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MENA REGIONAL WATER GOVERNANCE BENCHMARKING PROJECT

DESK STUDY PROTOCOL

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TABLE OF CONTENTS

ACRONYMS	V
FOREWORD	VI
1. INTRODUCTION	7
1.1. Purpose	7
1.2. Structure	8
1.3. Staffing	8
1.4. Level of effort.....	8
2. DOCUMENT COLLECTION	10
3. ONLINE DATABASE	12
4. DOCUMENT TAGGING	13
4.1. Manual Tagging.....	13
4.2. Electronic Tagging	14
5. POLICY AND LEGAL ANALYSIS	16
5.1. Qualitative Analysis	16
5.2. Policy and Legal Framework Scoring	17
5.2.1. Key Document Identification	17
5.2.2. Initial Scoring.....	18
5.2.3. Deliberation to Consensus.....	19
ANNEX 1: DOCUMENT METADATA FORM	21
ANNEX 2: WATER GOVERNANCE BENCHMARKING CRITERIA	22
ANNEX 3: EXAMPLE OF A MANUALLY TAGGED DOCUMENT	23
ANNEX 4: EXAMPLE OF AN ELECTRONICALLY TAGGED DOCUMENT	24
ANNEX 5: EXAMPLE OF TAGGED TEXT SPREADSHEET	25
ANNEX 6: EXAMPLE OF COUNTRY POLICY AND LEGAL PROFILE	26
ANNEX 7: EXAMPLE OF COUNTRY SCORE SHEET	27

ACRONYMS

DDA	Digital Database Assistant
DOC	MS Word document format
IRG	International Resources Group
OSU	Oregon State University
P&L	Policy and Legal
PDF	Portable Document Format
ReWaB	MENA Regional Water Governance Benchmarking Project
USAID	United States Agency for International Development

FOREWORD

One important purpose of this project was to develop a structured process for profiling national policy and legal frameworks. This Protocol represents a distillation of the process that has emerged into a form that can guide others in applying it. Because changes, adaptations, and improvements to it should and, it is hoped, will occur, it also serves to document the present “state of play” and to serve as a foundation for those improvements.

The protocol was drafted by Dr. Lucia De Stefano of International Resources Group (IRG) and Ms. Bridget Brown of Oregon State University (OSU). In addition, the development of the process described benefitted greatly from contributions from other team members at OSU and members of the project team at other institutions. Special thanks are due to Prof. Aaron Wolf who directed the work at OSU.

Mark Svendsen, Ph.D.
International Resources Group
Team Leader
Regional Water Governance Benchmarking Project

I. INTRODUCTION

1.1. PURPOSE

The purpose of this protocol is to document the Regional Water Governance Benchmarking (ReWaB) project's approach to implementing document-based policy and legal analyses¹. These analyses, in turn, are intended to provide insight into the policy and legal context for water governance decision-making in the target country. The policy and legal analysis, together with field-based data, helps characterize the country's water governance regime. Final outputs of this activity are (1) a searchable online database of water-related policy and legal documents, (2) a set of country reports assessing the extent to which five water resources standard functions and five water governance decision-making process features are addressed in those documents, and (3) a score sheet reporting quantitatively the extent to which each of the standard functions and process features are supported in the documents reviewed. This protocol describes the process followed collecting and analyzing relevant documents for each country.

The documents considered include (1) policy papers that are either specifically aimed at water, or are focused on other issues but have a direct impact on water governance and management and (2) national water-related laws, together with important implementing regulations². The document set that provides the basis for the assessment is collected with the support and advice of local partners in each target country. The subsequent analysis is a desk study, based only on the written documents collected. As such, it does not assess actual performance but rather the framework of policies and laws that organize and guide water sector governance and management. This approach makes the analysis relatively easy to update, in comparison with field studies. On the other hand, it does not reflect unwritten laws, intangibles, social values, and traditions that contribute in a unique way to shaping water governance in the country, unless these influences are also captured in the official texts. In a similar way, government initiatives that are not explicitly mandated or mentioned in legal or policy documents are not captured by the analysis. Therefore, this analytic component of the governance assessment process provides a picture of the “enabling conditions” for good water governance, but only integration with field-based data can show the results of their implementation.

