

# 5. Scenario Analysis: A Tool for Task Managers

---

Jonathan N. Maack

Scenario analysis has been used by the private sector for the last 25 years to manage risk and develop robust strategic plans in the face of an uncertain future. Its success in helping firms manage large capital investments and change corporate strategy has made it a standard tool of medium- to long-term strategic planning. Scenarios have helped public sector agencies plan for population growth and regional development, state transportation investments, and the distribution of landfills. In the developing world, scenarios have been used to highlight the opportunities, risks, and trade-offs in national policy debates.

## Uses

Scenario analysis is different from the high, medium, and low cases for lending considered as part of Country Assistance Strategy (CAS). High, medium, and low scenarios look at different rates of progress along a path that is based on a single set of projections. Scenario analysis focuses on the areas of greatest uncertainty for a country or an operation, systematically develops several plausible alternative future environments in which the operation might be implemented, and determines how they would affect its success. This structured approach to thinking about the future could help World Bank country teams make strategic choices about where and how to direct lending over the medium term in several ways:

*Managing risk.* Scenarios that look at future paths for a country help decisionmakers manage risk and develop concrete contingency plans and exit strategies. Describing how and why possible futures might occur enables decisionmakers to reflect on how political, social, and economic changes affect the operation and to plan accordingly.

*Building consensus for change.* Scenarios are a logically rigorous, transparent means to give stakeholder representatives a role in planning. Because a number of possible futures are created, many perspectives can be included, and the discussion does not revolve around the advocacy of fixed positions. All participants take part in formulating the core elements of all scenarios, and later break into smaller groups to write each of the four or five scenarios. This process helps decisionmakers share their thinking about uncertainty and risk, develop mutually understood contingency plans, and defuse blame-casting when forces outside their control lead to a change in strategic direction.

*Augment understanding about the future.* Scenarios are designed to bring up issues that otherwise would not be considered by exposing the underlying forces in a sector or region. They are most effective when dealing with big issues and strategic directions, rather than tactical decisions, and should not be used for short-term planning.

*Monitoring progress and scanning changes in the environment.* Scenario analysis can help establish indicators that create a framework to monitor the execution of a strategy. Decision-makers then “scan” the external environment for the agreed indicators that the country or region is beginning to move toward a different scenario (or to a different stage along a scenario path). The focus on key drivers of change makes explicit the assumptions underlying lending and speeds mobilization of resources in response to changes in the external environment.

Scenario analysis is a tool with a strong track record and significant potential, but it needs to be adapted and piloted before it can be more widely used in the Bank. This chapter describes a scenario process designed to be the cornerstone of a strategic plan. It also suggests ways to use the key concepts of scenario thinking in shorter exercises designed to help decision-makers minimize risk, address key uncertainties, and more effectively share their thinking with stakeholders about a lending program and the country’s future.

**Process**

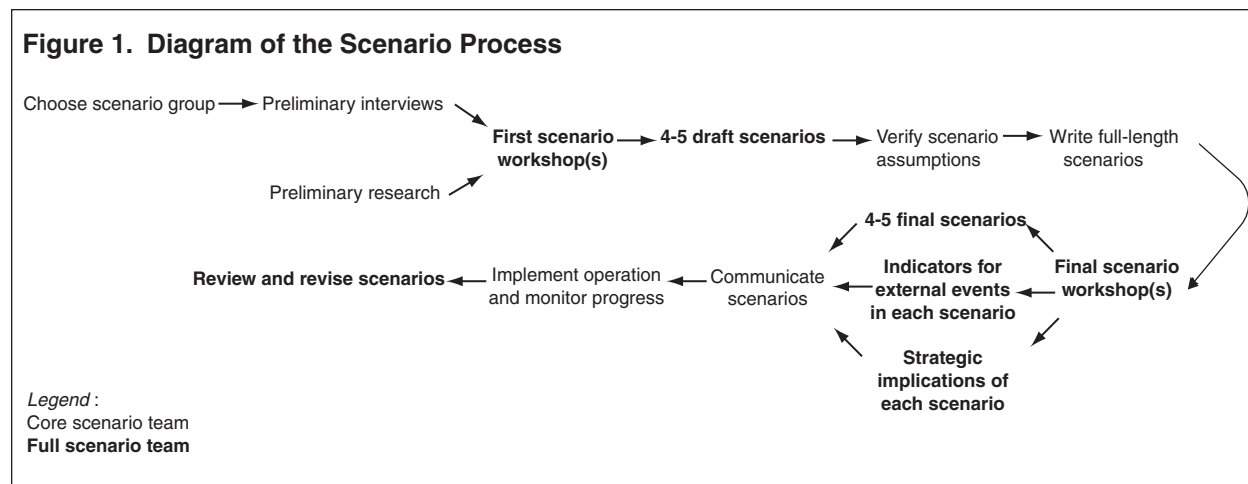
Scenario analysis follows a systematic process to create a set of four to five plausible and vividly contrasting narratives that describe possible evolutions of key areas of uncertainty (figure 1). These narratives, known as scenarios, examine the social, political, economic,

