

ANNEX C - Project Workplan for Flood and Drought Management Tools Project																			
Project objective: improve the ability of land, water and urban area managers operating in transboundary river basins to recognize and address, as part of the TDA-SAP, IWRM plans and water safety plan processes, the implications of flood and drought events																			
Number	Activity	Outputs	Inputs	2014		2015				2016				2017				2018	
				Year 1				Year 2				Year 3				Year 4			
				1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Component 0	Preparation and Inception activities																		
Outcome 0.1	Enhanced focus and effectiveness of final project design achieved through the assessment of current practices in addressing flood and drought impacts as part of planning processes in transboundary basins, including the TDA-SAP process																		
Output 0.1.1	Reports containing review of GEF portfolio, case studies, mapping and assessment of current decision making processes, highlighting strengths, weaknesses and any gaps identified (including those related to data and information)																		
Outcome 0.2	Identification during project preparation of three transboundary basins for participatory development and pilot testing of the new methodology and tools, ensures timely inception and smooth project implementation																		
Output 0.2.1	Selection of three pilot basins and 1-2 learning basins based on a review of all river/lake basins object of foundational GEF IW projects including the TDA-SAP process																		
Activity 1	Stakeholder consultations in each pilot (3 basins) and learning basins (2 basins) to provide awareness of the project, provide further input, and verify the methodology so it is relevant for end users	Inception report																	
Task 1	Identify 15-30 participants to participate in each stakeholder consultation, which will be a mix of focus groups and key informant interviews	Participant list and invitations to consultations	Staff																
Task 2	Organize meetings in each pilot basin with relevant stakeholders, if possible in conjunction with planned events (e.g. IWA conferences). There will be an emphasis on identifying existing flood and drought planning and response processes to identify gaps that the DSS can address	Stakeholder meeting reports with verification of generic methodology	Staff, travel costs, meeting costs																
Task 3	During stakeholder consultations identify impacts on vulnerable groups affected by water related shocks	Included in inception report	Staff																
Task 4	Summarize discussions in stakeholders consultations into a report which provide end user verification and additional guidance to floods and drought methodology	Meeting report with verification of generic methodology	Staff																

Number	Activity	Outputs	Inputs	2014	2015				2016				2017				2018		
				Year 1				Year 2				Year 3				Year 4			
				1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Output 0.2.1	Selection of three pilot basins and two learning basins based on a review of all river/lake basins object of foundational GEF IW projects including the TDA-SAP process																		
Activity 2	Development of planning approach for integration of flood and drought components for DSS systems - DHI	Inception report																	
Task 1	Describe impacts/issues/consequences of floods and droughts in a transboundary basin context (what are the problems to be solved)	See below	Staff																
Task 2	Identify flood and drought indices (indications that there is a problem), the means these can be monitored or predicted, and the data and analytical tools required	See below	Staff																
Task 3	Outline a planning approach, which can accommodate flood and drought situations considering technical, economic and environmental aspects (including risks and consequences)	See below	Staff																
Task 4	Prepare a description of overall planning approach for application of the flood and drought DSS components for use at stakeholder consultations	Report on overall methodology	Staff																
Output 0.2.2	Project inception with the participation of GEF Project Agencies and of Pilot Basin representatives																		
Activity 3	Convening key stakeholders to participate in inception meeting and project steering committee - IWA	Inception report																	
Task 1	Preparation of inception meeting agenda and organization of logistics	Agenda	Staff, travel costs, meeting costs																
Task 2	Preparation of material for participants	workplan and inception report draft	Staff																

