



4 Real-Time Delphi Studies

The Millennium Project has helped several organizations collect judgments around the world using its Real-Time Delphi online software over the past year. For example, the World Bank supported a review of the Resource Allocation Framework of the Global Environmental Facility, UNESCO began planning for the United Nations World Water Development Report, Peru's Energy and Mining Supervisory Agency explored possibilities for the 10-year future of electricity, Millennia 2015 assessed developments to improve the status of women, and the World Federation of UN Associations studied current relevance and issues of the Universal Declaration of Human Rights.

The Real-Time Delphi is a relatively new and efficient method for collecting and synthesizing expert opinions. The original Delphi technique was developed by the RAND Corporation in the late 1950s. Although it has produced many valuable insights for many around the world, it requires multiple rounds of questionnaires that can take months to complete. The big advantage of the RTD is that it is a “roundless” Delphi. There is no need for an explicit second round. The respondents participate by filling out an online questionnaire, and the results—both numerical and qualitative—are updated as responses are recorded in “real time.” Respondents can—and are encouraged to—revisit the questionnaire as many times as they want. Each time, they are shown their own responses as well as the updated answers of the others, and they can revise and change their own inputs based on this feedback.

Review of the Global Environment Facility's Resource Allocation Framework for the World Bank

Since 1991, the Global Environmental Facility has provided \$8.26 billion for more than 2,200 projects to improve environmental conditions in more than 165 developing countries and countries with economies in transition. It was initiated by the World Bank. Today it is a global partnership among 178 countries, international institutions, NGOs, and the private sector. World Perspectives, under contract to the World Bank, contracted with The Millennium Project to conduct three simultaneous Real-Time Delphi studies (biodiversity, climate change, and overall performance) for the GEF Evaluation Office. The studies contributed to the evaluation of the indicators, indexes, and overall performance of the Resource Allocation Framework of GEF. In all, more than 100 people responded to the questionnaires.

The RAF is a systematic method for allocating resources to recipient countries. The method involves a number of country-by-country indexes that relate to the potential contributions of each country, and resources available for this purpose are allocated on the basis of the scores. The scores are calculated by criteria based on index formulas that were reviewed in these studies. Many of the questions in the Real-Time Delphi were quite technical and specific and dealt with adequacy of the formulas used in the framework; other questions were matters of judgment about the general content of the formulas and the philosophy of allocation.

The results were used in the GEF's *Midterm Review of the Resource Allocation Framework*, May 2009. The report is available at www.gefeo.org/uploadedFiles/Evaluation_Office/RAF/raf-mtr.pdf.

The following are some examples of insights from the study used by GEF:

- Biosafety is best addressed as a transboundary issue outside the RAF design.
- Biodiversity indexes should not be extended to include agrobiodiversity.
- There were doubts that biosafety can be addressed appropriately through indexes.
- Data on marine invertebrates and ecosystems should be included.
- Neither the overall size of a country's emissions nor its economic growth are reliable proxies for obtaining the most emission reductions for the money spent; energy intensity is a better indicator.
- More representation of gases and sources of GHG emissions are needed—including agriculture and land use change, deforestation and forest degradation, gas flaring, and industrial non-carbon dioxide.
- Emphasis on conservation was insufficient regarding sustainable use of biological resources and transfer of genetic resources across borders.
- The list of countries qualifying for individual funding was somewhat biased toward conservation.

- There was no agreement on the best year for measuring GHG emissions for the index; the choice of baseline years, the 10-year lag, and the use of a single base year seemed to be arbitrary.
- The Clean Development Mechanism and carbon trading initiatives are not relevant for a climate change index.

A paper summarizing the Real-Time Delphi results is available at www.gefweb.org/uploadedFiles/Evaluation_Office/RAF/RAF_MTR-TECH_Paper_5-noapdx.pdf.



UNESCO's Planning for the World Water Report and Scenarios

The Millennium Project conducted RTDs for UNESCO's World Water Assessment Program to assist in the preparation of the fourth World Water Development Report. Participants included UN agency coordinators, writers, content contributors, and the WWAP Technical Advisory Committee. The studies explored the use of on-line systems to help identify and set priorities on issues, identified many drivers for water scenarios, and reviewed subject priorities and suggestions for WWDR-4, in terms of both process and content.

Some key observations:

- Existing IPCC scenarios and analyses must be downscaled to regions and hotspots.
- The new work should focus on areas where time is short and impacts are great.
- It would not be wise to rely on only a single set of scenarios.
- The effects on water security of non-climatic drivers such as population and economic growth need to be considered, as well as the effects of climate change.
- A special focus is needed on how climate change impacts will be estimated.

A long list of drivers for the scenarios was collected and will be rated in subsequent studies. The international panel in one of the Real-time Delphis did rate the following factors as very important to consider in water scenarios:

- Food production remains an important driver for water storage development.
- Wastewater is a critical input for countries with rural populations over 50%.
- The number of hydroelectric dams will increase with rising energy demand and fuel costs.
- Fast-growing emerging countries will invest in neighboring countries if necessary.
- Developing dams for flood protection is increasingly being coupled with other development objectives, such as irrigation, navigation, and tourism.

- Pollution of groundwater and springs (due to leaching of agriculture nutrients or industrial and city wastes) may significantly increase the cost of the provision of water (once expensive treatment is taken into account) or, in extreme cases, render it unusable. In some cases, excessive drainage into underground aquifers can lead to increased waterlogging and flooding of dirty waters, adding a significant health risks in low areas that are often inhabited by the poorest people.