and technological forces that will impact on a project or strategy. Scenarios are arrived at by a team composed of key decisionmakers, experts, and stakeholder representatives during two or three one-day workshops held over a period of weeks or months. Because they focus on areas of uncertainty and the potential for unexpected future discontinuities, scenarios provide a perspective not captured through projections based on *past* data.

Scenario analysis involves *constructing or developing scenarios* (steps 1-4 below), and *integrating the content of scenarios into decision-making* (steps 5-8 below). During the exercise itself, it is important that both of these elements receive equal attention and that mutually acceptable triggers and measures of success be agreed as outcomes of the process.<sup>1</sup>

1. *Define a focal issue or decision.* Scenarios are best suited to looking at the future through the lens of a specific issue, such as the likely outcome of a national election leading to a transfer of power or a currency devaluation. Without this grounding, there is a danger that they will be too general.

2. *Identify driving forces.* These are the social, economic, environmental, political, and technological factors that are most relevant to the focal issue. They should be prioritized by the scenario team according to their level of predictability and importance in affecting the desired outcome.



3. *Write scenario plots.* These are the stories that explain how driving forces interact and what effects they have on the operation or strategic direction being discussed.

4. *Flesh out scenarios.* Good scenarios combine a solid understanding of relevant present trends with a clear focus on the outcomes sought by decisionmakers. They should incorporate lessons revealed by analysis of quantitative and qualitative data relevant to the assumptions underlying each scenario.

5. *Look at implications.* After scenarios have been fully developed, decisionmakers should study their implications for the outcomes being sought by the operation.

6. *Choose "leading indicators."* These indicators should help decisionmakers monitor changes in the external environment as well as developments in the project.

7. *Disseminate scenarios.* Once scenarios have been built and refined, they should be written in succinct, easy-to-read language and disseminated within implementing organizations and to the public.

8. *Integrate scenario outcomes in daily procedures.* Change the incentive system in affected agencies and areas to ensure concerted movement toward the strategic goals that have been

formed on the basis of the scenarios. Use or modify existing systems to monitor progress toward operational goals as well as changes in the external environment.

### Scenarios in Practice

The two primary situations in which scenario analysis has been used by the public and private sectors are:

1. When considering a significant capital investment decision or sectoral strategy
2. When developing or reformulating national or corporate strategy.

#### *Scenario Analysis for Capital Investments*

Scenario analysis is extensively used in the private sector by companies that make large investments in productive capital or research and development. Utilities, hospitals, oil companies, and pharmaceutical companies all invest significant amounts of money in research, development, and site construction. They need to make all possible efforts to ensure that their investments will remain viable over the long term. Scenario analysis has helped them examine the political and regulatory environments, the likely attitudes of consumers, and other relevant factors to attempt to ensure that their investments continue to be profitable as conditions change (box 1).

#### **Box 1. Scenario Analysis for Capital Investment: Shell Oil Company**

Scenarios to assess the riskiness of an investment strategy need not be simplistic. The process of identifying the real focal issue behind an investment is often quite revealing. For example, Shell Oil Company has used scenario analysis since the 1960s. When Shell began looking into investing in new oil fields in the late 1970s, it asked its scenario team to evaluate the investment in terms of forces that would affect the price of oil in Western Europe.

The team came back with several scenarios. One cited the risk of the collapse of the Organization of Petroleum-Exporting Countries (OPEC) due to internal tensions and external pressure. Another looked at the demographics and political situation in the Soviet Union and noted that a relaxing of tensions with the West could lead to large amounts of oil from Central Asia being exported to Europe.