Number	Activity	Outputs	Inputs	2014	2015				2016				2017				2018		
				Year 1				Year 2				Year 3				Year 4			
				1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Component 1	Development of methodology and tools																		
Outcome 1.1	Methodologies with tools aimed at increasing understanding of flood and drought dynamics and impacts at transboundary and local levels and including enhancement of commonly used decision support systems, fully developed jointly with pilot basins stakeholders																		
Output 1.1	At least 6 methodologies with tools adopting a basin and local approach, including enhancements for decision support systems, that would allow the integration of flood and drought issues into (i) the TDA-SAP GEF IW or equivalent processes, and (ii) IWRM plans and Water Safety plans																		
Activity 1	Needs assessment with respect to flood and drought issues (based on the stakeholder consultations) - DHI	Part of report on methodology																	
Task 1	Key findings with respect to implementation of flood and drought in planning	See below	Staff																
Task 2	Identification of key issues relevant for the F&D project	Section in the methodology report	Staff																
Activity 2	Assessment of the gender and social dimensions in F&D management - IWA																		
Task 1	Consultations and stakeholder involvement in flood prone areas within pilot basins	Documentation on the gender and social dimensions of F&D management	Staff																
Task 2	Identify water relevant gender indicators being adopted and monitored by countries, if any.	Gender indicators	Staff																
Task 3	Identify impacts of droughts on men and women/girls, including hygiene, and analyse options for diversified livelihood support for women during droughts.	Documentation on the impacts of drought to different groups and options for diversified livelihood support	Staff																

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				Year 1				Year 2				Year 3				Year 4			
				1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Output 1.1	At least 6 methodologies with tools adopting a basin and local approach, including enhancements for decision support systems, that would allow the integration of flood and drought issues into (i) the TDA-SAP GEF IW or equivalent processes, and (ii) IWRM plans and Water Safety plans																		
Activity 3	Methodologies for including flood and drought in planning - DHI																		
Task 1	Describe idealised methodologies for including floods and drought issues into existing planning methods	See below	Staff																
Task 2	Collect and analyse evidence of how flood and drought issues are affecting the pilot basins	See below	Staff																
Task 3	Inventory of previous and existing initiatives related to floods and drought issues and taking contact to those that may be relevant for cooperation/lessons learnt including GWP/WMO	Inventory of previous and existing initiatives	Staff																
Task 4	Develop idealised methodologies for DSS components for flood and drought issues in a planning context	Developed in connection with the detailed design	Staff																
Activity 4	Methodologies for including future change (climate and land use change) in planning - DHI																		
Task 1	Describe idealised methodologies for including future change (climate and land use changes) into existing planning methods	See below	Staff																
Task 2	Collect and analyse evidence of how future changes (climate and land use changes) are affecting the pilot basins	See below	Staff																
Task 3	Inventory of previous and existing initiatives related to climate change and taking contact to those that may be relevant for cooperation/lessons learnt including World Bank supported initiatives such as WB GAMS	Inventory of previous and existing initiatives	Staff																
Task 4	Develop idealised methodology for DSS components for future change including global climate change impacts in a planning context	Developed in connection with the detailed design	Staff																

Number				Activity				Outputs				Inputs				2014		2015		2016		2017		2018	
																Year 1		Year 2		Year 3		Year 4			
																1	2	3	4	1	2	3	4	1	2
Output 1.1		At least 6 methodologies with tools adopting a basin and local approach, including enhancements for decision support systems, that would allow the integration of flood and drought issues into (i) the TDA-SAP GEF IW or equivalent processes, and (ii) IWRM plans and Water Safety plans																							
Activity 5		Develop and consolidate methodologies to apply DSSs in TDA/SAP, IWRM and WSP - DHI																							
Task 1		Develop a methodology for F&D with respect to DS components		Report on the methodology and connected Mockup's of the UI		Staff																			
Task 2		Demonstrate the use of DSS with representatives from basin organisations, urban water utilities and relevant industries to resolve typical hot-spot issues in planning processes		Meeting report from stakeholder meetings in 1st half of 2015		Staff																			
Task 3		Consolidate stakeholder input to idealised methodologies		Based on feedback, may have 2nd iteration with some of the stakeholders		Staff																			
Task 4		Establish and consult with international experts to define guideline materials needed for incorporating flood and drought methodologies into planning processes		Feedback into methodology and guideline material		Staff, IWA members, travel costs, meeting costs																			

