IPIECA - GEMI
Water Risk Assessment Tools
Webinar and Workshop
Outcomes Summary
This document was prepared by IPIECA and GEMI, who gratefully acknowledge the assistance of Geosyntec Consultants in its preparation.
Introduction

This document presents the outcomes of a webinar and workshop on water risk assessment tools co-hosted by the Global Environmental Management Initiative (GEMI) and IPIECA, the global oil and gas industry association for environmental and social issues, in September and October 2013. These organizations have collaborated in developing a unique set of interrelated water tools, which companies may use in their efforts to sustainably manage water. In the two years since IPIECA and GEMI launched their tools - the IPIECA Global Water Tool (GWT) for Oil and Gas (2011), which is a customized version of the World Business Council for Sustainable Development (WBCSD) GWT, the GEMI Local Water Tool (LWT)™, and the GEMI LWT™ for Oil and Gas (2012) - companies have been applying and gaining experience with these tools. The webinar and workshop featured several insightful company testimonials and case studies, interactive breakout sessions, and facilitated discussions about key considerations for applying the tools. The experiences shared by companies using the IPIECA and GEMI tools are summarized herein with the goal of assisting new and current tool users in implementing emerging best practices that will result in effective and comprehensive water risk assessment for their companies.

Overall Process

Several IPIECA and GEMI member companies have been applying the GWT for oil & gas and the GEMI LWT™ in sequential global and local water risk assessments. The interconnectivity of these tools enables easy transfer of site information and water use data between them in either direction. Typically, the GWT (or another global water risk tool) is used first to map a company’s portfolio of sites for a global-level screening of those sites in potentially water-stressed regions. The tool compares a company’s water use, site-by-site, with validated water, sanitation, and population information. By calculating water consumption, efficiency, and intensity metrics, it establishes relative water risk in the portfolio for prioritizing action. The GWT for oil & gas also maps water risk metrics and creates water sustainability reporting data and inventories.

Next, the GEMI LWT™ is applied to potential high-risk sites, as identified by the GWT for oil & gas or other global-level tools, to assess water-related impacts and risks at a site-specific level and document water management activities and opportunities to address those risks.

The tool consists of six modules (Table 1). Module 2 requires the user to review recent, credible sources of local data and

<table>
<thead>
<tr>
<th>Module</th>
<th>Functionality</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 – Site Data</td>
<td>Enter water use data and assign internal importance levels to all water sources and discharge points</td>
</tr>
<tr>
<td>2 – Local External Conditions</td>
<td>Review local data and rate external stress severity levels for 17-19 water issues for each water source and discharge point</td>
</tr>
<tr>
<td>3 – External Impacts Assessment</td>
<td>Assign magnitude of company contribution to each impact issue for identification and ranking of external impacts</td>
</tr>
<tr>
<td>4 – Risk Assessment</td>
<td>Identification and ranking of the external risks to each water source and discharge point</td>
</tr>
<tr>
<td>5 – Management Plan</td>
<td>Enter current water management methods and opportunities</td>
</tr>
<tr>
<td>6 – Reporting/Summary Dashboard</td>
<td>Highlights risks and impacts and generates water use metrics for four sustainability reporting entities</td>
</tr>
</tbody>
</table>
apply best professional judgment to qualitatively rate external stress conditions for a comprehensive list of issues. This is done for each water source and discharge point used by the site. These ratings drive assessments of site-level water impacts and risks in Modules 3 and 4, respectively. Users can then enter water management planning-related information into Module 5. The tool generates a summary dashboard of the highest level impacts and risks and generates site-level water use metrics for performance tracking and sustainability reporting.

**Business value of the tools – linking impacts and risks to management plans**

Companies characterized a broad range of current management methods and approaches for addressing water risks and impacts. Workshop participants identified numerous potential opportunities and benefits that could be created from implementing water management activities as an outcome of comprehensive water risk assessment. These included reducing freshwater consumption and beneficially re-using water, which could result in enhanced efficiency in operations, better community relations, reduced costs (raw water cost and water disposal costs) leading to enhanced profitability. Other benefits may include: enhancing stewardship; prioritizing action/focus areas; informing business development decisions; fostering investor confidence; supporting new product lines; enhancing compliance; improving stakeholder relationships; and ensuring the use of best management practices.

Companies using the GWT for oil & gas and GEMI LWT™ in comprehensive water risk assessments report: business value from an efficient, consistent, and credible process for assessing and documenting water risks; enhanced internal company communications regarding high-risk sites and proactive water management planning; and responsive external communication with stakeholders about a company’s water use. Enhanced external communication may take the form of sustainability reporting, customer surveys, or meetings with non-governmental organizations and other stakeholders.

The ultimate business value of using these tools results from incorporating their use into an iterative water management process. By assessing global and local water risks, critically thinking through how water use impacts local water conditions, and prioritizing water management activities in their value chain, companies can optimize their water use and consumption, enhance business performance, and maintain their reputation and social license to operate.
Organizing a Water Risk Assessment

Case studies and breakout sessions revealed that many companies are using top-down, tiered approaches in conducting comprehensive water risk assessments. The tiered approach may consist of applying one or more global-level tools to screen a portfolio of sites, followed by applying the GEMI LWT™ to assess individual high-risk sites. Several companies are using the GWT and the World Resources Institute (WRI) Aqueduct risk assessment tool for their global-level water risk assessments. One company has been using Aqueduct followed by the World Wildlife Fund (WWF)/DEG Water Risk Filter and the GEMI LWT™. The use of multiple high-level tools can add value in validating trends in water stress and scarcity indicators, which strengthens internal communication about tool results and sites potentially warranting site-specific assessment.