¹ A description of the project and other project material is available at the project website www.rewab.net.

² The ReWaB database, available at www.rewab.net, contains the full set of documents used in these analyses.

1.2. STRUCTURE

The desk study work includes the following steps (1) document collection, (2) document tagging³, (3) uploading of documents to an online document database, and (4) country by country policy and legal analysis (elaboration and scoring).

1.3. STAFFING

Four project staff members, at minimum, are needed to conduct the policy and legal (P&L) desk study. These include three trained staff members who will act first as document coders (taggers) and then as analysts⁴ and one digital database assistant (DDA) familiar with Adobe Acrobat Professional 9.0 software. In addition to these four project staff members, the support of an online database manager is required to update and maintain the document database. A local organization or contact in the target country is also required to advise on the selection of the documents and to help retrieve physical and electronic copies of those not available online (see Section 2 for details).

The three coders first manually tag the documents and then subsequently conduct the policy and legal analysis and scoring exercises. The DDA keeps an inventory of incoming documents, checks the provided metadata for completeness, uploads digital documents to the online database, and transfers document tags to the digital versions of the documents. If documents are also to be tagged electronically in the original language (in addition to English), a DDA fluent in that language performs this task.

1.4. LEVEL OF EFFORT

No minimum or maximum number of documents is required for the Desk Study, since the main criteria for selection is their relevance and the main constraint for collection is their actual availability. For the five initial study countries, total number of documents per country ranged from 11 to 41. Likewise, the length and content of the documents will vary, depending on their formats. For example, Egypt has a lengthy National Water Resources Plan, which discusses water policy across several dimensions of supply and demand, while Jordan has several shorter policy documents specific to different sectors, such as agriculture, and sources, such as groundwater. Thus, what constitutes completeness in the collection of documents will vary substantially by country.

³ As it will explained in Section 3, “Tagging” here means indexing relevant passages of documents and linking them to specified key words, or “tag terms”. The tag terms reflect the water resource standard functions, decision-making process features, and cross-cutting categories listed in Annex 2.

⁴ If circumstances require, document coders and analysts can be different staff, though some efficiency will be lost.

Time required for the analysis is also strongly influenced by the specific circumstances of the country. Ideally, local partners are given about 3 months to identify and provide documents. However, in the focal countries this process has sometimes required numerous interactions between the project team and the local partner, significantly prolonging the document retrieval process. Where translation from another language into English is required, the time required for this must also be considered. As a point of reference, a professional translator needed approximately 34 working days to translate about 62,000 French words in Moroccan policy and legal documents into English. An additional initial period of about four weeks was required to identify providers and contract for translation services.

The duration of the document tagging and analysis also varies significantly, depending on the number and length of the documents to be analyzed. As a reference, for Egypt tagging 11 documents took approximately 15 days⁵, the elaboration of the country profiles spanned about 30 days, and the scoring required an additional 21 days.

⁵ These times refer to the number of calendar days spent by three coders/analysts working 20 hours per week. These are not person-days of effort.

2. DOCUMENT COLLECTION

When starting the P&L desk study in a new country, the project team follows the steps below to retrieve and organize the documents relevant to the analysis:

1. The project team identifies a consulting firm or partner organization in the country that knows the water sector well and is familiar with existing water-related laws and policies.
2. The local partner is given a timeframe to locate and provide digital copies (*pdf* or *doc* files) of official water-relevant policy and legal documents. Policy documents are strategies, master plans, or guidelines in which the government defines water-related goals and outlines means of achieving those goals, often within a specified period of time. Legal documents include basic water laws, irrigation and water supply laws, and laws that relate to water quality, water in the environment, and water in other uses. These documents must meet two simple tests to be included: (a) they must be “official” in that they have been approved by the relevant authority and are in effect, (b) they must be the most recent existing version of the law or policy, incorporating all amendments and changes which have been made and formally approved to date. If possible, the documents are obtained in both the country’s official language and in English. Ideally, the English version is an official translation. If no English translation is available, a translation into English is arranged, preferably using a native English-speaking translator with a strong working knowledge of the second language and a familiarity with water-related issues.
3. The local partner is responsible also for collecting and providing metadata for each document, using the form shown in Annex 1. The metadata describe and classify the document and are entered with the document into the online database. It is important that the metadata are accurate and complete from the beginning to avoid repeated revisions and edits in the database. The DDA on the analysis team keeps a record of all received documents and checks the metadata of each for completeness.
4. The analysis team complements the work of the local partner by independently searching websites of national ministries of water, environment, agriculture, and so on for downloadable documents. Two general sites that contain useful legal document collections for many countries

are also searched⁶. When such documents are located, the local partner is asked to confirm the relevance of the retrieved documents and complete the metadata sheets for them.

