 2010: preparation by FAO Secretariat of the Management Response to the evaluation;
11. January 2010: translation of the report for the Programme Committee;
12. Spring 2010: presentation of the evaluation report and of the Management Response to the Programme Committee of FAO.

ANNEX 2: REPORT OF THE EXPERT PANEL OF THE EVALUATION OF FAO'S ROLE AND WORK RELATED TO WATER

(Annex 3 of final report)

Expert Panel Members in FAO HQ:

Audrey Nepveu de Villemarceau (IFAD)

Esther de Jong (Gender and Water Alliance)

Jan Lundqvist (SIWI)

William Cosgrove (Independent consultant)

Expert Panel Members to be reached by phone:

Pay Drechsel (IWMI)

Mats Eriksson (ICIMOD)

Henrik Larsen (UNEP)

Evaluation Team

Chris Perry (Water Economics Expert)

Tullia Aiazzi (FAO Evaluation Service, Evaluation Manager)

The panel considered the report near-final. Therefore, it would not be making far-reaching suggestions, but indicating specific amendments for finalization and giving opinions on the report. These will be outlined according the points set out in the panel's terms of reference (Appendix 1).

A. With regard to the logical structure, the relevance and the quality of the evidence-based findings and the conclusions provided in the final evaluation report

The evaluation report is overall of good quality, well formatted and easy to read, and clearly presents the information retrieved and the conclusions reached. Nevertheless, the panel of experts feels that the present executive summary does not do justice to it. Considering that the executive summary is likely to be the main – if not the only – document read by delegates, it is essential that additional efforts are put to improve its accuracy and readability.

While a number of sections of the text throughout the report describe normative products produced, the present structure of the report induces the reader to think that these sections are only mentioned in so far as they support FAO activities on technical assistance, policy assistance and information sharing. Considering the wealth of information retrieved, the evaluation team could have made an overall assessment of this core function of FAO water. These points are all the more valid with regards to the advocacy function of FAO.

Although capacity building features clearly in FAO activities and many examples are given in the report (see also FAO website), the expert panel feels that more justice could be done to the efforts implemented beyond Section 7.4, in particular in the executive summary.

It is good that recommendations are addressed to different units within the Organization.

The evaluation matrix (Annex 6 of full report)provides an indication of which evaluation criteria was relevant to which evaluation questions. An explanation of how this was applied would be beneficial within the report/methodology section.

B. With regard to the extent to which the recommendations are firmly based on evidence and analysis, are relevant and realistic, with priorities for action made clear

The evaluation shows clearly that from the assessment criteria used in the evaluation, the one on social inclusion and gender equality is poor throughout "Water at FAO" (except for a few exceptions). Therefore the expert panel is of the opinion that recommendations addressing the lack of performance in these issues should be part of the Foremost Recommendations.

The panel of experts suggests a new formulation of Recommendation 1, as it should convey a clear message. If this suggestion is not found acceptable the panel of experts recommends that a clear, alternative mission statement is set for the water platform on the basis of the concept suggested below:

- Food security is a prime objective in the work of FAO. To realize this objective, FAO should strengthen the efforts to ensure that the policies, management and use of water and land resources are coordinated to the extent necessary and feasible. The purpose must be to improve and stabilize the productivity in the use of these resources in a long-term perspective, i.e. to meet an expected increase in demand for food and other goods and services from the agricultural sector. This can only be achieved by taking the different capabilities of women, men and youth into account. Special attention must be paid to the inclusion of poor and vulnerable groups. This approach should be the basis of the design of the technical, financial and institutional arrangements.

The report shows that FAO is below critical mass of staff for both the water-related normative work and field programme. A recommendation to provide adequate human and financial resources to correct this problem should be addressed among the Foremost Recommendations of the report.