Another looked at a future in which the pressure of high prices and environmental organizations led to technological breakthroughs that reduced the dependence of Western Europe on oil and gasoline.

All of these scenarios were plausible, and, indeed, all did come to pass to a degree. Shell planned its investments to take advantage of potential technological breakthroughs and to grow through a flexible series of small expansions. When OPEC was no longer able to control enough of the oil supply to keep prices high, Shell's conservative position allowed it to rise from seventh in the industry to third. Its small investments remained profitable while competitors lost significant amounts of money as riskier oil fields tapped during a period of high prices failed to perform.

In the *public sector*, scenarios have been used to guide large capital investments in transportation, landfill development, and city planning (box 2). These scenarios deal with potential changes in user behavior, the utility of capital investments to a mobile population, and the economic and social pressures likely to develop on a national scale over time. Special emphasis is also placed on likely voter pressures, larger political and demographic trends, and ways to ensure continued political support for projects once they are underway. Scenarios can help create the best long-term strategies for continued growth and flexibility for states and regions.

*Scenario Analysis for Long-Range National Strategy*

Significant scenario development also has been done in the public sector at the national policy level. Scenarios have been used to shape agendas for change in Colombia, Guatemala, and South Africa (box 3). In these countries, which were mired in turmoil or facing fundamental socioeconomic crises, leaders from academia, business, trade unions, the military, rebel groups, political parties, and peasant unions came together to discuss steps forward.

When used in the public sector, strategic scenarios have the goal of helping decision-

makers and key stakeholders agree on substantive messages about possibilities for future change. The process helps create informal networks and understanding among the participants that can lead them to become champions of the policy recommendations that come out of scenario discussions. The second function of public sector scenarios is to engage public opinion. The completed scenarios are simplified and broadcast in the mass media, explained at local meetings, and highlighted in leaflets and policy bulletins. Shaping public debate about issues of national concern is made easier by the flexibility of the scenario methodology. Scenarios are stories that bring together the key elements of policy in a narrative that can be understood by the public. Because each scenario can illustrate plausible changes along many dimensions, discussion begins to focus on the *interactions among forces*, rather than on specific issues.

**Adapting Scenario Analysis to World Bank Interventions**

In the World Bank, scenarios can provide assistance in formulating goals, designing projects, building ownership, and monitoring progress. Scenarios are most valuable when they are brought in at the point in the project cycle at which the overall direction of the

**Box 2. Scenario Analysis for the Public Sector: New Jersey Department of Transportation**

In the mid-1990s, the State of New Jersey used a participatory scenario process to develop a vision for the future that would help it deal with intransigent transportation issues. The core decision was whether to focus on sustaining existing roads, expanding the highway system, or building more light rail. To develop the scenarios, the scenario team looked at the likelihood of regional and national economic growth, citizen priorities, environmental pressures and political will. Research, which included a values survey of a cross-section of citizens and businesses, studies of existing travel and commerce patterns, and a study of conventional forecasts, was carried out as part of the process. In addition, consultations were held in communities across the state.

The scenario team included state politicians, department of transportation decisionmakers,

experts, academicians, and activists. The scenarios focused on economic growth and citizen attitudes (see box 7 for full scenario matrix). Special attention was paid to regional growth, because New Jersey is a major transportation corridor between the two large metropolitan areas of New York and Philadelphia.

The scenarios were widely publicized and sparked significant public debate. All of the scenarios highlighted the importance of innovation and cooperation with the public sector and the need for environmentally sound development. Through innovative public-private partnerships, the department of transportation leveraged federal funds for its long-term plan of mixed road-rail development. Business practices were also changed to allow for more citizen interaction.

Source: Adapted from Bonnet, 308-24

### Box 3. Scenario Analysis for National Strategy: South Africa

In 1990, four distinct—and evocatively titled—scenarios for South Africa’s post-apartheid future were developed during three 3-day workshops. The process was initiated by a local university and took place during the heated national debates between the National Party and the African National Congress (ANC). The participants looked at the possible actions of various stakeholders in the political process and came up with four scenarios.