Major tasks for completing a water risk assessment include creating the project team, gaining support from site management, obtaining water use data by site, selecting the appropriate fit-for-purpose tools (normally after testing a variety of tools), defining the “local” area around the company’s operation in which to base the risk assessment, and obtaining the required data and information in order to complete the risk assessment. Companies identified the following types of best practices to ensure consistency and credibility in organizing and conducting water risk assessments:

- Establish guidance for the team(s) conducting the assessments;
- Assign subject matter experts to the core team;
- Establish the core team, resources, assessment process, and objectives through an internal workshop or webinar;
- Use multiple high-level tools to ensure the validity of findings;
- Establish criteria for carrying high-risk sites through the tiered assessment;
- Draw upon local knowledge and datasets as key to use of the GEMI LWT™;
- Communicate and coordinate internally for endorsement of the process; and
- Clearly document data sources used in rating each issue in the GEMI LWT™.
Data Requirements for Implementing a Risk Assessment Using the GEMI LWT™

Module 2 of the GEMI LWT™ requires the user to select the most appropriate external stress severity levels for a comprehensive list of water issues that are beyond the company’s control (e.g. a dry climate). Breakout groups worked with the detailed definitions for influent and effluent issues in Module 2 and explored the different kinds of local information and data that could be used to complete the module. The breakout groups estimated the level of effort needed to complete the tool as tending towards 40 to 60 total hours per facility/site. The following work approaches for completing the tool to provide for credible, robust analysis of the issues were suggested:

- Centralized in-house management and local subject matter experts and/or consultants;
- Subject matter expertise to include compliance, public affairs, policy, hydrology, ecology, water quality, geology, agriculture, economics, pollutant fate and transport/toxicity, depending upon the local setting;
- Oversight by someone familiar with the tool;
- Framework for data needs evaluation, gathering, analysis, and reporting;
- Methods for maintaining intra- and inter-project consistency; and
- Effective internal and external communications.

Current Good Practices

A number of good management practices were highlighted during the company case studies and workshop discussions. These focused mainly on the GEMI LWT™ and included the following:

- Incorporating flexibility into the high-level screening process and using multiple tools to validate water stress trends and support internal communications about high-risk sites;
- Defining the local area for each water source and discharge point at the outset of the local water risk assessment, noting that the extent of the local area may vary between sources and discharge points;
- Applying case-by-case best professional judgment to the rating of module inputs;
- Using a centralized team to maintain consistency in application of the tools;
- Considering expertise and years of experience in selecting the team;
- Conducting a site visit and interview with facility staff to evaluate site-specific issues;
- Using the provided fields in each module to document data sources and rationale;
- Obtaining internal peer review and validation of information entered into the tools;
- Communicating and coordinating closely with company and site management to proactively address concerns regarding tool implementation and results, and
- Pulling company case studies together as guidance to provide for consistency and reference.
Future Developments

A key outcome from the webinar and workshop is a desire for the continued support of GEMI and IPIECA to promote the uptake of these tools by new and current users. The webinar and workshop also suggest potential opportunities for future tool development, namely:

- Workshop participants expressed a great deal of interest in the company testimonials and case studies presented. This included the continued sharing of company experiences of applying the tools, which could take the form of written case studies and e-learning videos hosted on the GEMI and IPIECA websites.
- In addition, companies could benefit from future training on how to use the GEMI LWT™ in particular. Training could be provided in workshops, as a written user guide, and/or as an e-learning course made available to member companies and organizations on the GEMI and IPIECA websites.
- Finally, workshop discussions revealed a need by companies for more water management planning guidance to facilitate effective application of Module 5 of the GEMI LWT™. Guidance would assist companies in better understanding how to approach documenting management plans and opportunities. Through the implementation of management plans, companies could ultimately realize the full business value of conducting a local water risk assessment.

IPIECA and GEMI will aim to explore these future development opportunities in 2014 and beyond.
IPIECA is the global oil and gas industry association for environmental and social issues. It develops, shares and promotes good practices and knowledge to help the industry improve its environmental and social performance, and is the industry’s principal channel of communication with the United Nations.

Through its member-led working groups and executive leadership, IPIECA brings together the collective expertise of oil and gas companies and associations. Its unique position within the industry enables its members to respond effectively to key environmental and social issues.

5th Floor, 209-215 Blackfriars Road. London SE1 8NL, United Kingdom
Telephone: +44 (0) 20 7633 2388 Fax: +44 (0) 20 7633 2389
E-mail: info@ipieca.org Internet: www.ipieca.org

The Global Environmental Management Initiative (GEMI) is a global leader in developing insights and creating environmental sustainability solutions for business. Since 1990, GEMI has captured the vision and experience of senior-level global corporate environmental, health and safety (EHS) and environmental sustainability leaders from diverse business sectors through the development of a wide range of 30+ publicly-available, free solutions-based tools designed to help companies improve the environment, their operations and add business value.

1155 15th Street, NW, Suite 500, Washington, DC 20005, United States.
Telephone: +1 202-296-7449 Facsimile: +1 202-296-7442
Email: info@gemi.org Internet: www.gemi.org Twitter: @GEMINews

© IPIECA/GEMI 2014 All rights reserved