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				Year 1				Year 2				Year 3				Year 4			
				1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Output 1.1	At least 6 methodologies with tools adopting a basin and local approach, including enhancements for decision support systems, that would allow the integration of flood and drought issues into (i) the TDA-SAP GEF IW or equivalent processes, and (ii) IWRM plans and Water Safety plans																		
Activity 6	Develop DSS which integrates flood and drought management decisions in water resources management planning - DHI																		
Task 1	Develop functionality of DSS to be applicable for basin organisations to improve planning for management of flood and drought risk in each of the pilot basins. The process will be developed in collaboration with users, experts and partners, as well as relevant civil society to ensure vulnerable localities impacted by floods and droughts.	Basin scale methodological approach developed	Staff, members, meeting costs, travel costs																
Task 2	Develop functionality of DSS to be applicable for water utilities to improve planning for management of flood and drought risk in each of the pilot basins. The process will be developed in collaboration with users, experts and partners, as well as relevant civil society to ensure vulnerable localities impacted by floods and droughts.	Downscaled methodological approach developed	Staff, members, meeting costs, travel costs																
Task 3	Prepare a detailed design of F&D DSS components	Outline of F&D DSS components	Staff																
Task 4	Consolidate stakeholder input to methodology to DSS	Via meetings (including Skype or e-mail)																	
Task 5	Prepare a software development plan	Software development plan	Staff, software development																
Task 6	Initiate software development	Software development plan	Staff, software development																

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				Year 1				Year 2				Year 3				Year 4			
				1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Component 2	Validation and testing at basin-wide level																		
Outcome 2.1	Application of the methodologies at the basin level (at least 3) using DSS tools in the three pilot basins enables the integration of flood and drought issues into the IWRM, TDA-SAP and other planning processes																		
Output 2.1	Strategic recommendations for inclusion of flood and droughts issues in IWRM, TDA/SAP, and other basin planning methods in the 3 selected pilot basins																		
Activity 1	Establish working environment for application of methodology with DSS tools in pilot basins – DHI with IWA input																		
Task 1	Plan application in pilot basins together with project partners (responsibilities, data sharing agreement, workplan, etc. for application)	Methodological approach implementation plan	Staff, travel costs																
Task 2	Transboundary basin and national water managers who are specifically involved in responding to water related risks provide guidance to identify and select specific areas for application. Involvement of relevant civil society to ensure that areas selected take into account vulnerable areas impacted by floods and droughts. The relevant civil society representatives will be identified during the stakeholder consultations	Report on application of methodology in basins	Staff, meeting costs, travel costs																
Activity 2	Apply F&D Components in a DSS for TDA/SAP, IWRM in selected basins - DHI																		
Task 1	Apply the DSS in within each of the pilot basins in collaboration with the key stakeholder.	See below	Staff, travel , meeting																
Task 2	In cooperation with transboundary basins and national water managers demonstrate the applicability and usefulness of the DSS in planning across the three pilot basins. Simultaneously provide training on the application of the flood and drought DSS to end users including basin officials (transboundary and national), and urban managers from water utilities and industry.	Report on application of F&D components	Staff, travel costs, meeting costs																

Number	Activity	Outputs	Inputs	2014		2015				2016				2017				2018	
				Year 1				Year 2				Year 3				Year 4			
				1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Output 2.1	Strategic recommendations for inclusion of flood and droughts issues in IWRM, TDA/SAP, and other basin planning methods in the 3 selected pilot basins																		
Activity 3	Recommend policy and strategy for F&D in consultation with stakeholders - DHI with IWA support																		
Task 1	With transboundary basins and national water managers involved in the application, prepare strategic recommendations for inclusion of flood and droughts consideration in IWRM, TDA/SAP and other basin-wide land and water plans in selected basin	Strategic recommendations prepared in consultation with key stakeholders	staff, travel costs, meeting costs																
Task 2	Develop documentation of the process to provide basin specific guidance on how to use information from the floods and drought components of a DSS in developing recommendations for planning	Guidance for application to pilot basins	Staff																