1. *Ostrich*. A closed transition process in which conservative parties attempt to forge a nonrepresentative compromise government rather than reach a negotiated settlement. The outcomes of this policy, named after the bird’s habit of sticking its head in the sand in the face of danger, are political and economic isolation and deepening ethnic tensions.

2. *Lame duck*. A half-hearted and prolonged transition of power that creates a coalition government stripped of any real authority. The outcomes of this scenario are a deteriorating political climate, lack of sufficient investment in economic redevelopment, and the risk of continued isolation.

3. *Icarus*. A populist national government takes power and adopts an unsustainable policy of high government spending and taxation. The outcome of this policy is short-term prosperity followed by a

deep economic slump that leaves the country in worse condition than it was during the transition.

4. *Flight of the flamingos*. A smooth transition followed by a move toward sustainable policies to increase growth and inclusion. This story, named after the slow take-offs and close flight patterns of flamingos, shows steady economic growth, bipartisan priority setting, and a greater increase in long-term benefits to the poor.

The scenarios were developed by economists, businesspeople, politicians from all major parties, academicians, and NGOs. They received heavy press coverage, and F. W. de Klerk, leader of the National Party, was quoted as saying that he was “not an Ostrich.” The Icarus scenario, which critiqued unsustainable government spending, was endorsed by key left-wing economists and comforted the local and international business community. The transition government that eventually came into power was notable for its restrained economic policies and its success at using tested, sustainable methods to reach the poor. The scenario process was an excellent way to broaden the involvement of stakeholders in policy dialogue without creating chaos in the decisionmaking process.

Source: Adapted from Kahane, 325-32.

intervention is being designed or significantly rethought. If it is meant to be the key strategic framework for an operation, the scenario process should be integrated with the budgeting, negotiation, and implementation of a project rather than treated as a stand-alone exercise.

Such an application of scenario analysis would add significant value in five strategic areas:

1. *Formulation of Country Assistance Strategies*. The CAS is the Bank’s business plan in a nation, the closest analog to the corporate strategies around which scenario analysis techniques were developed. Scenarios can increase the selectivity and realism of a CAS by focusing discussion on likely future opportunities and constraints. The technique has been presented in clinics for Bank task managers on formulating CAS documents. The combination of a focus on areas of key uncertainty and a strong participatory element in the scenario

analysis make it well suited to this approach. Scenarios are also valuable for monitoring the progress of both the client and the Bank toward the goals outlined in the CAS.

2. *Formulation of participatory national strategies*. The emphasis on participation makes scenarios useful for planning processes that need dialogue and agreement among multiple stakeholders, such as the Poverty Reduction Strategy Paper (PRSP) and the Comprehensive Development Framework (CDF). A country-driven scenario process is an excellent way to develop ownership and incorporate the political situation and relevant external forces in PRSP and CDF documents. Because the scenario process can be led by the country, as it was in Colombia and South Africa, the Bank can concentrate on its comparative advantage: leveraging the input of macroeconomic, political, and sectoral experts to add depth and believability to the scenarios.

3. *Formulation of a medium-term framework for program loans.* Scenario analysis is most effective in looking at medium- to long-term time horizons. It is thus well suited to helping the team prepare a medium-term framework that looks at the desired outcomes of lending and the uncertainties that it will face. Because the signposts of progress toward different scenarios are formulated by a group, the process makes the framework more transparent and increases the motivation of both Bank and client to act on strategic recommendations. Scenarios also aid in the development of exit strategies based on mutually understood changes in the agreed indicators.

4. *Developing benchmarks and goals for an Adaptable Program Loan.* Scenario analysis can provide an effective and inclusive method to create a long-term set of benchmarks for extended interventions, such as the Adaptable Program Loan (APL). By including all stakeholder representatives in the risk analysis and indicator development process, scenarios establish a clear and consistent set of benchmarks that are widely understood. Due to the need for regular review and approval in the face of emerging needs, the APL project cycle favors the regular monitoring and revision that make scenarios most useful.

5. *Analysis of risks and impacts of adjustment loans.* Adjustment operations frequently involve institutional change. Scenarios are an excellent way to look at the potential outcomes of changing the formal and informal rules in a sector or an industry. Changes in the way people do business can have unexpected results. Disciplined scenario analysis enables decisionmakers in the Bank and the client government to clarify the drivers of change in a given sector and explore potential interactions among those drivers and the impacts of changes. Because they build consensus among labor, public, and private sector leaders about what needs to be changed and why, scenarios can help task managers shape the public dialogue about adjustment operations by clarifying the objectives and reasoning behind an intervention.

