**Appendix 4: Results Framework**

| **Goal**: To promote financing of the future management and development of the environments and resources of transboundary water systems, through strong stakeholder engagement. |
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|  | **Indicator** | **Baseline** | **Target** | **Sources of verification** | **Risks and Assumptions** |
| **Objective**: 1a) To undertake the first global assessment of transboundary water bodies, through a formalised consortium of partners, that will assist GEF and other international organizations to improve the setting of priorities for funding;  | Published global assessment of the five types of transboundary water systems. | Fragmented and incomplete assessments of different types of water bodies by different agencies and institutions and a lack of consideration of transboundary elements in these assessments. | Integrated and holistic assessment of all five types of transboundary water systems. | Project website and water systems portal maintained by Grid Geneva, supported by five component websites and data systems. | One of more of the transboundary water components fails to deliver the required data and information by the due dates.This **risk** is assumed to be small since all the partners have collaborated to date in the MSP and the Project preparatory Process. |
| 1b) To formalise the partnership with key institutions aimed at incorporating transboundary considerations into regular assessment programmes, resulting in periodic assessments of transboundary aquifers, lake/reservoirs, river basins, large marine ecosystems, and open ocean areas. | Formalised network of partners linked via Memoranda of agreement. | Network established informally to conduct the present assessment. | Formalised network of partners that agree to conduct future periodic assessments. | Signed agreements between partners. | One of more of the key partners refuses to sign such an agreement.This **risk** is of unknown magnitude but presumed to be small given the successful informal networking that has taken place to date. |
| **Component I Objective:** To undertake a global assessment of transboundary aquifers and SIDS groundwater systems, through a formalized consortium of partners, to support informed investments by the GEF and other international organizations, and to be sustained through a periodic process in partnership with key institutions aiming at incorporating transboundary considerations into a regular assessment programme. |
| **Component I Outcomes** | **Indicator** | **Baseline** | **Target** | **Sources of verification** | **Risks and Assumptions** |
| **Outcome I.1:** Improved strategic focus and cost-effectiveness of investments of GEF and other international agencies and programmes, based on a solid scientific foundation. | I.1 The GEF 6 strategy for the IW focal area, global water policy formulation processes, and other International Financial Institutions (IFI) and donor investment programs show increased focus on TBAs and make reference to TWAP. | I.1 GEF 5 strategy includes only generic reference to groundwater as a priority area. Other donor’s investment programs or policy formulation processes lack specific mention of, neither or indication of understanding of TBAs issues. | I.1 GEF 6 Strategy earmarks resources for investments on TBAs based on TWAP; processes like WWDR reflect TWAP TBA priorities; by the end of the project at least 1 donor program allocates additional resources for TBAs issues. | I.1 The GEF 6 IW Strategy; future annual WWDRs (starting 2014); documentation showing donor consideration of new programs on TBAs. | I.1 GEF Council will adopt and continue to sustain the TWAP approach to allocation of IW resources; this will in turn trigger interest in countries, other International Financial Institutions (IFI) and donors. |
| **Outcome I.2:** Improved country capacity to manage transboundary aquifers by using TWAP TBA assessment methodology. | I. 2 Water managers in countries ready to implement level 2 TWAP TBAs methodology. | I.2 Limited understanding in countries of TBAs issues and lack of capacity to undertake science based assessments. | I.2 By the end of the project at least 5 countries poised to undertake “level 2” assessments based on TWAP TBA methodology. | I.2 Countries decisions showing commitment to in depth TBA assessments based on TWAP. | I.2 Implementation of baseline TWAP will effectively engage decision makers in countries. |
| **Outcome I.3:** Improved review of the state of transboundary water concerns in TBAs through a periodic sustainable assessment process linked to regular assessment programmes. | I.3 A coalition of partners takes over the periodic TBA assessment process. | I.3 Regular water related assessments do not include consideration of TBAs. | I.3 TBA coalition of partners commits to integrate TBAs in regular periodic assessments based on TWAP methodology and indicators. | I.3 Document stating commitment of partners to sustain periodic TWAP indicators based TBA assessment. | I.3 Regular programs, e.g.: UN Water WWAP, willing to lead partner coalition on future periodic TBAs assessments. |
| **Outcome 1.4:** A network of informed stakeholders technically ready to implement periodic assessments. | I.4 Communication strategy in place. | I.4 Project beneficiaries, partner executing entities and other stakeholders lack awareness of TBA assessment modalities. | I.4 Primary target GEF Council members and international agencies; partners and stakeholders at regional and national level. | I.4 Communication strategy and functioning data and information system with access to synoptic reports and awareness materials. | I.4 Partners and stakeholders remain committed to actively contribute to the assessment. |
| **Component II Objective:** to provide an assessment of the state of transboundary lakes through a systematic review of existing data and information, application of relevant indicators, and utilization of both expert opinion and lake basin questionnaires, in order to facilitate the ability of the GEF to more accurately and cost-effectively utilize its limited International Waters funds. |
| **Component II Outcomes** | **Indicator** | **Baseline** | **Target** | **Sources of verification** | **Risks and Assumptions** |
| **Outcome II.1.1:** Increased data, knowledge and understanding regarding status of transboundary lakes at risk, their basins and their assessment and management challenges. | 1. Evidence of increased use of results by GEF and other partners of global-scale assessment of transboundary lake basins undertaken by ILEC and its core partners, as basis for guiding future GEF IW funding possibilities. | 1. Sparse and/or inadequate information and data on comparative status of transboundary lakes and their basins hindering GEF and other funding agencies from establishing funding priorities. | 1. Scientifically-based comparative assessment of transboundary lakes including lakes at risk thereby guiding GEF and other agencies regarding IW funding priorities. | 1. FSP Final Report on results of transboundary lake basin assessments. | **Risk** (1-2): Transboundary Lakes Final Report will not provide necessary data and information for prioritizing and guiding GEF IW activities.**Assumption**: Transboundary Lakes Final Report will provide scientifically-rigorous data/info for addressing transboundary lake issues. |
| **Outcome II.1.2:** Guidance regarding specific aspects of lake assessment and management related to GEF’s TDA/SAP process for IW and their basins, as well as non-GEF water systems on a global scale. | 2. Improved identification and prioritization of GEF IW and non-GEF transboundary lake basin projects. | 2. GEF TDA/SAP process inadequate for identifying and assessing transboundary lake priorities. | 2. GEF TDA/SAP process is enhanced providing more useful scientific and governance information for addressing lakes and other water systems at risk. | 2. Enhanced understanding of concept of “prioritization” as applied to lakes and enhanced capabilities of GEF TDA/SAP IW activities. |
| **Outcome II.2.1:** Mechanism for conducting periodic comparable lake basin assessments. | 3. Increased and continuing periodic assessment of status of Transboundary lake basins. | 3. Sustainable partnerships for undertaking rigorous, compatible and periodic assessment of Transboundary lake basins. | 3. To identify and establish formal and sustainable partnerships for undertaking rigorous, compatible and periodic assessments of transboundary lake basins. | 3. Continuing rigorous assessment of transboundary lake systems within ongoing and anticipated GEF and non-GEF monitoring and assessment activities. | **Risk** (3): Insufficient interest in conducting continuing transboundary lake basin assessments.**Assumption**: Transboundary lake consortium partners continue lake basin data collection and analyses. |
| **Outcome II.2.2:** Appropriate management of and access to lake basin data and information. | 4. Scientifically-based data and information on transboundary lakes available and readily utilized by GEF and other IW organisations. | 4. Needed lake basin data and information scattered among many sources and/or only accessible with difficulty, thereby hindering transboundary lake basin assessments. | 4. Rigorous and continuously updated data base established for use by GEF and lake consortium partners. | 4. Consortium of lake partners actively utilizing and continuously updating transboundary lake basin data base. | **Risk** (4): Inadequate management of transboundary lake basin data/info.**Assumption**: Transboundary lake consortium partners willingly cooperate in making data/info available to interested parties. i |
| **Outcome II.3.1:** Lake sub-project is effectively managed and produces credible results. | 5. Timely and cost-effective management of Transboundary lakes. | 5. Inadequate output and usable results from transboundary lake basin assessment. | 5. Lake sub-project is managed in effective and cost-effective manner. | 5. Lakes sub-project is conducted on-time and within budget, producing identified outputs. | **Risk** (5): Transboundary lakes component of TWAP is not properly managed.**Assumption**: ILEC and partners have undertaken lake projects for many years with much experience conducting such activities. |
| **Component III Objective:** To undertake a global comparative assessment of transboundary river basins, through a formalised consortium of partners, to support informed investments by the GEF and other international organizations, and to be sustained through a periodic process in partnership with key institutions aiming at incorporating transboundary considerations into regular assessment programmes. |