In the section supporting Recommendations 34 and 35[19] indicating ADG of NR Department as the relevant champion for a water platform, there is little presentation of the analysis done to reach such a conclusion. Possible alternative solutions that could have been considered and discarded are not mentioned, and possible overlap of the proposed FAO water platform with the initial mandate of the NR Department (see para 33 http://www.fao.org/uploads/media/WG1WG3ReportOrganizationalStructure9Sept_1.pdf) does not seem to have been looked into. This weakens the strength of the proposal made.

To be effective, the proposed Water Platform should have the following characteristics:

a) The authority of ADGs themselves (no delegation) to jointly take decisions binding all parties in FAO-Water must be recognized.
b) The Platform under their authority should develop an overall goal and set priorities to achieve it which provides a framework for programme development and allocation of resources paying particular attention to the impact focus areas.
c) The evaluation leaves it to "Water at FAO" to decide on the priorities of the area's of work. The expert panel agrees to that, but advises to focus on the complementarities between water – land – people as mentioned in Recommendation 1, as this is where FAO has its comparative advantage. Internal responses to the recommendations of the evaluation report should focus on those recognizing the essential interaction of water, land and people.
d) The Platform should monitor performance (progress towards results and application of resources) and assure quality control for programmes within their domain.

[19] Recommendations 33 and 34 in final report

Recommendation 31[20] calls for an increase in human resources in many fields which probably is unrealistic, without setting priorities. It would have been preferable if priorities had been set. This should now be dealt with by the Water Platform (see above).

The evaluation team was not able to capture human and financial resources mobilized for a given result, making it impossible to either judge the efficiency of effort or fully valuate performance. Evaluation, and more importantly proper management, requires a results-based management approach that includes a clear statement of results/outputs, intermediate outcomes and long-term impacts to be expected, the criteria by which these are to be measured, the resources to be applied, a time recording system and regular reporting on the use of time and financial resources applied to a programme. Such a system also will permit an informed judgment of whether the results of new proposals can be achieved with the resources available. The evaluation unit could support this work by monitoring the impact pathway of FAO projects beyond their life time through related tools and procedures to see if the outcomes have been achieved.

The evaluation report in several places makes reference to rapidly changing external factors that will affect the availability of, use of, and competition for resources. These external factors include climate change, population and economic growth, migration patterns (esp. rural-urban), land use change, technological developments, evolving energy requirements, financial turmoil, evolution of the global economic and trade regimes and environmental degradation. To enable FAO to give advice on measures to deal with the risks and uncertainties these factors may create, a foresight programme assessing the impacts of these changes on water in different regions should be developed, perhaps in coordination with those in ESA who prepare the Global Perspectives.

With regard to references to the context of FAO water work, more emphasis could be put on the essential role of fisheries for food security, livelihoods of the poor and diversified resource uses. This would in turn clarify the strategic position taken for FAO water to complement and support the needs related to fisheries, for instance supporting aquaculture or conserving water quality.

The assessment and conclusions on gender and social inclusion in the report are relevant, logical and of good quality. Paragraph 514[21] states “there is no clarity as yet within FAO’s work on water about two key concepts: “what is gender mainstreaming” and “who should be responsible for gender mainstreaming”.” The recommendations formulated in the report are valid and need to be taken seriously. However, the panel is not convinced that these will be enough to improve the performance up to the required level:

- The combination of lack of knowledge, will and human resources to adequately mainstream gender and social inclusion into FAO’s work on water seem to require more efforts than the ones already mentioned in the report. Suggestions are: capacity building of staff on gender and social inclusions issues, a stronger mandate for the PPRC (or its successor) not to approve projects or programmes unless gender and social inclusion are properly taken into consideration (a stronger mandate than Recommendation 22 has right now), improve the current GFP system by allocating sufficient time to do the work as well as appointing staff at higher level to this position, understand why there is resistance to mainstream gender and addressing these reasons, etc.

The reporting on water use and resources is carried out by AQUASTAT at national, regional and basin levels. Their contacts at these levels and expertise in the water sector make them ideally equipped to contribute the national level data to UNSD (New York) if they establish a global national water accounting system as is currently being discussed.