## **Adapting and Shortening the Scenario Process**

Scenarios can be adapted to enhance strategic planning at a number of stages in the project cycle. Scenarios are, above all, a way of thinking about the world and can be used in shortened form to change the terms of dialogue and introduce a new way of interacting. A brief, participatory scenario workshop can be arranged early in the design phase to build scenarios and gather input quickly. Alternately, a more extensive process with supporting research can be carried out during the development of a risk management framework and used to develop a system for monitoring and evaluation.

An example of a streamlined scenario implementation may clarify how the technique can be adapted. If the task manager of an adjustment loan wanted to use scenarios as one input during project design, but did not want to execute the full process, he or she could set up scenario workshops with relevant stakeholders during preparation and appraisal to build simple models of relevant forces. These basic scenarios could be sketched out by the group in two one-day workshops during a two-week preparation mission as a form of brainstorming and negotiation. They could then be integrated in the early stages of project planning. If there were enough time and money, the period between preparation and appraisal could be used to flesh out the scenarios with statistical projections and other relevant information. The final workshop, in which the completed scenarios would be further questioned by the group and applied to create contingency strategies, could be held during the appraisal mission.

## **Running a Scenario Exercise**

The following description of the stages of a scenario exercise will give task managers a background in its practical requirements. This description should enable task managers to lead a simplified scenario analysis process, make a significant contribution to a scenario team, or work knowledgeably with private sector consultants.

### *Stages of the Scenario Process*

There are no fixed rules for how to carry out a scenario analysis, but several stages occur in almost every case. The actual creation of scenarios takes place with a group in a workshop. The organizers need to carry out a number of activities before the first and last workshops. The four broad stages to the process follow. The specifics of each stage will be discussed later in the chapter. An illustration of a sample process from start to finish can be found in appendix 2.

1. *Preparation.* A number of tasks need to be carried out before the scenario workshops. They include defining the scope of scenario use, choosing and interviewing the scenario team, and preparing background material for the workshops. These are crucial steps in the process, because they help the task manager build confidence in the scenario exercise and gain an early understanding of the issues that will be most important to participants. The specifics of this process are detailed in appendix 1.

2. *Building the scenarios.* This process can occur in one workshop, or two held back to back. Together the scenario team determines the focus of the intervention, identifies and prioritizes the key external factors that will affect its success, sets them in a matrix to differentiate their effects, and writes simple scenario plots.

3. *Investigating and writing the scenarios.* This exercise is carried out between workshops. The task manager and core team gather relevant qualitative and quantitative information to determine whether the assumptions made in the scenarios are accurate. Decisionmakers from the scenario team should write more finished drafts of the scenarios.

4. *Using the scenarios to plan strategy.* In this workshop, the scenario team goes over the finished scenarios and looks at the implications for the strategic decision being made. Specific external “signposts” of changes in the key forces are also identified at this stage.

### **Building the Scenarios**

The first step of the scenario workshop is to clarify the decision focus of the exercise. This should have been outlined to individuals when they were invited to participate, but it is important for the group to work together to clarify the issue. As this discussion can become contentious, it is best to state clearly within the first 10 minutes of the meeting the behavior expected during the meeting. Propose, or ask the group to agree on, whether a facilitator is needed, and, if so, who it will be; a system to recognize speakers; a time limit on the length of comments; and other basic procedures of the meeting.

Discussion of the decision focus forces all participants to concentrate on the *goals* sought by the development intervention rather than on the specific *process* that will be used to reach those goals. This *separation of means from objectives* is key to giving the group the conceptual space needed to come up with new approaches. Several key issues should be addressed when deciding the decision focus:

1. *Desired outcome of the intervention.* This discussion should begin with input from the organizers of the event but then will be open to further discussion. The group may come up with a different formulation of the desired outcome than was originally brought to the table. This reformulation will guide the group’s understanding of the forces that will affect it.