| **Component III Outcomes** | **Indicator** | **Baseline** | **Target** | **Source of verification** | **Risks and Assumptions** |
| **Outcome** **III.1**: Improved review of the state of water concerns in transboundary river systems through a sustainable periodic assessment process linked to regular assessment programmes of the partners. | 1. Evidence of global comparative transboundary river basins assessment undertaken through a formalized consortium of partners.  | Absence of systematic, periodic assessment of transboundary river basins hinders GEF and other agencies from setting priorities for funding. | Comparative assessment which allows GEF and other agencies to set priorities for funding. | Systematic global assessment report on the state of transboundary river basins with provisional outlook projections (Output 6.4). | **Risk**: A lack of adequate data/information for some transboundary water bodies might hinder proper assessment of those water bodies.**Assumption:** The report will not provide solutions, only a prioritization of basins according to a range of issues. The report will not deliver a ‘final’ prioritization combining all issues, but rather the tools to weight issues differently. |
| 2. Framework designed and established during FSP for sustainable periodic assessment process. | Data and information is currently scattered and assessments often undertaken on an ad-hoc basis. | Sustainable partnerships to undertake compatible periodic assessments to observe trends. | An agreed framework for a sustainable periodic assessment process, including a sustainable consortium of partners by Dec. 2014 (Output 7.1). | **Assumption:** Funding mechanisms identified during the TWAP FSP for periodic assessments. |
| **Component IV Objective:** To conduct a global comparative baseline assessment of LMEs through a formalised consortium of partners, and to establish a process for future periodic assessments of LMEs through formal partnerships with key institutions and linkage with regular assessment programmes.  |
| **Component IV Outcomes** | **Indicator** | **Baseline** | **Target** | **Sources of verification** | **Risks and Assumptions** |
| **Outcome IV.1:** Improved strategic focus and cost-effectiveness of investments of GEF and other international stakeholders based on a credible/valid scientific foundation  | GEF and other international stakeholders accept and agree to use the assessment results in decision-making regarding funding allocation | Strategic focus and cost-effectiveness of investments of GEF and other int’l agencies constrained by the lack of a credible and valid scientific foundation to guide investments. | Improved strategic focus and cost-effectiveness of investments of GEF and other int’l agencies based on a scientifically valid foundation in the form of a global baseline comparative assessment of LMEs. | GEF IW VI strategy incorporating assessment results, Periodic progress reports, LME Working Group meeting reports, project mid-term and terminal evaluation. | **Assumption:** GEF and other stakeholders have a high level of confidence that the assessment will be scientifically credible and will allow a valid ranking and prioritization of LMEs, and agree to apply results in decision-making regarding investments.**Risks:** GEF and other stakeholders reject LME assessment results because they are not considered adequate to allow prioritization of LMEs or because the methodology is not accepted as valid; prioritization of LMEs considered to be biased. |
| **Outcome IV.2:** Improved country capacity to assess and manage LMEs adoption of standard assessment methodology and assessment results. | Assessment methodology and comprehensive and standardized LME-scale data and information available to bordering countries; increased awareness about transboundary issues.  | Transboundary issues not fully considered by bordering countries in assessment and management of marine and coastal areas, and limited availability of indicators and data at LME scale; limited awareness about transboundary issues. | Countries are aware of the TWAP, and assessment results including indicators and data are easily accessible by the countries.  | Periodic progress reports; LME Working Group meeting reports; project mid-term and terminal evaluation; feedback from countries through communication with Regional Seas programmes, GEF LME projects and others. | **Assumption:** Countries will be interested in transboundary issues, will accept the assessment methodology and results, and adopt them in assessment and management of LME transboundary issues. **Risks:** Countries reject the methodology and assessment results; do not have the required human and financial resources and political will; and view LMEs as conflicting with other regional frameworks. |
| **Outcome IV.3:** Improved review of the state of transboundary water concerns in LMEs through a periodic sustainable assessment process linked to regular assessment programmes. | Agreed institutional framework linked to regular assessment programmes designed and established for a sustainable periodic assessment process. | Review of state of transboundary water concerns in LMEs currently inadequate; regular assessment programmes do not incorporate transboundary issues.  | Links with regular assessment processes such as the UN Regular Process and Regional Seas to carry out period review of transboundary concerns in LMEs. | Document describing an agreed strategy to link TWAP with regular assessment programmes; Letters of agreement with partners; periodic progress reports; LME Working Group meeting reports; project mid-term and terminal evaluation.  | **Assumption:** Institutions responsible for regular assessment programmes will see the added value of linking with TWAP and agree to incorporate elements of TWAP; financial resources will be available.**Risks:** Non-compatibility between TWAP and regular assessment processes makes linking difficult or impossible; financial resources inadequate to allow meaningful periodic assessments.  |
| **Outcome IV.4:** Efficient delivery of sub-project outputs and effective communication and information dissemination. | Sub-project outputs and communication strategy within established timeframe and budget.  | No dedicated mechanism in place for communication and dissemination of information and assessment results.  | Successful completion of all outputs and communication strategy, including website.  | Project outputs and communication strategy, website, periodic progress reports, LME Working Group meeting reports, project mid-term and terminal evaluation. | **Assumption:** No unforeseen events or circumstances will hinder completion of sub-project within the established timeframe and budget; executing agency is competent in carrying out its functions within the framework of the project and employ adaptive management to address adverse situations.**Risks:** Occurrence of unforeseen adverse events and circumstances; executing agency unable to address these events and circumstances should they occur.  |
| **Component V Objective:** To undertake a global assessment of the open ocean through a formalized consortium of partners, highlighting global ocean environmental issues, their local environmental and human impact, and informing and influencing the development of thematic interventions through informed investments by the GEF and other international organizations, providing a baseline on which to monitor future progress.  |
| **Component V Outcomes** | **Indicator** | **Baseline** | **Target** | **Sources of verification** | **Risks and Assumptions** |
| **Outcome V.1:** Enhanced global cooperative management action on environmental issues involving the open ocean and affecting human wellbeing. | Adoption of the assessment results by key open ocean stakeholders’ and decision makers . | Lack of a scientifically-credible global baseline assessment of ecological state and trends of the Open Ocean and impacts on human wellbeing.  | Wide consultation and use of a scientifically-valid, policy-relevant assessment of Open ocean ecological state and trends in relevant themes, and impacts on human wellbeing. | Web clicks on the assessment web page and indicator platforms, media mentions of the assessment, assessment results cited in proceedings/documents of global environmental governance agreements and conventions, project evaluations. | **Assumption:** High level of confidence that the assessment will be robust and scientifically credible and will be used for cooperative management action.**Risks:** Assessment not well-communicated, Assessment invalid or inadequate because of data and knowledge gaps, etc.  |
| V.2 Improved strategic focus and cost-effectiveness of investments of GEF and other international agencies and programmes. | GEF and other international stakeholders recognize the value of Open Ocean ecosystem services and agree to use the assessment results in decision-making regarding funding allocation | Limited strategic focus and cost-effectiveness of GEF and other int’l agencies in setting priorities for funding; limited recognition of the value of Open Ocean ecosystem services  | Increased awareness by GEF and int’l community on Open Ocean issues and impacts on human wellbeing ; a scientifically valid global baseline assessment that will allow GEF and other int’l agencies to identify ocean areas and themes in need of urgent attention and help to better set priorities for investment and track results of interventions |  GEF IW VI strategy incorporating preliminary assessment results, periodic progress reports, OO Working Group meeting reports, project mid-term and terminal evaluation. | **Assumption:** GEF and the int’l community have an interest in addressing Open Ocean issues.**Risks:** GEF and other stakeholders do not see Open Ocean as a priority or reject assessment results.  |