Number	Activity	Outputs	Inputs	2014		2015				2016				2017				2018	
				Year 1				Year 2				Year 3				Year 4			
				1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Component 3	Validation and testing at local level																		
Outcome 3.1	Application of the methodologies at lower administrative levels using DSS tools in the three pilot basins enables the integration of flood and drought issues into local level planning (e.g. water safety planning) for water suppliers and regulators, (agro) industries and urban area managers to consider options for increased resilience and preparedness to F&D within broader basin context with an emphasis on vulnerable groups affected by water related shocks																		
Output 3.1	Recommendations for inclusion of flood and droughts issues in Water Safety, and other local planning methods in the 3 selected pilot basins with integration of urban and (agro-) industrial water users’ perspectives and realities																		
Activity 1	Establish working environment for application of methodologies with water utility end users with DSS tools in the 3 pilot basins – DHI with IWA input																		
Task 1	With guidance from basin representatives and urban water managers, identify at least 3 water utilities (one in each basin) that will test application of DSS information in local level planning (e.g. water safety planning).Plan application in pilot basins together with project partners (responsibilities, data sharing agreement, workplan, etc. for application)	Plan for implementation of methodological approach	Staff, travel costs																
Task 2	Catchment managers who are specifically involved in responding to water related risks provide guidance to identify and select specific areas for application. Involvement of relevant civil society to ensure that areas selected take into account vulnerable areas impacted by floods and droughts. The relevant civil society representatives will be identified during the stakeholder consultations	Report on application of methodology at local	Staff, meeting costs, travel costs																

Number	Activity	Outputs	Inputs	2014		2015				2016				2017				2018	
				Year 1				Year 2				Year 3				Year 4			
				1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Activity 2	Apply flood and drought components in a DSS to contribute towards utility level planning (e.g. water safety planning) in selected basins - DHI																		
Task 1	Apply the DSS in within each of the pilot basins in collaboration with the key stakeholder. Apply a suitable model to test at least one urban area/catchment within each of the 3 pilot basins with the ultimate purpose of improving the resilience and preparedness through appropriate planning and implementation of mitigating measures. Simultaneously provide training on application of the downscaled methodology during implementation with water utility and industry representatives.	See below	Staff, travel costs, meeting costs																
Task 2	Incorporate recommendations from application of flood and drought methodology into planning processes (e.g. WSP)	Report on application of F&D components	Staff, travel costs, meeting costs																
Activity 3	Recommend policy and strategy for F&D in consultation with stakeholders - DHI with IWA support																		
Task 1	Establish critical factors (e.g. water levels) for water safety and urban drainage at the selected test areas/catchments and assess impacts, risks and frequencies	See below	Staff, travel costs, meeting costs																
Task 2	Incorporate recommendations from application of F&D methodology into planning processes (e.g. WSP)	Report with recommendations	Staff, members																
Task 3	Recommendations for updated plans, including investments, for utility water safety and, urban drainage and socio-economic urban areas vulnerable to flood and drought incorporating basin level constraints and outlooks																		

Number	Activity	Outputs	Inputs	2014	2015				2016				2017				2018		
				Year 1				Year 2				Year 3				Year 4			
				1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Component 4	Capacity building and dissemination																		
Outcome 4.1	Experience and know how gained through the project is made available within the GEF system and beyond																		
Output 4.1.1	Learning package including technical specifications and training materials for the application of the new methodology with DSS tools is tested in 2-3 trainings with basin officials, utility and industry management and operational staff, and representatives from civil society with 15-30 people per training.																		
Activity 1	Prepare technical specifications, manuals, guidance and training materials for users in the 3 pilot basins focusing on capacity building in the pilot basins - IWA (with DHI support)																		
Task 1	Identify potential basin, water utility and industry users’ levels of knowledge and establish their need for knowledge and training. This includes those involved in the development of the DSS tool and additional users who would apply the tool and use the outputs.	Survey on users level of knowledge and need for training	Staff, travel																
Task 2	Preparation of technical specifications and user manuals enabling professional level staff to apply the methodology and models within different planning processes. Material will include system manuals, approaches, methodologies and demos.	Guidelines and training material	Staff																
Task 3	Confirm applicability of guidance material on a number of selected trainees in the pilot basins	Reports from selected trainees through interviews and questionnaires	Staff																
Output 4.1.2	Output and feedback from the awareness workshops																		
Activity 2	Awareness workshops on DSS with decision makers																		
Task 1	Develop awareness raising workshop material based on experience from NBI																		
Task 2	Identify participants in each basins such as Commissioners and Senior Advisors to take part in the workshops																		
Task 3	Implement workshops with the aim of developing a better understanding of the usefulness of DSS and how the outputs can be applied effectively																		
Task 4	Develop and implement follow up mechanisms to continue to engage decision makers																		
Activity 3	Prepare training modules on application of F&D methodological approach from basin to end user for inclusion in existing training courses - IWA with DHI support																		