2. *Desired outcome of the scenario process.* Once the outcome of the intervention is clarified, the role that scenarios will play should be explained. Will they be used as a way to test existing strategies for riskiness, as a tool to formulate new strategies, or as a means to build a shared vision for governmental or organizational reform? The organizers should clarify how they envision the scenarios being applied to strategy, and explain any internal business tools that will be used to put that strategy into practice. For example, if the goal is the creation of a medium-term framework to guide the sequencing of a program of adjustment loans, the group needs to understand

how the program of loans works and where scenarios fit in.

3. *Time frame.* The time frame will significantly affect the range of issues a scenario can address. The technological and economic shifts that should be considered in a 20-year time horizon may have no relevance for a 5-year plan. Scenarios should be conceived of as ways to shape strategy within the medium term. The time frame should be long enough for significant changes to occur in the driving forces, ideally 3 to 5 years.

### Key Factors

After the decision focus has been discussed and analyzed, the team should brainstorm key factors for the success of the strategy or operation. This session should be led by a person with experience in facilitation. Key factors for project success can include:

- Specific events, for example, the passage of legislation that gives legal status to NGO microcredit providers
- General trends, for example, a decline in the cost of fertilizer  
Improvements in service delivery measured by positive beneficiary feedback as well as number of persons served.

To get as many dimensions of success as possible, the facilitator should encourage all members of the group to participate during this phase. After a brief brainstorming session, the clusters of logical association and key factors developed by the analysts after the preliminary interviews (see appendix 1) can be added to the list. These can become building blocks for discussion and make it easier for different groups to understand one another.

### Two Driving Forces: External and Organizational

The free association used to identify key factors can lead to a jumbled list. The next phase in the process consists of the group's looking at the underlying causes of the issues that have come up in individual interviews and group brain-

storming. The goal of this stage is to build a good conceptual model of the forces that are most relevant to the decision focus.

There are two large categories of driving forces. *External forces* are the social, economic, environmental, and political forces in society that are relevant to the topic of the scenario discussion but are outside the participants' control. *Organizational forces* are the product of the actions of the Bank and other stakeholders and can be affected by the project. These driving forces will become the key foci of further scenario development, and they can be identified intuitively by using the visual clustering method described in appendix 1 or separated into a series of logical groups and analyzed.

*External Forces: The SEEPT (Social, Economic, Environmental, Political and Technological) Framework*

The simplest way to systematically address external forces is to organize the issues identified in the brainstorming sessions and preliminary interviews in five broad categories:

1. Social
2. Economic
3. Environmental
4. Political
5. Technological.

The SEEPT framework (table 1) is an efficient way to obtain a holistic view of the many forces that will affect a project's success. Rather than focusing on a single dimension, such as economic performance, the group can look at how the forces relate to and affect one another. The specific events identified in the initial brainstorming of key factors can be thought of as symptoms resulting from these deeper forces. For example, the strain on urban infrastructure that results from migration to cities is intimately related to demographic, social, and economic pressures. It may also be tied to political pressures or regional instability. A simple device like the SEEPT framework can help decisionmakers look at all the dimensions that affect an urban development project at once. As the group thinks about how these forces could plausibly change and interact in



**Table 1. Illustration of the SEEPT (Social, Economic, Environmental, Political and Technological) Framework for Identifying External Forces**

This is an illustrative SEEPT framework for a national-level scenario exercise. This chart can serve as a menu for scenario teams or as a stand-alone example of the sort of questions that can be posed in each of the SEEPT categories. The Social Indicators of Development, Country Political and Institutional Assessment information, United Nations Development Programme (UNDP) Human Development Indicators, and the World Development Indicators are useful sources of data for these domains.