| V.3 Improved review of the state of the open ocean through a periodic sustainable assessment process linked to regular assessment programmes.  | Agreed institutional framework linked to regular assessment programmes designed and established for a sustainable periodic assessment process; and financing mechanism identified. | No institutional framework and financial mechanism currently exist for periodic assessment of the Open Ocean; previous assessments have been ad hoc and not comprehensive. | Sustainable partnership among institutions and links with regular assessment processes such as the UN Regular Process and Regional Seas to carry out period review of the Open Ocean, with funding mechanism identified.  | Document describing the framework and mechanism; Letters of agreement with partners; periodic progress reports; OO Working Group meeting reports; project mid-term and terminal evaluation.  | **Assumption:** Institutions responsible for regular assessment programmes will see the added value of linking with TWAP and agree to incorporate elements of TWAP Open Ocean; financial resources will be available.**Risks:** Non-compatibility between TWAP and regular assessment. processes makes linking difficult or impossible; financial resources inadequate to allow meaningful periodic assessments.  |
| V.4 Efficient delivery of project outputs, and effective data and information dissemination. | Sub-project outputs and communication strategy within established timeframe and budget.  | No dedicated mechanism in place for communication and dissemination of information and assessment results. | Successful completion of all outputs and communication strategy, including website. | Project outputs and communication strategy, website, periodic progress reports, OO Working Group meeting reports, project mid-term and terminal evaluation. | **Assumption:** No unforeseen events or circumstances will hinder completion of sub-project within the established timeframe and budget; executing agency is competent in carrying out its functions within the framework of the project and employ adaptive management to address adverse situations.**Risks:** Occurrence of unforeseen adverse events and circumstances; executing agency unable to address these events and circumstances should they occur. |
| **Component VI Objective: T**o evaluate governance and socio-economic aspects of all five transboundary water systems and provide an analysis of governance architecture and the cross-cutting social and economic features of the human-environment interactions as a basis for a comparative, synthetic approach for examining common issues across them. |
| **Component VI Outcomes** | **Indicator** | **Baseline** | **Target** | **Sources of verification** | **Risks and Assumptions** |
| **Outcome VI.1:** Improved understanding of transboundary water governance architecture.  | Presentation of an holistic picture of governance arrangements for individual water systems within each transboundary water system. | No consolidated review of governance arrangements for transboundary water systems exists to date. | Use of a common governance assessment methodology to evaluate governance arrangements across selected systems in all five transboundary water systems. | Website publication of assessment methodology reports on individual water system governance architecture. | **Assumption:** That governance arrangements can be harmonised across transboundary water systems.**Risks:** That governance architecture across the transboundary water systems displays no congruence. |
| **Outcome VI.2:** Improved capacity to compare the cross-cutting social and economic features of human-water interactions across and within the five transboundary water systems. | Development and widespread use of indicators of human population distribution, its growth and level of development associated with transboundary waters, the water-based livelihoods and the vulnerabilities of human communities to environmental changes and climate-related natural disasters. | To date no attempt has been made to compare the linkages between human populations and transboundary waters across water systems. | Use of a common methodology and indicator set across selected systems in all five transboundary water system. | Website publication of the methodology and reports on water ,system-human interactions.  | **Assumption:** cross-cutting social and economic features of human-water system interactions are comparable across transboundary water systems.**Risks:** selected indicators and methodology will not prove replicable across transboundary water systems ; required input data products are not available for subsequent periodic indicator-based assessments. |
| **Component VII Objective: T**o organize and present core data and indicators used in the assessment in a consistent way, tailored for the use by the TWAP stakeholders and to operate as an authoritative clearing house for transboundary water data and indicators. |
| **Component VII Outcomes** | **Indicator** | **Baseline** | **Target** | **Sources of verification** | **Risks and Assumptions** |
| **Outcome VII.1.1:** Improved availability and accessibility of consistent data and indicators on transboundary water systems for use by TWAP stakeholders and the wider public.  | Single online access point to relevant data on transboundary water systems has been created and is operational, including mapping of TWAP indicators. The TWAP Portal/Platform is linked with the TWAP website and connected with IW:LEARN functionalities. | Scattered and incomplete data available in different formats from WGs and external data partners. | One entry point for accessing and presenting TWAP data sets and indicators, available for use by TWAP stakeholders, enabling comparison and visualization of main assessment results. | TWAP Portal/Platform is on-line, functioning and linked to TWAP website, providing access to core TWAP data and indicators. | **Assumption:** data formats used by WGs are compatible**Risks:** Copyright issues on data from WGs and other sources; Insufficient resources. |
| **Outcome VII.1.2:** Availability of TWAP Project Information, connected to the International Waters Learning Exchange and Resource Network – IW:LEARN. Improved knowledge management with compiled knowledge and experiences about the project shared with other GEF projects and GEF Sec. | Project information and assessment results and documents are available on-line via a dedicated TWAP project website, with links to TWAP Portal/Platform and IW:LEARN information. | Off-line project information available from TWAP Secretariat and WGs. | On-line, up-to-date and integrated project information available through dedicated website, including electronic assessments reports. | A project website exists and provides up-to-date information on the project and its assessment results and provides access to other TWAP resources and IW:LEARN information. | **Assumption:** project information is up-to-date and available**Risks:** Incomplete and/or outdated project information available from Secretariat and WGs. IW:LEARN not able to host TWAP project website.Insufficient resources. |
| **Outcome VII.2.1:** Targeted, customized information products available for stakeholders and mainstreaming into policy-making. | Assessments reports and outreach products are produced and disseminated.  | No reports or information products available.  | All assessments reports are made available printed and on-line; outreach material is produced, disseminated and communicated to stakeholders.  | Availability of reports and outreach material, web statistics and references in policy documents. | **Assumption:** resources are available for printing reports (printed and o-line) and for preparing outreach material.**Risks:** WGs do not provide final reports on time.Insufficient resources. |
| **Component I Objective:** To undertake a global assessment of transboundary aquifers and SIDS groundwater systems, through a formalized consortium of partners, to support informed investments by the GEF and other international organizations, and to be sustained through a periodic process in partnership with key institutions aiming at incorporating transboundary considerations into a regular assessment programme. |
| **Component I Outputs** | **Indicator** | **Baseline** | **Target** | **Sources of verification** | **Risks and Assumptions** |
| **Output 1.1:** Data sets from the 166 transboundary aquifers and 43 groundwater systems in SIDS. | Data sets added to the global data system. | Additional data unlikely to be added.  | Basic information available on all TBAs harmonized and captured by TWAP TBA/SIDS indicators suite.  | TBAs final reports. | Countries unwilling to engage and recognize transboundary nature of TBAs; data owners, including the private sector, unwilling to share basic information. |
| **Output 1.2**: A systematic assessment of the current status of 166[[1]](#footnote-1) transboundary aquifers including 43[[2]](#footnote-2) aquifers in SIDS as well as provisional outlook projections of future status, with consolidated results within 24 months. | 1.1 Assessment report covering 166 TBAs and 43 SIDS groundwater systems, organized by regions including indicators valuation and projections produced by the end of the project. | The transboundary nature of existing major TBAs not always recognized by countries, and only scanty information available, including on groundwater in SIDS. | Basic information available on all TBAs harmonized and captured by TWAP TBA/SIDS indicators suite.  | TBAs final reports. | Countries unwilling to engage and recognize transboundary nature of TBAs; data owners, including the private sector, unwilling to share basic information. |
| **Output 1.3:** An interim assessment report within 9 months after sub-project effectiveness and a draft final assessment report within 21 months after sub-project effectiveness. | Published reports. | None. | GEF Council and all stakeholders. | Published reports. | **Risk:** Insufficient data and information acquired to produce the reports.Assumptions: none. |
| **Output 1.4:** A data and information management system that will include assessment results, indicators, and links to partners, data sources and the TWAP platform (draft system set up within 6 months of project start, rolling improvements until project end at 24 months) . | 1.3 By the end of the project, all collected information on TBAs, including assessment results and indicators, hosted in neutral repository - IMS, open to all and linked to the overall TWAP platform. | The ISARM database, hosted and maintained by IGRAC, is the only existing repository of information on TBAs, and might represent the starting point of the TWAP TBA IMS. | The TBA IMS, regularly updated and expanded, used by GEF, by the countries and by the international community to inform resources allocation and water management policies. | Terminal Project Evaluation confirms TBA IMS full effectiveness. | Countries, partner agencies, and data providers unwilling to publicly disclose and share TBA information. |