NumberActivityOutputsInputs				2014		2015				2016				2017				2018	
				Year 1				Year 2				Year 3				Year 4			
				1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Task 1	Development of module that contains information on F&D methodological approach in catchment and end user context	Module on F&D for WSP and IWRM training	Staff, members																
Task 2	Testing of module in 2-3 existing IWRM (could be through involvement in one of the CAPNET trainings) and WSP trainings to build the capacity of end users (basin representatives, water utility and industry users) in understanding the DSS application and use of the results in planning	Report from training workshops	Staff																

Number	Activity	Outputs	Inputs	2014		2015				2016				2017				2018	
				Year 1				Year 2				Year 3				Year 4			
				1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Outcome 4.2	Global dialogue on water security and adaptation to climate variability and change enriched by the dissemination of project outcomes.																		
Output 4.2.1	Communication approach developed to disseminate F&D methodology within pilot basins, GEF basins, and to other relevant end users.																		
Activity 4	Document the design and implementation process of F&D methodology in pilot basins to be communicated to a wide range of stakeholders - IWA																		
Task 1	Document the design and implementation process of flood and drought methodology in pilot basins to be communicated to a wide range of stakeholders	Communication strategy	Staff																
Task 2	Collect and collate information from the pilot basins through various media - video, blogs, interviews, focus groups, etc.	Series of communication outputs - reports, videos, blogs, etc.	Staff, consultants, Communications products, travel costs																
Output 4.2.2	2-3 Experience Notes and other documents and audio-visual materials produced for IW LEARN dissemination mechanisms and website.																		
Activity 5	Audio-visuals, documents and other materials for global dissemination with an emphasis on IW LEARN - IWA with DHI support																		
Task 1	Analyse IW LEARN mechanisms and their requirements to materials in order to streamline it with the existing materials and to make it accessible on a global scale	Report on information to develop	Staff,																
Task 2	Prepare and adjust materials on the methodology and the application to meet the requirements of IW LEARN	Briefing notes, videos, publications, etc. for IW LEARN and other events	Staff, Communications products																
Task 3	Identify other dissemination channels in order to reach out broadly including development of project website	Project website	Staff, website																
Task 4	Participation in IW LEARN events	Reports from 2 IWA LEARN events	Travel																

Number	Activity	Outputs	Inputs	2014		2015				2016				2017				2018	
				Year 1				Year 2				Year 3				Year 4			
				1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Output 4.2.3	Development of materials (4-5) developed and disseminated at major water events: WWF, Water Week, GEF IWC 7/8/9, and IWA Conferences.																		
Activity 6	Prepare brochures, leaflets and materials suitable for water events - IWA with DHI support																		
Task 1	Identify water events scheduled for the near future and where the methodology would be a relevant topic for presentation	List of water events	Staff																
Task 2	Prepare presentation material tailor-made to water events (pamphlets, posters, etc.)	Pamphlets, CDs, posters	Staff, Communications products																
Activity 7	Organisation of and participation in international conferences and workshops for the dissemination of methodological approaches and technical solutions across networks - IWA																		
Task 1	Organisation and facilitation of workshops at key events including (but not limited to): IWA World Water Congress (Lisbon (Portugal), September 2014 // Brisbane (Australia), September 2016), IWA Development Congress (Jordan) October 2014) IWA Conference on Water, Energy and Climate (TBD)	Workshop programme and reports from (3-4 events)	Staff, meeting costs, travel costs																
Task 2	Support key stakeholders to attend and present at international events	Workshop programme and reports (3-4 events)	Travel costs																
Project operation and management																			
	Partner meetings - DHI/IWA	Reports from meetings	Travel costs																