⁶ <http://faolex.fao.org/>, <http://www.emwis.net/countries>

3. ONLINE DATABASE

All the received documents are uploaded (in *pdf* format) into an online searchable database, with each document supported by the document metadata. Once the project team has completed the tagging process – described in Section 4 of this document – the tagged versions of the original documents are included into the online database as well.

The purpose of the database is twofold. First, it helps to store, in a structured way, the documents used by the project team for the P&L analysis. Second, the document database is freely available online, serving as a documented repository of water-related policy and legal documents for the target countries. Professionals in the water field as well as researchers can access these documents in their original form or, alternatively, search for how various aspects of water governance manifest in national policies and laws. The latter feature enables users to read the language in various passages related to the five water governance functions and five water governance process features, offering a unique and useful approach to examining the context of specific aspects of water governance within a single country or across several countries.

The following three menus are available at the database interface for online users to choose from:

1. Document List. This menu contains a list, with links to online files, of the documents included in the database. The documents are sorted by country, and all available languages are indicated and retrievable.
2. Document Query. This menu allows users to search for the original, untagged, versions of available documents. Available search criteria include country name, language, and information provided in the metadata, such as the sector from which the document originated.
3. Tagged Document Query. This menu allows for searches based on tags, discussed in detail in Section 4.
4. It allows users to search for documents containing material relevant to the various tag terms that reflect the five water governance functions and five water governance process features. Queries in this menu can be implemented for one or more countries, as well as for one or more water governance topics. The query returns a list of documents in order of relevance, defined by the number and length of passages associated with specified criteria.

4. DOCUMENT TAGGING

Once the document collection is complete for a given country, each document is tagged, which means that relevant passages are indexed and linked to specified key words, or tag terms. The tag terms reflect the water resource Standard Functions (functions), Decision Making Process features (processes), and Cross-Cutting Categories (categories). It should be remembered that *Standard Functions*, *Decision Making Process Features*, and *Cross-Cutting Categories* are terms that have specific meanings in the context of this project and are defined in the project framework paper⁷. The complete list of tag terms can be found in Annex 2. The purpose of the tagging process is to allow project analysts, or any online user of the database, to easily locate and access passages related to particular aspects of water governance within the set of available documents. The tagging process consists of two steps – manual tagging and electronic tagging.

4.1. MANUAL TAGGING

During manual tagging, coders read carefully through each document and tag relevant portions of it using the list of tag terms described above. In practice, coders read each document slowly, sentence by sentence, looking for language that reflects one or more of the 42 tag terms. Where relevant language is identified, coders indicate the associated term(s) by writing it (them) adjacent to the relevant passage. In addition to writing in the relevant tag terms, coders must also indicate the extent of the content to which each tag refers. This can be achieved by drawing brackets around the relevant passage or by some other consistently-used process. This is done to communicate the extent of the relevant passage to the DDA, so that during the electronic tagging he/she can indicate on the tagged text spreadsheet (described below) how much content is relevant to each tag.

In tagging for functions, each document is tagged for occurrences of the sub-function terms, but not for the broader function categories. For processes, each document is referenced for each of the five decision-making process features. A limitation of the process features tagging is that processes can sometimes be indicated by the mere existence of a document, which is difficult to tag. For instance, passing a series of environmental protection statutes may be a sign in and of itself that the government is responsive, but this may not be indicated in the language of the individual documents, and therefore this

⁷ www.rewab.net

process may not be appropriately identified. Where this is the case, researchers mention, in the final report, that certain process features may be better-covered than the individual tags indicate. Additionally, each document is assessed in terms of the sub-elements of the two cross-cutting categories pertaining to the various sources and uses of water. Using the cross-cutting tag terms during the analysis, analysts can observe which sources receive the most attention and which water use sectors are emphasized.