| **Output 1.5:** A sustainable consortium of partners among institutions and experts, within 24 months. | 1.2 TBAs consortium of partners, possibly under UN Water lead, committed to sustain and implement periodic TBA assessments using TWAP methodology and indicators. | None of the regular assessment programs include consideration of TBAs. | Long-term periodic and systematic TBA assessments allow the detection of trends and impacts.  | Document containing formal agreement of partners. | Partners unwilling to modify their regular assessment programs to integrate TBAs and adopt TWAP methodology. |
| **Output 1.6:** A communication strategy for periodic reporting to stakeholders. (Draft within 6 months of project start, rolling improvements until project end at 24 months). | 1.4 Countries and other stakeholders regularly informed on project advancements through project website, IW LEARN, and a TBA newsletter/bulletin. | The UNESCO ISARM is the only website that contains information on the TBAs; it will be linked to the IMS and contribute information to the TWAP TBA website. | Globally disseminated information on TWAP TBAs helps creating momentum and triggers exchanges and synergies. | Terminal Evaluation confirms full implementation and effectiveness of the TWAP TBA communication strategy. | Limited funding hinders effectiveness of TBA communication strategy. |
| **Component II Objective:** to provide an assessment of the state of transboundary lakes through a systematic review of existing data and information, application of relevant indicators, and utilization of both expert opinion and lake basin questionnaires, in order to facilitate the ability of the GEF to more accurately and cost-effectively utilize its limited International Waters funds. |
| **Component II Outputs** | **Indicator** | **Baseline** | **Target** | **Sources of verification** | **Risks and Assumptions** |
| **Output II.1.1:** Master list of Transboundary lake basins and revised lake basin indicators. | 1. Master list of Transboundary lake basins and revised indicators published and accessible online and at ilec.or.jp and partner websites. | 1. Sparse and/or inadequate knowledge of location and status of transboundary lakes and inadequate understanding of status of transboundary lake basins. | 1. Credible knowledge of location and status of transboundary lakes. | 1. Availability of final master list of transboundary lakes and revised indicators via Lakes website and accessible through TWAP website. | **Risk** (1-3)\_ Lakes Interim and Final Reports will not necessarily sufficient information and knowledge regarding lake basin management.**Assumption**: Lakes Interim and Final Reports will provide adequate, understandable and credible information and guidance to address transboundary lake basin issues.**Assumption:** ILEC’s ILBM Platform Process will be increasingly used to guide lake basin assessment and management studies. |
| **Output II.1.2:** Interim (Sept. 2013) and Final list (project termination date 2014) of transboundary lakes at risk based on GIS techniques, expert opinion and basin questionnaires. | 2. Published and accessible Interim and Final Reports on transboundary lakes at risk. | 2. Uncoordinated and non-collaborative lake basin programmes and activities involving a myriad of water-related agencies and organisations. | 2. Interim and Final Reports on transboundary lakes provide basis for guiding future GEF transboundary lake projects, finding priorities and lake basin assessment approaches. | 2. Interim and Final Reports on appropriate means of identifying priority transboundary lakes at risk available on website and guiding future GEF activities regarding transboundary lake funding considerations. |
| **Output II.1.3:** Overview paper(s) on: (i) implications of hydrologic connections of lakes with other water systems; (ii) “prioritization” concept for transboundary vs. non-transboundary lakes; and (iii) Integrated Lake Basin Management (ILBM) Platform Process applied to TDA/SAP process. | 3. Published and accessible Overview papers on: (i) hydrologic linkages between lakes and other water systems; (ii) concept of prioritization applied to transboundary lakes; and (iii) application of ILBM within context of GEF’s TDA/SAP process. | 3. Inadequate understanding of implications of hydrological linkages between lakes and other water systems, the concept of establishing “priority” in identifying lakes at risk and inability to apply ILBM as supplement to GEF TDA/SAP process..  | 3. Better understanding on part of GEF regarding implications of hydrological lake linkages, appropriate means of establishing lake funding priorities, and utility of ILBM within GEF IS lake activities. | 3. Overview papers available in hard copy and oh the website used as guidance for addressing issues of hydrologic linkages, establishing transboundary lake priorities, and greater use of ILBM in GEF lake basin activities. |
| **Output II.2.1:** Long-term lake basin assessment partnership. | 4. Partnership established for long-term Transboundary lakes assessment process. | 4. No existing consortium directed to assessment of transboundary lake basins. | 4. Formally established long-term consortium for conducting continuing transboundary lake basin assessment. | 4. Memoranda of Understanding used to establish the Lake consortium for future transboundary lake assessment. Cooperating partners involved in transboundary lake basin assessment activities on a continuing basis. | **Risk** (4-6): No basis for continuous long-term lake basin assessment activities. **Assumption:** Consortium of lake basin partner agencies will engage in long-term continuing lake basin assessment activities within a coordinated and agreed assessment framework. |
| **Output II.2.2:** Framework for long-term evaluation of transboundary lake basins and risk. | 5. Existing framework for continuing evaluation of status of transboundary lakes. | 5. No credible framework for conducting transboundary lake assessments over long-term. | 5. Long-term framework and mechanism for conducting transboundary lake basin assessments. | 5. Work plan and agreed modalities for conducting future assessments available on the website. Long-term assessment of transboundary lake basins ongoing. |
| **Output II.2.3:** Mechanism for long-term data management. | 6. Reliable long-term data base and management activities. | 6. Relevant lake data is not identified, compiled or analyzed in rigorous, scientifically-sound manner. | 6. Effective data acquisition and management. | 6. Network for data management. Database and information archive available via website, operated and used by lake basin assessment consortium. |
| **Output II.3.1:** Lakes sub-project management process. | 7. TWAP Lakes sub-project is managed in an efficient and cost-effective manner. Quarterly operational and financial reports produced in timely manner. | 7. No TWAP lake project management process. | 7. Effective TWAP transboundary lake management of the Lake sub-project. | 7. TWAP Lake assessment process ongoing and effectively managed. Effectiveness of sub-project management evaluated as part of the Terminal evaluation. |  |
| **Component III Objective:** To undertake a global comparative assessment of transboundary river basins, through a formalised consortium of partners, to support informed investments by the GEF and other international organizations, and to be sustained through a periodic process in partnership with key institutions aiming at incorporating transboundary considerations into regular assessment programmes. |
| **Component III Outputs** | **Indicator** | **Baseline** | **Target** | **Source of verification** | **Risks and Assumptions** |
| **Outpu**t III.1: A systematic global assessment report on the state of transboundary river basins with provisional outlook projections. | Indicator based assessment of major transboundary river basins, including projections. Draft results at 10 months. Consolidated results at 24 months. | Transboundary assessments generally not comprehensive or globally comparable. Data, information and expertise presently scattered among different institutions. | Comparative assessment of major river basins, including some initial projections.  | Systematic global assessment report on the state of transboundary river basins with provisional outlook projections (Output 6.4). | **Risk:** not enough data in all basins to undertake global comparison. Risk: difficulty in defining risk categories if basins acquire similar scores.**Assumption:** Partners can agree on ‘baseline’ datasets and assessment approach.  |
| **Output III.2:** An agreed framework for a sustainable periodic assessment process, including a sustainable consortium of partners. | Evidence of a designed framework.  | Lack of systematic, periodic assessment of transboundary river basins which hinders GEF and other agencies from setting priorities for funding. | Institutional arrangements to provide a sustainable, cost-effective process for transboundary assessments.  | An agreed framework for a sustainable periodic assessment process, including a sustainable consortium of partners by Dec. 2014 (Output 7.1).. | **Risk:** most viable sustainability strategies for 5 components are not compatible, jeopardizing the overall sustainability of the TWAP. **Assumption:** partners continue to see value in participating in the TWAP, and are able to continue commitment. |
| **Component IV Objective:** To conduct a global comparative baseline assessment of LMEs through a formalised consortium of partners, and to establish a process for future periodic assessments of LMEs through formal partnerships with key institutions and linkage with regular assessment programmes.  |
| **Component IV Outputs** | **Indicator** | **Baseline** | **Target** | **Sources of verification** | **Risks and Assumptions** |