Peru's Electrical Sector in 2018

In collaboration with the Peruvian Institute of Business Administration (Instituto Peruano de Administración de Empresas), The Millennium Project managed a Real-Time Delphi and Scenario Analysis of the “Electrical Sector in Peru for the Year 2018” for the Energy and Mining Supervisory Agency (Organismo Supervisor de Inversión en Energía y Minería). The study included 212 participants (roughly 40% from Peru and 60% from other countries). The questionnaire had 136 questions, larger than most studies of this sort. The participants also selected three axes in the construction of scenarios: political, economic, and legal issues. Besides brief descriptions of the major scenarios, the study also included considerations of wild-cards and weak signals. For example, the rapid emergence of fully electric cars and the quick spread of solar and wind energy should have an important impact of the Peruvian electric sector matrix, which was historically dependent on hydroelectricity and more recently on natural gas plants.

The findings of the “Electrical Sector in Peru for the Year 2018” study highlighted the importance of ensuring the sufficient and efficient generation and distribution of energy in Peru. The analysis indicated that it is necessary to promote substantial investments in hydropower, as well as more efficient use of natural gas, through central generation in combined cycle plants. Furthermore, there is a perceived need to have the capacity to take advantage of the technological changes that are expected this century. According to the experts, the most important factor in achieving the proposed changes is the local stability of the rules of game, and particularly an explicitly long-term energy policy.

In 2007, The Millennium Project contributed to a similar Delphi survey and Scenario Analysis of the “Natural Gas Sector in Peru for the Year 2030.” That study was coordinated by the Peruvian Graduate School of Business Administration (Escuela de Administración de Negocios para Graduados) for the Energy and Mining agency as well. More than 300 participants (about 30% from Peru and 70% from other countries) answered about 80 questions about natural gas forecasts and possible developments in Peru until 2030. The participants selected political and economic issues as the two most important dimensions for the scenario axes. Four scenarios were developed and identified as Paradise, Hell, Economic Limping, and Political Challenge. These scenarios were further developed in a second round of the Delphi survey. Some final policy recommendations were compiled based on the input provided by the experts’ comments in order to develop the natural gas sector in Peru toward the year 2030.



Developments to Improve the Status of Women for Millennia 2015

The steering committee of Millennia 2015 initiated a Real-Time Delphi to collect judgments to help foster an informed dialogue about policies that might help bridge rhetoric and action for improving the status of women. An expert panel of about 150 people from around the world assessed potential developments that are not sufficiently addressed, emerging, or growing in importance over the next decade.

Participants in the “Developments to Improve the Status of Women” study were invited to consider policies, strategies, challenges, and barriers to improving the status of women worldwide and/or in specific regions or cultures by judging the probability, possible impacts, and potentially negative effects of 21 developments chosen by the steering committee.

The developments seen as most likely, with high impact and low backfire potential and hence the easiest to implement, were:

- Equal access to education is guaranteed by law in all countries [but as one respondent commented: what would be taught?].
- Women’s right to health information and family planning, to decide on pregnancy, and access to safe, effective and affordable health care services is guaranteed in all countries.
- Women have equal access to training and skills development programs to ensure their full participation in the economic and social life, worldwide.
- Access to investment and financing mechanisms is equal for men and women.

The developments rated with high impact but low probability—hence, those that should be considered for policy action (but taking into account the backfire potential)—included:

- Equal access to natural resources (land and water) is available to men and women.
- The media stop perpetuating gender stereotypes.
- At least 33% women ratio in government bodies is mandatory worldwide.

The participants were also asked to give their opinion about potential future values of five variables that would help assess progress or regress in addressing gender equity—the best and worst plausible values, along with a value that would be considered a success for the respective variables by 2015. The results were:

1. Percentage of women in all the world’s parliament (best: 33.24; worst: 13.58; success: 31.05)
2. Ratio of average employed women’s income to men’s (best: 83.02; worst: 58.57; success: 77.83)
3. Percentage of the world’s ambassadors that are women (best: 28.37; worst: 11.86; success: 34.46)

4. Life expectancy of women. (best: 78.78; worst: 64.09; success: 75.62)
5. Percentage of women, worldwide, who have essentially free access to prenatal and postnatal care (best: 69.51; worst: 47.59; success: 71.35)

Success for variables 3 and 5 did not seem possible by 2015. The estimated value for their success was rated higher than the best plausible future value by 2015.

The full report of the study is available in the attached CD, Chapter 1, Challenge 11 Status of Women.



Universal Declaration of Human Rights Study for WFUNA

Using the occasion of the sixtieth anniversary of the Universal Declaration of Human Rights, the World Federation of UN Associations put 15 questions to UN Associations and other civil society leaders around the world. Many believe that the Declaration—which has been translated into more than 350 different languages—is one of the greatest documents ever written and remains as valid today as when it was first proclaimed.

More than 100 participants agreed that the most important principles in the declaration were that human rights and freedoms are inherent in the nature and dignity of each human being and that a globally accepted set of basic ethical standards and principles is needed that is equally applicable to all cultures, religions, and political systems. Although participants pointed out that hundreds of treaties and countless national laws were inspired by the Declaration, most agreed that more-effective national systems are needed to enforce human rights and that states should be held accountable for human rights violations. The UN should help make that so by facilitating cooperation among governments, civil society, international agencies, and business corporations.

The results of this Real-Time Delphi were presented at the United Nations DPI/NGO conference in Paris in September 2008. To receive the report of this study, contact WFUNA, 1 UN Plaza, New York, NY 10017 or go to www.wfuna.org.