A minimum of two, but ideally three, coders tag each document independently and then revise their assessments jointly, reaching consensus on each tag. As complete objectivity is impossible to achieve in a content analysis such as this, the approach of utilizing more than one coder helps ensure that the resulting tags reflect a range of interpretations of meaning within the texts. Tags are thus associated with content that without question refers to a given tag term, but also associated with content that is more ambiguous. Through this process, all content that is at least marginally relevant is tagged. Eventually, a final tagged hard copy is handed to the DDA for electronic tagging⁸ (See a sample of manually tagged document in Annex 3).

4.2. ELECTRONIC TAGGING

Once a document is manually tagged, the DDA transfers the tags to the digital form of the document in *pdf* format. The DDA first appends the two-page list of tag terms (Annex 2) to the beginning of the document using the “combine: merge documents” tool in Adobe Acrobat Professional 9.0. Next, the DDA scans through the manual tags in the document and numbers and letters them (0 to 99, then A to Z, then AA to ZZ) according to the order of occurrence in the tag terms list. This means that the DDA starts by numbering, in sequential order, all the tags that refer to the first sub-function, and then continues the numbering with each sub-function, process and cross-cutting category. Then, for each passage that had been previously tagged manually and that has now been numbered, the DDA (1) inserts the assigned number/letter as closely as possible to the passage within the electronic document⁹ and (2) adds that number/letter combination to the tag term list now attached to the beginning of the document. The numbers/letters in the tag term list thus correspond to the numbers/letters inserted into relevant passages within the document. Tags are placed so that they demonstrate the extent of coverage. For example, a tag placed next to the document title indicates that the entire document reflects the tag term. Likewise, a tag placed adjacent to a paragraph indicates that relevant information may be found anywhere within the associated paragraph. These are set up as hot links and provide a two-way clickable

⁸ This could also be a digital Word document, with the tags typed in a contrasting color or inserted as comments.

⁹ This is done using the Adobe Professional 9.0 “bookmark” and “typewriter” tools.

connection between the tag term list at the beginning of the document and tagged passages in the body of the document. This allows an analyst, or user of the online database, to select and jump from the tag term list to the relevant material within a document associated with a particular tag term, and vice versa. Annex 4 provides an example of an electronically tagged document.

During the electronic tagging process, the DDA creates a spreadsheet of tags for the country (see a sample tagged text spreadsheet in Annex 5). The spreadsheet includes four columns of relevant information, which are used to return documents in order of relevance in the *Tagged Document Query* described in Section 3 above. The first column in the spreadsheet contains the document title. In the second column, adjacent to the document title, is the series of tag numbers/letters inserted into the document, beginning with the first tag for sub-function 1.1 (1, 2, 3, 4... and so on). Adjacent to each tag in the third column is an abbreviated code for each tag. Sub-functions are referenced using the letter "A" and the sub-function decimal number (e.g. sub-function 1.1 is inserted into the spreadsheet as "A1.1"). Process features use the letter "B" and the number associated with each feature (e.g. transparency is "B1"), and cross-cutting categories the letter "C" and the associated decimal number (e.g. surface water is "C1.1"). Finally, in the fourth column is a code reflecting the amount of relevant content associated with each tag. There are four different categories for amount of content, listed in order of least to most associated content: paragraph (P), article (A), section (S), and document (D). Each spreadsheet is delivered to the manager of the online database, who integrates it into the database to facilitate the "Tagged Document Query" feature.

5. POLICY AND LEGAL ANALYSIS

Policy and legal documents are analyzed separately using two different methodologies, both of which are applied to each set of documents. The first approach is a qualitative textual analysis, and the second is a quantitative analysis based on a scoring process.