| **Output IV.1:**. A systematic, comparative global assessment of all LMEs based on ecological status, stress, socioeconomic and governance indicators and provisional outlook projections within 24 months, presented in interim and final reports and data products.  | Completed and valid, indicator-based comparative assessment of all LMEs and  | A significant amount of data relevant to LMEs being collected by a large number of institutions, but this has not been harnessed for a systematic assessment of all LMEs incorporating a standard suite of indicators of ecological status, stress, socioeconomics and governance; ongoing marine assessments do not explicitly consider transboundary issues | A valid, global comparative baseline assessment of all LMEs within 24 months, using a suite of indicators of ecological status, stress, socio-economics and governance to allow ranking of LMEs in terms of their ecological status | Interim and final assessment reports and datasets quantifying the indicators; website/DIM system with assessment results; periodic progress reports; LME Working Group meeting reports; project mid-term and terminal evaluation  | **Assumption:** Adequate data are available for the core set of indicators for all LMEs and assessment partners will be engaged for the full duration of the sub-project to deliver the assessment results**Risks:** Data unavailable for some LMEs to enable global comparative assessment; Discontinuation of involvement of partners, withdrawal of support by key partners (financial support, data and information, etc.) |
| **Output IV.2:**. Sustainable framework and partnership among institutions and experts to conduct periodic assessment of LMEs within 24 months. | An agreed framework of partners with defined roles, and sustainable financial mechanism identified for periodic assessment of LMEs  | A wide array of institutions and experts involved in data collection, monitoring/observation, and marine assessment of relevance to LMEs, but currently there is no partnership among them for a cost-effective and sustainable process for periodic assessment of LMEs  | Within 24 months, a formalized partnership of institutions and experts, with sustainable financing mechanism identified, for periodic assessment of LMEs | Letters of agreement from partners; document describing partners’ roles and institutional arrangement for conduct of periodic assessment | **Assumption:** Institutions and experts will have interest in forming a sustainable partnership, and financial resources will be available **Risks:** Difficulty in securing the multilateral national engagement required to ensure long-term periodic assessments; and in securing long-term incremental funding for periodic assessments |
| **Output IV.3:** A communication strategy for periodic reporting to stakeholders within 3 months | Communication strategy developed and implemented | No strategy currently exists for communication of LME assessment to stakeholders | Effective communication strategy consisting of website and other mechanisms within 3 months  | Document describing communication strategy; functional website  | **Assumption:** Communication strategy will be approved by the executing agency and implemented within the specified timeframe; the sub-project will generate information in a timely manner for reporting to stakeholders**Risks**: Communication strategy delayed; no information available for communicating to stakeholders |
| **Outputs IV.4:** A data and information management system that will include assessment results, indicators, and links to partners, data sources and the TWAP platform within 24 months. | Functional marine DIM system, integrating both Open Ocean and LME assessment results, linked to partners and relevant data sources and the TWAP common platform | A large number of relevant DIM systems exist, but none dedicated to assessment of LMEs, data sources, indicators | Within 24 months, a functional dedicated LMEs DIM system integrated with the Open Ocean system, with LMEs assessment results and relevant links | Accessible LMEs DIM system populated with assessment results and appropriate links | **Assumption:** Assessment partners provide assessment results and relevant data in a timely manner and in the required format; data providers agree to make data available through LMEs DIM system **Risks:** Delay in submission of results and data provided in incompatible formats; data and information copyright and proprietary issues |
| **Component V Objective:** To undertake a global assessment of the open ocean through a formalized consortium of partners, highlighting global ocean environmental issues, their local environmental and human impact, and informing and influencing the development of thematic interventions through informed investments by the GEF and other international organizations, providing a baseline on which to monitor future progress.  |
| **Component V Outputs** | **Indicator** | **Baseline** | **Target** | **Sources of verification** | **Risks and Assumptions** |
| V.1 A metric- and mapping-based assessment transforming existing scientific data and projections for the open ocean into stakeholder-relevant information for several themes of relevance, built on a data and information management system that will include assessment results, indicators, and links to partners, data sources and the TWAP platform (intermediate results by July 2013, final by August 2014). | Indicators and maps available for the four themes of the open ocean assessment: climate, ecosystem, fisheries, and pollution. | A significant amount of data about the open ocean and its relationship to human well-being is being collected, but has not been harnessed for systematic assessment of ocean environmental issues requiring global action and their local impact on human well-being. Some assessments are available for certain themes and for certain regions, but not globally for the open ocean. | Interactive platform for mapping and global indicators, as a basis for an interpreted assessment. | TWAP OO web site, periodic progress reports, project mid-term and terminal evaluations. | **Assumption:** TWAP OO partners will deliver data, the GEOWOW project will deliver appropriate infrastructure to host data and provide interface into indicators.**Risks:** Difficulties of partners in providing data, divergent objectives of complementary projects. |
| V.2 Individual review assessments of high uncertainty but potentially high impact of environmental issues and governance arrangements (final by December 2014). | Completed assessment reports in the four themes of the open ocean assessment and an additional assessment of global governance structures | A unified assessment across the conceptual framework spanning the natural and human systems does not exist. | Interpreted assessment that allows stakeholders and users to make decisions about priority action in ocean observations, science, and governance. | Assessment report, periodic progress reports, project mid-term and terminal evaluations. | **Assumption:** Consultants of sufficiently broad background and credibility hired to compile review articles for climate and ecosystem themes.**Risks:** Lack of coherence in reports across all four themes plus governance. |
| V.3 Reporting and interpretation of assessment results relevant to key stakeholders including GEF (intermediate results by July 2013, final results by December 2014).  | Assessment products with interpretation of the assessment results and distillation of main messages for key stakeholders | Limited availability of policy-relevant Open Ocean assessment information in a form that is easily understood and relevant to key stakeholders | Effective interpretation and communication of assessment results and main messages to key stakeholders including the GEF | Completed assessment products, periodic progress reports, project mid-term and terminal evaluations | **Assumption:** Competent communication expert with good understanding of science-policy interface related to the Open Ocean indicators and themes will be available.**Risks:** Unavailability of consultant with the necessary skills for the required time period. |
| V.4 Formal agreements among partner institutions and experts to conduct periodic assessment of the open ocean (by December 2014). | An agreed partnership with defined roles and sustained funding for periodic assessment of the open ocean | A wide array of scientific and institutional partners currently has the distributed ability to perform a global assessment of the open oceans, but lacks a strong framework for present and future cooperative action needed to conduct a periodic assessment. | A formalized partnership of institutions and expertise.  | Letters of agreement from partners, document describing strategy for periodic assessment. | **Assumption:** TWAP recognized within its partnership as a useful contribution to the individual objectives of each partner.**Risk:** Lack of repeated central funding will erode interest of some partners. |
| V.5 A strategy for linking TWAP with the ongoing UN Regular Process (ongoing engagement during entire project, final by December 2014). | A defined and recognized strategy for TWAP to contribute to the UN World Ocean Assessment (UN Regular process). | The UN World Ocean Assessment (UN Regular process) recognizes the role of IOC-UNESCO and UNEP as technical agencies able to contribute to the substance of the assessment, and may emerge as a framework for the sustainability of TWAP. | The TWAP OO methodology and partnership accepted as a contribution to the UN World Ocean Assessment | Incorporation of TWAP OO indicators and methodology in portions of the UN World Ocean Assessment (UN Regular process) report due in 2014. | **Assumption:** Institutions responsible for ongoing assessment programmes will agree to incorporate elements of TWAP Open Ocean assessment; financial resources will be available.**Risks:** Political considerations may force introduction of new partnerships, governance of the assessment. |
| V.6 Quarterly Financial and activity reporting to UNEP and the GEF | The individual OO TWAP component can be interpreted in the context of the full TWAP assessment. | The MSP provides a strong baseline for cooperation amongst the TWAP components and in cross-cutting areas such as socioeconomics and governance. | Strong overall TWAP assessment coherent with individual component results. | Assessment report, periodic progress reports, project mid-term and terminal evaluations. | **Assumption:** strong level of communication between TWAP partners and guidance from UNEP and GEF.**Risks:** Partner's objectives diverge. |
| **Component VI Objective: T**o evaluate governance and socio-economic aspects of all five transboundary water systems and provide an analysis of governance architecture and the cross-cutting social and economic features of the human-environment interactions as a basis for a comparative, synthetic approach for examining common issues across them. |
| **Component VI Outcomes** | **Indicator** | **Baseline** | **Target** | **Sources of verification** | **Risks and Assumptions** |