[20] Recommendation 30 in final report

[21] Paragraph 530 in final report

Specific comments

There has been a big improvement in the clarity of the recommendations since the previous version of the report. However, they are in many cases maybe a bit too general, and therefore difficult to address. Examples of recommendations that are quite general are for instance nos. 5, 6 and 9[22]. More detailed guidance could facilitate the uptake of the recommendations.

The panel of experts found Recommendation 26[23] over-ambitious and suggests to leave "all the donors" out.

In Recommendation 30[24] the current two bullets, d) and e) may be reformulated and merged into one bullet:

- Insofar as possible, at least two officers, one or more of each discipline, should be located in FAO decentralized offices to properly deal with issues related to the management of water and land resources, jointly and separately, to ensure synergies and to implement strategies to enhance productivity of water and land resources.

It is suggested to "bridge" the message in para 257[25] to the definition of efficiency and productivity in paras 258-260[26]. As it is now, the formulation in para 257 refers to rainfed systems, whereas the discussions in paras 258-260 refer to irrigation systems. This can be done by adding a couple of sentences in paras 258 and 260:

- … It is essential to develop methodologies that will make it possible to estimate the efficiency/productivity in the capturing and use of the entire (potential) water resource, i.e. water in rainfed systems, supplementary irrigation, etc. It seems relevant and important for FAO and in a general sense to develop the concept of "the efficiency of the rains" (similar) and also a methodology that will make it possible to calculate efficiency/productivity in this wider perspective. Similarly, it is important to develop a conceptual and methodological basis for calculations of the productivity of land and water resources jointly (if that is possible??).

With regards to para 278[27], it is suggested to include a sentence about the need to consider price increase of inputs in food production (and, probably transport). In the current version, the food price increase is mentioned. Everything else the same, this could be good for the farmer. The key problem, however, is (and will be) the price increase of inputs that the farmers need and for which the poor farmers will have to pay the full price in the absence of subsidies. Faced with a high level of risk and uncertainty (due to climatic variability among other things) the price hike on inputs is devastating for many farmers and, indirectly, for increase in food production among the groups of farmers who most badly need to increase production and productivity.

C. With regard to the extent to which the report makes the information accessible and comprehensible

The report in general makes the information accessible and understandable (although there may be a few exceptions noted in the detailed comments listed above or communicated directly to the evaluation team).

[22] Recommendation 11 in final report

[23] Recommendation 25 in final report

[24] Recommendation 29 in final report

[25] Paragraph 270 in final report

[26] Paragraphs 284-285 in final report

[27] Paragraph 306 in final report

D. With regard to the transparency, rigour and inclusiveness of the evaluation process

The expert panel found the variety in the composition of the panel useful, in particular for good insights into the complexity of FAO. However, the regional representation should be strengthened.

The timing of the evaluation was perceived as not very convenient as the structure of FAO changed as of 1 January 2010. This made it difficult to target recommendations as some structures did not exist yet at the time of the evaluation and others ceased to exist. This also complicated the assessment of the recommendations by the expert panel.

The panel met timely in June 2009 for the revision of the ToRs, although there was no room for major changes as the team was already selected and would start working on the following day. The choice of members of the evaluation team was appropriate to reflect the disciplines required. Even so, it is recommended that a panel of experts contribute to the ToR of the evaluation before the evaluation team composition is finalized.

The sources of information and the people met at HQ and in the field were appropriate. However, some of the quantitative information required simply was not available (para 119[28]), and it was impossible for the evaluation team to fulfil part of its terms of reference. Such shortcomings could be overcome following the panel's recommendation on RBM.

It appears that the evaluation team has properly analysed the information available to them and drawn appropriate conclusions.