Policies and laws are analyzed separately because they tell two different stories and can consequently be compared to one another. As explained in Section 2, policies here are defined as strategies, master plans, or guidelines in which the government defines water-related goals and outlines instruments to achieve those goals, often within a specified time period. Therefore, the coverage of water governance functions and processes within policy material reveals which topics are emphasized and prioritized, and which topics the government plans to legitimize through mandates and regulations in the future. Legal documents create implementation and enforcement mechanisms for policies and include basic water laws, irrigation and water supply laws, and laws that relate to water quality, water in the environment, and water in other uses. Coverage of particular water governance functions and processes within the legal material designates the topics the government can legitimately implement and enforce. Comparing the two can reveal discrepancies and consistencies, information that may prove useful in writing and revising policies and laws.

5.1. QUALITATIVE ANALYSIS

The qualitative analysis utilizes the tagged policy and legal documents described in the previous section. Preferably three, but a minimum of two, analysts review the tags within the water-related documents with the purpose of assessing “how” and to what extent functions and process features are incorporated into policies and laws. Moreover, analysts evaluate whether existing policy documents and laws emphasize particular sources and/or uses of water.

These issues are addressed in a write-up that begins by analyzing the policy and legal treatment of function one and its sub-functions and proceeds in order through function five. A similar analysis is then undertaken for the five good governance decision-making features and the cross-cutting categories. Throughout the analysis, the consistency (or lack of it) between the policy guidelines referring to a specific function/feature/category and the corresponding legal provisions is highlighted. Each topic is discussed in enough detail to provide an accurate summary description of its manifestation in the text, and to highlight important details such as document titles and relevant organizations. While there is no minimum or maximum page length for the document, previous write-ups have ranged in length from 28

pages to 45 pages. The result of this process is a *Country Policy and Legal Profile*. An example of such a profile is provided in Annex 6.

5.2. POLICY AND LEGAL FRAMEWORK SCORING

For each country, documents are also numerically scored, based on the level of detail in the language describing sub-functions and process features. These scores are intended to present a snapshot depiction of how extensively various criteria are included in the documents, with the previously-described qualitative analysis serving as the in-depth analysis. While the five water governance functions and five water governance process features can be considered universal assessment criteria, sources and uses of water vary so extensively from country to country that scoring the cross-cutting categories was determined not to be useful.

As in the qualitative analysis, policy documents are assessed independently of the legal documents. The result is two separate sets of numeric scores – one for policies and one for laws – at the level of sub-function and process feature. Once these numeric scores have been determined, numeric scores for sub-functions are aggregated by function through arithmetic averaging. Aggregate scores are obtained by averaging all functions together and all process features together. A sample score sheet is shown in Annex 7.

Three analysts implement the scoring process independently to reduce subjectivity and bias in scoring. This process is based on the concept of “inter-rater reliability”, a validation technique that enhances the repeatability of a content rating methodology. Because the analysts must assign scores for “latent” content (e.g. underlying meaning or intent), consensus among analysis team members is crucial.

5.2.1. KEY DOCUMENT IDENTIFICATION

Prior to assessment, key policy documents and key legal documents for the country are singled out by the analysis team. A key policy document is a master plan, a water resources strategy, or other comprehensive water-specific policy document. A key legal document is a comprehensive water law or a source- or use-specific water law. There may be several key documents for a given country, or none at all. The purpose of this step is to determine which document(s) the analysis team should begin the assessment with, since they are likely to contain the bulk of the coverage. If key documents are identified, analysts assess those documents first and then move on to the remaining documents. The purpose of this step is to limit time invested in this process. As scores are comprehensive, a single key document may contain enough language to warrant scoring a “4” for a framework element, thus eliminating the need to exhaustively review the remaining tags.

5.2.2. INITIAL SCORING

At least three analysts independently review each group of documents and assign scores between 1 and 4, based on the criteria below representing how extensively the policy or legal documents, taken together, cover the framework element in question.

Table 1. Criteria for assigning whole-number numerical scores to documents.