| **Output VI.1.1: A systematic indicator-based global assessment of governance arrangements for transboundary waters.** | Completed and robust crosscutting assessment of transboundary governance arrangements for transboundary water systems, | Transboundary governance arrangements and architecture for key issues affecting transboundary water systems have not been systematically examined | A valid and systematic baseline assessment of transboundary governance arrangements and architecture for key issues affecting transboundary water systems human populations, their levels of completeness and implications for successful water system governance, | Information on transboundary governance arrangements in relation to key issues assembled, analysed and documented in Interim and final assessment reports; web-based publication of data, methods and results; Periodic progress reports; Working Group meeting reports; Project mid-term and terminal evaluation, | **Assumptions:** Adequate current and projected input data products are available to support indicator-based assessments; Partners and other stakeholders in selected water systems are willing and able to complete their assessments in a timely fashion.**Risks:** Project partners and stakeholders can provide accurate and relevant information on governance arrangements. |
| **Output VI.2.1:** **A systematic, and comparative indicator-based global assessment of human populations dependent on transboundary waters.**  | Completed and robust assessment of crosscutting social and economic features of human populations associated with transboundary waters, | Data on population, economic production, and vulnerability to climate-related natural disasters are routinely collected but have never been analysed in relation to the environmental states of transboundary waters at a global scale, | A valid and systematic baseline assessment of human populations, their levels of current and projected dependence on changing states of transboundary waters, | Identified input data sets and core crosscutting socioeconomic indicators; Interim and final assessment reports; web-based publication of data, methods and results; Periodic progress reports; Working Group meeting reports; Project mid-term and terminal evaluation, | **Assumptions:** Adequate current and projected input data products are available to support indicator-based assessments; Partners are able to complete their assessments during the project’s lifespan. **Risks:** Unavailability of up-to-date and projected input data products and disrupted involvement of partners to complete global assessment. |
| **Component VII Objective:** To organize and present core data and indicators used in the assessment in a consistent way, tailored for the use by the TWAP stakeholders and to operate as an authoritative clearing house for transboundary water data and indicators. |
| **Component VII Outputs** | **Indicator** | **Baseline** | **Target** | **Sources of verification** | **Risks and Assumptions** |
| **Output VII.1.1:** A project data and information management platform for showcasing, visualizing and exploring main assessment results and as a clearing house on transboundary water system data and indicators (by 24 months). | Single online access point to relevant data on transboundary water systems has been created and is operational, including mapping of TWAP indicators. The TWAP Portal/Platform is linked with the TWAP website and connected with IW:LEARN functionalities. | Scattered and incomplete data available in different formats from WGs and external data partners. | One entry point for accessing and presenting TWAP data sets and indicators, available for use by TWAP stakeholders, enabling comparison and visualization of main assessment results. | TWAP Portal/Platform is on-line, functioning and linked to TWAP website, providing access to core TWAP data and indicators. | **Assumption:** data formats used by WGs are compatible.**Risks:** Copyright issues on data from WGs and other sources; Insufficient resources. |
| **Output VII.1.2:** Dedicated project website connected with IW: LEARN and other GEF knowledge management systems (within 6 months). | Project information and assessment results and documents are available on-line via a dedicated TWAP project website, with links to TWAP Portal/Platform and IW:LEARN information. | Off-line project information available from TWAP Secretariat and WGs. | On-line, up-to-date and integrated project information available through dedicated website, including electronic assessments reports. | A project website exists and provides up-to-date information on the project and its assessment results and provides access to other TWAP resources and IW:LEARN information. | **Assumption:** project information is up-to-date and available.**Risks:** Incomplete and/or outdated project information available from Secretariat and WGs. IW:LEARN not able to host TWAP project website.Insufficient resources. |
| **Output VII.2.1:** Published assessment reports, launch events, communication and outreach material printed, and on-line. | Assessments reports and outreach products are produced and disseminated.  | No reports or information products available.  | All assessments reports are made available printed and on-line; outreach material is produced, disseminated and communicated to stakeholders.  | Availability of reports and outreach material, web statistics and references in policy documents. | **Assumption:** resources are available for printing reports (printed and o-line) and for preparing outreach material.**Risks:** WGs do not provide final reports on time.Insufficient resources. |
| **Component I Objective:** To undertake a global assessment of transboundary aquifers and SIDS groundwater systems, through a formalized consortium of partners, to support informed investments by the GEF and other international organizations, and to be sustained through a periodic process in partnership with key institutions aiming at incorporating transboundary considerations into a regular assessment programme. |
|  **Activities** | **Objectively verifiable indicators** |
| **Sub-component I.1: Assessment of 166 TBAs and 43 SIDS groundwater systems** | Comprehensive Report (Activity I.1.3, , Sub-activity 1) |
| Activity I.1.1: Data and Information gathering | Comprehensive Report (Activity I.1.3, , Sub-activity 1) containing section on information on data gathered on all 166 TBAs and 43 SIDS.  |
| Sub-activity 1: For major TBAs | See above |
| Sub-activity 2: For SIDS groundwater systems | See above |
| Sub-activity 3: Modelling and remote sensing | Data and information management system incorporating all collected date and information. |
| Activity I.1.2: Assessment of TBAs and SIDS groundwater systems | Comprehensive Report (Activity I.1.3, , Sub-activity 1) includes sections on results of the indicator-based assessment of TBAs and SIDS groundwater systems, on expected future trends, and on conclusions and priorities for action.  |
| Sub-activity 1: Assessment for major TBAs | See above |
| Sub-activity 2: Assessment for SIDS | See above |
| Sub-activity 3: Determine priority aquifers/regions | See above |
| Sub-activity 4: Outlook projections for 2030 and 2050 | See above |
| Activity I.1.3: Assessment reporting | Comprehensive Report (Activity I.1.3, , Sub-activity 1) |
| Sub-activity 1: Comprehensive Report on major issues for TBA & SIDS | See above |
| Activity I.1.4: Data and Information management | Data and Information management system operational and data collected during the assessment accommodated in the system. Main results of the assessment transferred to central TWAP web-interface according to defined protocol. |
| **Sub-component I.2: Sustainability of the TBA assessment** | Report containing the technical specifications, operational modalities and execution arrangements and costs of follow up periodic monitoring  |
| Activity I.2.1: Establishment of a periodic assessment system | TWAP implementing and executing partners mandated to assess periodically the conditions of TBAs. |
| Sub-activity 1: Sustainability of consortium of partners | Partners formalize their long-term commitment to the periodic assessment |
| Sub-activity 2: Sustainability of the assessment process | GEF and other beneficiaries formalize their interest and support to the recommended follow up monitoring  |
|  Sub-activity 3: Sustainability of the TBA data and information management system | See above |
| **Sub-component I.3: Coordination of the assessment process** | Partners and stakeholders fully informed and working in a complementary way. |
| Activity I 3.1: Coordination of the assessment process | See above |
| **Component II Objective: T**o provide an assessment of the state of transboundary lakes through a systematic review of existing data and information, application of relevant indicators, and utilization of both expert opinion and lake basin questionnaires, in order to facilitate the ability of the GEF to more accurately and cost-effectively utilize its limited International Waters funds. |
| **Activities** | **Objectively verifiable indicators** |
| **Sub-component II.1: Assessment of Lake Basins** |  |
| **Activity II.1.1:** Data and Information gathering | Relevant information regarding transboundary lakes and lake basin data sets used in lakes component of TWAP will be provided as a major component of the Report on Transboundary Lake Basins and Lakes at Risk (Activity II.1.3, Sub-activity 2. All relevant data will be included and accessible in the project data and information management system. |
| Sub-activity 1: For transboundary lake basins |  |
| Sub-activity 2: For lake basins at risk |  |
| Sub-activity 3: For linked lentic and lotic water systems |  |
| **Activity II.1.2:** Transboundary Lake Basins assessment | Final results and conclusions of the transboundary lakes and lake basin assessments, validation and projections will be provided in the Report on Transboundary Lake Basins and Lakes at Risk ((Activity II.1.3, Sub-activity 2), or in the Report on Major Issues for Transboundary Lake Basins or Lakes at Risk (Activity II.1.3, Sub-activity 1), as appropriate. Interlinked topics will be discussed and cross-referenced as appropriate in both Reports. All relevant data will be included and accessible in the project data and information management system. |
| Sub-activity 1: Assessment for transboundary lake basins |  |
| Sub-activity 2: Assessment for lake basins at risk |  |
| Sub-activity 3: Assessment for linked lentic and lotic water systems |  |