It was deemed useful and worthwhile for the panel to meet prior to the evaluation team starting its work, and after the first draft was ready as well as after the final draft was presented. This clearly increased the value its contribution and enabled a more qualitative input in the second and third meeting, because the panel had already familiarized itself with FAO, as well as built a team.

It is positive as well as negative that the panel convened at the dates it has.

Positive: (i) the second meeting provided the possibility to provide guidance for the final draft; (ii) it served the purpose of defusing the situation with the stakeholders - however, that may not be the role of a panel of experts; and (iii) the third meeting made it possible to give comments of a different hierarchy on the final draft of the report.

Negative: the second meeting came too early and should have come after collecting internal comments and producing the next draft. This would have made the second meeting superfluous. It would be the best use of the panel's time to comment on the draft at a stage where it can still be properly amended. It would also have been appropriate that the final evaluation report address stakeholders' comments before being submitted to the panel of experts.

As far as the panel understood, the roles and division of work - including writing and editing - of the evaluation unit vis-à-vis the evaluation team were not clear and not very well described and communicated to the panel. After the first meeting of the expert panel, most of the members were under the impression that the FAO Evaluation Office only had a facilitating role, while the evaluation would rest entirely on the consultant team in order to ensure objective and non-biased views. However, at the second panel meeting, it became clear that the Evaluation Office also had an active role in the evaluation. Thus, the roles and responsibilities between the FAO Evaluation Office and the consultancy team have not been entirely transparent and clear to all panel members. This should have been explained earlier in the process.

[28] Paragraph 128 in final report

Appendix 1 - Terms of Reference for the Expert Panel

1. The expert panel has the role of guidance and advisor and is an **integral part of the evaluation process**.

2. The first meeting of the panel (17-19 June 2009) was convened to review the terms of reference (ToR) of the evaluation and contribute to the finalization of the evaluation's scope and methodology. The panel met with key stakeholders in the Organization, and had the opportunity to interact with FAO senior managers about their views on FAO's work related to water, its mandate and comparative advantage, strengths, weaknesses and gaps in past performance and major challenges ahead. Based on the knowledge, experience and institutional role of its members, the panel provided its observations and comments in a brief report and its suggestions were integrated into the final version of the evaluation's ToR.

3. The expert panel's objective, at its second meeting (2-4 December 2009), was to provide guidance to the evaluation team for finalizing the report. Panel members were asked to carefully review the draft working report of the team and provide views and inputs to the finalization process. In addition, the report had been circulated for comments among FAO stakeholders, and those received prior to the meeting were made available to the panel, with an initial response from the evaluation team. The panel had the opportunity to meet with key stakeholders in the Organization, hear their views and concerns, and hear clarifications of any outstanding issues.

4. Based on the knowledge, experience and institutional role of its members the panel provided its observations and comments in a brief report and its suggestions were integrated into the final evaluation report. The panel will be provided with a matrix, in which the evaluation team outlined the actions taken on each comment.

The Third Meeting of the Expert Panel

5. The panel, based on the knowledge, experience and institutional role of its members, is asked to provide its overall and final opinion on the quality of the evaluation process and the evaluation report.

6. In particular, in its final report the panel should comment on[29]:

1. The logical structure, the relevance and the quality of the evidence-based findings and conclusions provided in the final evaluation report;
2. The extent to which the recommendations are firmly based on evidence and analysis, are relevant and realistic, with priorities for action made clear; if the case, the panel should indicate recommendations that it disagrees with, and the reasons why;
3. The extent to which the report makes the information accessible and comprehensible; and
4. The transparency, rigour and inclusiveness of the evaluation process.

7. The panel will provide its observations and comments in a brief report, to be presented for discussion on the morning of Wednesday 3 February 2010. The report will be finalized as soon as possible by the panel and will become an annex to the final evaluation report.

8. To facilitate its task, it is suggested that on Monday morning, the panel should select a Chairperson and a rapporteur, from among panel members. The FAO Office of Evaluation will assist the whole process.

[29] Based on UNEG standards for evaluation