4	The framework element (sub-function/process feature/cross-cutting sub-category) is covered extensively in the documentation, and is specific to the water sector . Language is rich, detailed, and/or abundant, and clearly refers to the framework element in question. The framework element may present as a section or article heading, or appear consistently across the documentation. There is marginal, if any, doubt that the framework element is a clear priority within the documentation.
3	The framework element is covered to a lesser degree than above in the documentation; language is specific to the water sector but less detailed and/or less abundant, but still clearly refers to the framework element in question. Language is somewhat ambiguous when referring to the framework element, lost among other topics, or included substantially but not as a main point. Alternatively, language is rich, detailed, and/or abundant and clearly refers to the framework element in question, but refers to the broader environmental (or a related) sector rather than directly to the water sector. There is some doubt that the framework element is a priority.
2	The framework element is covered marginally in the documentation. Language is present but unclear, not detailed, or not abundant. If any evidence of the framework element is present, a “2” must be assigned rather than a “1”.
1	The framework element is not covered in the provided material. No evidence of the framework element is present whatsoever, unless it is through a tag that has since been determined to be not relevant to the framework element.

During the scoring, each analyst keeps detailed notes describing why he/she assigned a particular score, pointing to specific documents and language within the documents. Analysts do not confer with one another during this phase, and each applies precisely the same methodology, implementing the following process to assign initial scores.

1. Numerically score policy documents
 - a. Beginning with sub-function 1.1 in the key documents, then moving through all additional policy documents, review and record language associated with all relevant 1.1 tags. This is done in a Word document, in a spreadsheet, or by hand, as long as all of the recording is done in a single location and is readily accessible (i.e. not next to the tags in the documents). As some documents may have been over-tagged, resulting in irrelevant tags, some tags may be disregarded for the scoring. If the analyst feels that this is the

case, he/she notes reasons for the deletions. If deliberation is necessary because independent deletions are not unanimous, tags deemed irrelevant must be discussed and all team members must concur on the decision.

- b. Review the notes for sub-function 1.1, comparing language to the specific language in the framework element. When the word “and” is included in the framework element, there must be sufficient evidence of both sides of the conjunction. For example, sub-function 3.1 is “awarding and recording water rights and corollary responsibilities”. In order to earn a “4”, language clearly indicates awarding/recording rights and also awarding/recording corollary responsibilities.
 - c. Determine, based on the detail of language and using the rubric in Table 1, an initial numeric score between 1 and 4. Record this score.
 - d. Repeat for all sub-functions, process features, and cross-cutting sub-categories, in consecutive order.
2. Numerically score legal documents, following the same methodology laid out for policy documents above. Assign separate scores.

5.2.3. DELIBERATION TO CONSENSUS

The analysis team periodically convenes to determine the final scores to be assigned for each framework element. It is useful to convene frequently, breaking up the independent assessment process. For example, the team initially scores Function 1, and then convenes before moving onto Function 2. During this meeting a spreadsheet (see Annex 7) is produced containing the score assigned by each analyst in order to determine the variation, if any, among the scores. Elements scored identically by all team members during the initial scoring process receive that value as a final score.

Elements with varying scores are assigned a final score by implementing at least two additional steps. First, the analysis team discusses the initial scores, each providing justification as to why each assigned his/her respective scores. After listening to the justifications, each analyst then has the opportunity to alter his/her score. If consensus is reached at this point, this becomes the final score for the element. If consensus is not reached, the analysts revisit their original analyses independently and repeat the scoring process. They then reconvene and deliberate to consensus once again. This process is repeated until consensus is reached among the analysts. Where initial scores are not identical (i.e. the deliberation to consensus process is necessary) the final score is marked with a “C” to indicate the process of consensus. Where initial scores are identical, a “U” is recorded, indicating unanimity. The final products are two sets

of scores rating the comprehensiveness of policy documents and legal documents in addressing sub-functions, functions and process features.

ANNEX I: DOCUMENT METADATA FORM

ANNEX 2: WATER GOVERNANCE BENCHMARKING CRITERIA

ANNEX 3: EXAMPLE OF A MANUALLY TAGGED DOCUMENT

ANNEX 4: EXAMPLE OF AN ELECTRONICALLY TAGGED DOCUMENT

ANNEX 5: EXAMPLE OF TAGGED TEXT SPREADSHEET

ANNEX 6: EXAMPLE OF COUNTRY POLICY AND LEGAL PROFILE

ANNEX 7: EXAMPLE OF COUNTRY SCORE SHEET

U.S. Agency for International Development

1300 Pennsylvania Avenue, NW

Washington, DC 20523

Tel: (202) 712-0000

Fax: (202) 216-3524

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