| Sub-activity 4: Assessment of cross cutting issues (governance – socio-economic issues) |  |
| Sub-activity 5: Validation process |  |
| Sub-activity 6: Determine priority Lake Basins/regions |  |
|  Sub-activity 7: Outlook projections for 2030 and 2050 |  |
| **Activity I.1.3:** Assessment Reporting | Comprehensive reports on Transboundary Lake Basins and Lakes at Risk, Major Issues for Transboundary Lake Basins or Lakes at Risk, and Needed Responses, are prepared. If deemed appropriate for better understanding and guidance to GEF upon completion of the assessment, consideration will be given to combining one or more of these reports into a single document, and cross-referencing relevant issues, conclusions and recommendations. |
| Sub-activity 1: Reports on major issues for transboundary lake basins and lakes at risk, and linked lentic and lotic water systems |  |
| Sub-activity 2: Reports on priority transboundary lake basins and lakes at risk, and l inked lentic and lotic water systems |  |
| Sub-activity 3: Report on needed responses for transboundary lake basins and lakes at risk |  |
| **Sub-component II.2: Sustainability of the Transboundary Lake Basins Assessment** |  |
| **Activity II.2.1:** Establishment of a periodic assessment system | Core and data partners formalize an agreed framework for a sustained assessment process, including identification of any additional collaborative partners deemed necessary for long-term lake-based assessments |
| Sub-activity 1: Sustainability of consortium of partners |  |
| Sub-activity 2: Sustainability of the assessment process - an evaluation framework to identify high risks transboundary lake basins |  |
| Sub-activity 3: Data and information management system |  |
| **Sub-component II.3: Assessment Coordination** | Core and data partners are actively cooperating in project activities, and meeting project deadlines, outputs and budgetary constraints. |
| **Activity II.3.1:**Sub-project management. |  |
| **Component III Objective:** To undertake a global comparative assessment of transboundary river basins, through a formalised consortium of partners, to support informed investments by the GEF and other international organizations, and to be sustained through a periodic process in partnership with key institutions aiming at incorporating transboundary considerations into regular assessment programmes. |
| **Activities** | **Objectively verifiable indicators** |
| **Sub-component III.1: Water quantity & quality** |  |
| Activity III.1.1: Environmental water stress - current | Environmental water stress (current) indicator results data, intermediate by July 2013, final by Aug. 2014. |
| Activity III.1.2: Environmental water stress - projected | Environmental water stress (projected) indicator results data by Aug. 2014. |
| Activity III.1.3: Agricultural water stress | Agricultural water stress indicator results data, intermediate by July 2013, final by Aug. 2014. |
| Activity III.1.4: Urban water quality | Urban water quality indicator results data, intermediate by July 2013, final by Aug. 2014. |
| Activity III.1.5: Lake influence | Lake influence indicator results data, by Aug. 2014. |
| Activity III.1.6: Human water stress – current | Human water stress (current) indicator results data, intermediate by July 2013, final by Aug. 2014. |
| Activity III.1.7: Human water stress – projected | Human water stress (projected) indicator results data by Aug. 2014. |
| Activity III.1.8: Nutrients – current | Nutrients (current) indicator results data, intermediate by July 2013, final by Aug. 2014. |
| Activity III.1.9: Nutrients – projected | Nutrients (projected) indicator results data by Aug. 2014. |
| Activity III.1.10: Water quantity & quality reporting (CESR, CUNY, IGBP) | Water quantity & quality report, intermediate by Aug. 2013, final by Oct. 2014. |
| **Sub-components III.2: Ecosystems** |  |
| Activity III.2.1: Biodiversity & habitat loss | Biodiversity & habitat loss indicator results data, intermediate by July 2013, final by Aug. 2014. |
| Activity III.2.2: Ecosystem integrity | Ecosystem integrity indicator results data, intermediate by July 2013, final by Aug. 2014. |
| Activity III.2.3: Threats to fish | Threats to fish indicator results data, intermediate by July 2013, final by Aug. 2014. |
| Activity III.2.4: Ecosystems reporting | Ecosystems report, intermediate by Sep. 2013, final by Oct. 2014. |
| **Sub-components III.3: Governance** |  |
| Activity III.3.1: Governance architecture | Governance architecture indicator results data, intermediate by July 2013, final by Aug. 2014. |
| Activity III.3.2: Institutional resilience | Institutional resilience (current) indicator results data, intermediate by July 2013, final by Aug. 2014. |
| Activity III.3.3: Institutional resilience – projected | Institutional resilience (projected) indicator results data by Aug. 2014. |
| Activity III.3.4: Enabling environment | Enabling environment indicator results data, intermediate by July 2013, final by Aug. 2014. |
| Activity III.3.5: Governance reporting | Governance report, intermediate by Sep. 2013, final by Oct. 2014. |
| **Sub-components III.4: Socioeconomics** |  |
| Activity III.4.1: Economic dependence on water resources | Economic dependence on water resources indicator results data, intermediate by July 2013, final by Aug. 2014.  |
| Activity III.4.2: Societal well-being | Societal well-being indicator results data, intermediate by July 2013, final by Aug. 2014. |
| Activity III.4.3: Vulnerability to climate-related natural disasters | Vulnerability to climate-related natural disasters indicator results data, intermediate by July 2013, final by Aug. 2014. |
| Activity III.4.4: Population density – projected | Population density (projected) indicator results data by Aug. 2014. |
| Activity III.4.5: Socioeconomics reporting | Socioeconomics report, intermediate by Sep. 2013, final by Oct. 2014. |
| **Sub-components III.5: Deltas** |  |
| Activity III.5.1: Deltas assessment | Deltas indicator results data, intermediate by July 2013, final by Aug. 2014.  |
| Activity III.5.2: Deltas reporting | Deltas report, intermediate by Sep. 2013, final by Oct. 2014. |
| **Sub-component III.6: Analysis & reporting** |  |
| Activity III.6.1: River basin factsheets | River basin factsheets (intermediate by Sep. 2013, final by Aug. 2014). |
| Activity III.6.2: Data & information management | Website with indicator results (demo by June 2014, final by Dec. 2014). |
| Activity III.6.3: Cross-cutting analysis | Inputs to cross-cutting governance and socioeconomic report, by Dec. 2014.  |
| Activity III.6.4: Integrated assessment | Systematic global assessment report on the state of transboundary river basins with provisional outlook projections (Interim Sept. 2013, final report Dec 2014) |
| **Sub-component III.7: Sustainability** |  |
| Activity III.7.1: Design and establish periodic assessment framework | An agreed framework for a sustainable periodic assessment process, including a sustainable consortium of partners by Dec. 2014. |
| **Sub-component III.8: Component coordination** |  |
| Activity III.8.1: Contract management | Signed contracts |
| Activity III.8.2: Meeting arrangement | Meeting minutes |
| Activity III.8,3: Component communication | Updated work plans |
| Activity III.8.4: Progress / financial reporting | Quarterly Progress reports / Quarterly Financial reports |
| **Component IV Objective:** To conduct a global comparative baseline assessment of LMEs through a formalised consortium of partners, and to establish a process for future periodic assessments of LMEs through formal partnerships with key institutions and linkage with regular assessment programmes.  |
| **Activities** | **Objectively Verifiable Indicators** |
| **Sub-component IV.1: Assessment of LMEs and the Pacific Warm Pool** |  |
| Activity IV.1.1: LME Thematic assessment | **Indicator-based assessment of individual themes completed and results, including appropriate maps and associated data in agreed format, available within specified timeframe** |
| Sub-activity 1.1.1: Habitats | Habitat indicators quantified, report completed and data produced in agreed format  |
| Sub.activity 1.1.2: Pollution | Pollution indicators quantified, report completed and data produced in agreed format  |
| Sub-activity 1.1.3: Fisheries | Fisheries indicators quantified, report completed, and data produced in agreed format  |
| Sub-activity 1.1.4: Nutrients (with Rivers) | Nutrient indicators quantified, report completed and data produced in agreed format |
| Sub-activity 1.1.5: Productivity/SST | Productivity and SST trends updated, report completed and data produced in agreed format  |
| Sub-activity 1.1.6: Socioeconomics | Socioeconomic indicators quantified, report completed and data produced in agreed format  |
| Sub-activity 1.1.7: Governance | Governance architecture of transboundary LMEs described and data produced in agreed format  |
| Sub-activity 1.1.8: Cumulative impact mapping/Ocean Health Index | Report with cumulative impact scores and maps and Ocean Health Index for each LME completed and data produced in agreed format  |
| Sub-activity 1.1.9: Ranking of LMEs | LMEs ranked according to ecological status based on the thematic assessments  |
| Sub-activity 1.1.10: Pilot Level 2 assessment- Bay of Bengal LME | Pilot level 2 assessment completed and report and data in agreed format produced |
| Activity IV.1.2: Preparation of assessment products | **Results of thematic assessments integrated into a single report, validated and peer-reviewed, and finalized for publication; data in agreed format uploaded on DIM system**  |
| Sub-activity 1.2.1: Validation and peer review | Validation of assessment results and peer reviewof report completed |
| Sub-activity 1.2.2: TWAP LME assessment report | Assessment report integrating results from all assessment partners, and other products finalized and published |
| **Sub-component IV.2: Sustainability of the LME assessment** |  |
| Activity IV.2.1: Establishment of a sustainable consortium of partners | **Formal agreements signed with partners for their engagement in future LME assessments** |
| Sub-activity 2.1.1: Working Group coordination (meetings) | At least two working group meetings held within project timeframe |
| Activity IV.2.2:Development of a framework for sustainability of the assessment process | **Strategy and institutional framework for sustaining the assessment process prepared and agreed by all key stakeholders** |
| Sub-activity 2.2.1: Participation in stakeholders meetings (Regional Seas, Regular Process, LME consultation, etc) | Appropriate sub-project personnel participate in appropriate meetings to engage with stakeholders  |
| Sub-activity 2.2.2: Post-TWAP strategy for sustaining periodic assessment | Post-TWAP strategy for periodic LME assessments prepared, reviewed and approved by key partners  |
| **Sub-component IV.3: Assessment Coordination** |  |
| Activity IV.3.1: Communication and information dissemination | **Communication and information dissemination strategy implemented, including functional website and outreach material prepared**  |
| Activity IV.3.2: Data and information management system | **LMEs DIM system functional and integrated with the Open Ocean data infrastructure and linked to TWAP data platform** |
| Activity IV.3.3: Sub-project coordination | **Delivery of all sub-project outputs within sub-project timeframe and budget** |
| **Component V Objective:** To undertake a global assessment of the open ocean through a formalized consortium of partners, highlighting global ocean environmental issues, their local environmental and human impact, and informing and influencing the development of thematic interventions through informed investments by the GEF and other international organizations, providing a baseline on which to monitor future progress.  |
| **Activities** | **Objectively verifiable indicators** |
| **Sub-component V.1: Assessment of Open Ocean** |  |
| Activity V.1.1: Assembly of metrics and indices by theme | Below described in the adjusted OO methodology |
| Sub-activity 1: Climate indices | Availability of the climate indices, indicators and metrics  |
| Sub-activity 2: Ecosystem indices | Availability of the ecosystem indices, indicators and metrics |
| Sub-activity 3: Fisheries indices | Availability of the fisheries indices, indicators and metrics |
| Sub-activity 4: Socioeconomic indices | Availability of the socio-economic indices, indicators and metrics |
| Sub-activity 5: Cumulative mapping/OHI | Availability of the cumulative human impact/OHI products |
| Sub-activity 6: Data and information management and interactive display system | Open ocean indicators website available, and data shared with TWAP DIM system |
| Activity V.1.2: Expert assessment by theme |  |
| Sub-activity 1: Climate assessment | Written report component on climate |
| Sub-activity 2: Ecosystems assessment | Written report component on ecosystems |
| Sub-activity 3: Fisheries assessment | Written report component on fisheries |
| Sub-activity 4: Pollution assessment | Written report component on pollution and contaminants |
| Sub-activity 5: Governance assessment | Written report component on governance |
| Activity V.1.3: Assessment reporting and communication |  |
| Sub-activity 1: Report and communication | Availability of the final assessment report and tailored communication products |
| **Sub-component V.2: Establishment of a framework for periodic OO assessment** |  |
| Activity V.2.1: Establishment of a consortium of partners |  |
| Sub-activity 1: Working group coordination (meetings) | Reports of the meetings |
| Activity V.2.2: Development of a strategy for linking TWAP with the ongoing UN Regular Process |  |
| Sub-activity 1: Engagement with UN Regular Process and strategy for sustaining periodic assessment | Report of strategy for TWAP OO to be recognized as a contribution to the UN World Ocean Assessment (Regular Process) |
| **Sub-component V.3: Assessment Coordination** |  |
| Activity V.3.1: Assessment coordination | Quarterly operational and financial reports, OO Working Group meeting reports |
| **Component VI Objective: T**o evaluate governance and socio-economic aspects of all five transboundary water systems and provide an analysis of governance architecture and the cross-cutting social and economic features of the human-environment interactions as a basis for a comparative, synthetic approach for examining common issues across them. |
| **Activities** | **Objectively verifiable indicators** |
| **Sub-component VI.1: Governance** |  |
| Activity VI.1: Assess governance architecture/arrangements |  |
| Sub-activity 1: Establish/coordinate correspondence WG | Membership and commitment to participate are documented in the minutes of Crosscutting Governance Correspondence Group |
| Sub-activity 2: Support WG collection of governance architecture data | Data on governance architecture have been collected by all WGs and are available in a database |
| Sub-activity 3: Support WG governance analysis | Data on governance architecture have been analysed by all WGs and results are available in TWAP Project reports |
| Sub-activity 4: Select linked water systems | Three to five linked water systems have been selected and the rationale for system selection description documented in minutes of the Crosscutting Governance Correspondence Group |
| Sub-activity 5: Acquire governance data on linked systems | Data on governance architecture in the selected linked systems have been collected, compiled and are available in a database |
| Sub-activity 6: Analyse governance data on linked systems | Data on governance architecture have been analysed by all WGs and results are available in TWAP reports |
| Sub-activity 7: Revise governance architecture methodology | Lessons learned in the assessment process and the revised governance assessment methodology documented in a TWAP report |
| Sub-activity 8: Cross-cutting governance assessment report | Validated, peer-reviewed report, data sets and methods uploaded in the web |
| **Sub-component VI.2: Cross-cutting social and economic issues** |  |
| Activity VI.2.1 Assessment of crosscutting social and economic features of human populations dependent on transboundary waters |  |
| Sub-activity 1: Establishment of a Crosscutting Socioeconomic Correspondence Group with membership from each of the five Working Groups  | Membership and commitment to participate are documented in the minutes of Crosscutting Socioeconomic Correspondence Group |
| Sub-activity 2: Identification of input data products including population, and gross domestic product for baseline and projected scenarios | Data sources identified and data distributed to Working Groups in appropriate format |
| Sub-activity 3: Identification of core crosscutting socioeconomic indicators and harmonized methods of assessment  | Agreements on core set of indicators and methods of indicator assessment documented through minutes of Crosscutting Socioeconomic Correspondence Group,  |
| Sub-activity 4: Assessment of baseline crosscutting socioeconomic indicators  | Crosscutting socioeconomic indicators assessed at basin level baseline conditions for each water system and ranked along a gradient of transboundary water-dependent vulnerability for each of the five water systems |
| Sub-activity 5 Assessment of projected crosscutting socioeconomic indicators | Crosscutting socioeconomic indicators assessed at basin level projected conditions |
| Sub-activity 6: Crosscutting Socioeconomics Assessment Report | Validated, peer-reviewed report, data sets and methods uploaded in the web |
| **Component VII Objective:** To organize and present core data and indication used in the assessment in a consistent way, tailored for the use by the TWAP stakeholders and to operate as an authoritative clearing house for transboundary water data and indicators. |
| **Activities** | **Objectively verifiable indicators** |
| **Sub-component VII.1 – Data and Information Management System** |  |
| Activity VII.1.1 – Data and Information management platform |  |
| Sub-activity 1: Define a consolidated strategy for managing TWAP data and information | A consolidated strategy for managing TWAP data and information (document) |
| Sub-activity 2: Review and harmonize data standards to facilitate data sharing | Data standards and exchange mechanisms are documented and endorsed by partners |
| Sub-activity 3: Build, upgrade and integrate TWAP Data Platform/Portal | Single online access point to relevant data on transboundary water systems has been created and is operational, including mapping of TWAP indicators |
| Sub-activity 4: Development of additional technical functionalities and services | TWAP Data Platform supports increasing number of functionalities and services |
| Sub-activity 5: Ensure compatibility with other relevant data and information systems | The TWAP Data Platform is linked with the TWAP website and connected with IW:LEARN functionalities |
| Activity VII.1.2 – Project website – Interactions with IW:LEARN |  |
| Sub-activity 1: Development of project website | Project website has been developed |
| Sub-activity 2: Training and technical support | Project website is maintained |
| Sub-activity 3: Ensure compatibility and linking of TWAP Data Portal and IW:LEARN | Project website hosted by IW:LEARN and TWAP Data Portal are compatible and linked |
| Sub-activity 4: Content development for TWAP Project website | Project website is up-to-date |
| **Sub-component VII 2 – Assessment reporting – communication and outreach** |  |
| Activity VII.2.1 – Publication and outreach |  |
| Sub-activity 1: Publication of reports | Relevant assessment results and reports are published |
| Sub-activity 2: Preparation of outreach material | Other relevant material has been prepared |
| Sub-activity 3: Communication and launches | Assessment reports and outreach products are produced, launched and disseminated |

1. Size is considered to be the most pragmatic criterion to reduce the number of transboundary aquifers to be assessed in the framework of the TWAP level 1 assessment. All transboundary aquifers with a total size of at least 5000 km2 will be covered by the assessment. This reduces the number of TB aquifers from 448 currently known to 166 (assuming that aquifers with unknown area – probably poorly explored and poorly known - will also be deleted) [↑](#footnote-ref-1)
2. Three criteria have been applied to reduce the number of SIDS to be included in TWAP’s aquifer assessment: (i) a maximum size of 50,000 km2 (eliminates four countries: Cuba, Guyana, Suriname and Papua New Guinea), (ii) the state should consist of one or more islands (or part of islands) and not be located on the continent (eliminates another two countries: Guinea-Bissau and Belize); (iii) number of inhabitants should not exceed 5 million (leads to deleting also the Dominican Republic and Haiti). Combining these criteria reduces the number to be included in TWAP from 51 to 43 SIDS. [↑](#footnote-ref-2)