<b>Domain</b>	<b>Category</b>	<b>Examples</b>
<b>Social</b>	Social factors	Education levels, social priorities, cultural and class tensions, land and water rights, differentiated membership in groups and associations, gender issues
	Demographic patterns	Age, family, household, and ethnic structures; regional and national migration patterns; wealth distribution, including regional and national poverty rates
<b>Economic</b>	Macroeconomic conditions	GNP, balance of trade, rate of inflation, exchange rate; current and future relations with international financial markets, current debt levels; governmental expenditures, deficits Changes in the economic structure of nation (dependence on single export, percentage of exports in finished goods), formation of new regional trading blocs
	Microeconomic conditions	Change in size, type and ownership of firms; formal and informal labor force structure by region; changes in economies of scale/structure of key industries
	Market forces	Spending patterns of consumers (urban/rural, national/regional), international demand for key exports Distribution and efficiency of rural and urban markets, impact of the informal sector, sources of competition (national, regional, international)
	Impacts of global economy and development	Volume of assistance from multilateral and bilateral agencies, conditions for assistance (policies, requirements)/harmonization Risk tolerance and conditions for entry and exit by international firms, stake in local economy by international firms
<b>Environmental</b>	Physical environment	Air/water/land pollution trends and locations, environmental quality issues (global warming)
	Natural resources	Energy prices and availability (likelihood/impact of an oil shock), raw materials (rate of depletion, ease of access), land use (farming methods, erosion levels), sustainability (strategic use of resources) regional distribution of natural resources
<b>Political</b>	Geopolitical	Trends in international relations; relationship with other nations in region (regional trading blocs, military alliances); levels of tension, conflict (regional, international); trade and protectionism
	National	Change in governmental development strategy and policy (privatization); changes in legislation (including regulation, creation of enabling environment); changes in structure and responsibility of ministries; changes in rules governing formation and functioning of parties; stability of government, likelihood of change/overthrow
<b>Technological</b>	Infrastructure	Level of technology in key industries, emerging technologies, capacity to manufacture technology for export
	Future directions	Basic research and technical education trends in nation; "digital divide" – computer and telecom infrastructure/trends; potential for the rapid diffusion of new technologies from abroad

Source: Adapted from Wilson 1987.

the future, the group could create differentiated stories about how broad future trends and developments could affect the operation.

### *Organizational Forces*

Organizational forces are the specific actions and general positions taken by actors (individuals, agencies, and organizations) that affect project success. These actors may include government agencies, the private sector, political parties, NGOs, and international agencies. General trends in governmental actions might include a move toward privatization of state industries or trade liberalization. As in the case of external forces, the behavior of actors is interconnected. If the government and trade unions work together to create an enabling environment for trade, international businesses might begin to make serious investments or solidify their presence. The actions of agencies and organizations should make sense within the economic and political environment of a scenario. If organizational forces are used as key scenario drivers, they should be consistent with past behavior in that organization. Radical changes of position on critical issues should not be incorporated unless the rest of the scenario environment makes such changes likely.

### *Prioritizing and Analyzing External Forces*

Identifying key factors and assembling a list of relevant forces are the first steps. This list can yield as many as 50 driving forces and key factors. The next steps are analysis and prioritization, which reduce this larger set of forces to those that are most relevant to the decision focus, are predictable vs. unpredictable, and will respond to actions by participating agencies and groups. Complex analysis is not required. This is a logical exercise based on rigorously thinking through the forces and trends already noted and identifying the ones that are most important for the decision. At a minimum, this discussion should include:

*Identification of cause-and-effect relationships.* How do these forces interact? What impact do they have on other forces?

*Apparent direction of these forces today.* What are the current trends in these forces and why? One of the most critical tasks for scenario analysis is a good understanding of the causes of present trends and conditions. Present trends are a good base from which to extrapolate future interactions among driving forces.

*Relevance to the decision focus.* What is the magnitude of the impact of these forces on the future course of key factors for project success? Are reforms dependent on a political coalition that draws its support from a constituency whose influence is shrinking?

*Future prospects.* How much, in what ways, and how fast might these trends change in the future? At this stage of analysis it is integral that the scenario team differentiate among trends that are:

- *Predictable.* Certain things, such as current demographic trends, are already known and will need to be taken into account in all planning.
- *Unpredictable/uncertain.* Market prices, currency rate fluctuations, demand for export goods, and changes in political values are all unpredictable elements.

The impact-uncertainty matrix is an easy way to combine key factors and driving forces in a clear, legible format. The matrix ranks the forces on a simple “high-medium-low” rating system. The best way to determine prioritization is through a vote. A vote gives all participants equal voice and leads to a picture of the key forces that incorporates multiple viewpoints. The facilitator should give each person in the group approximately 20 chits to “spend” as “votes” and ask each individual to grade each force according to:

- Its impact on the key decision factors (a participant should “spend” more chits on the forces he or she sees as most important) and the degree of uncertainty (each participant should “spend” more chits on the forces that are uncertain)

- The number of chits that equal a “high,” “medium,” or “low” rating should be decided on by the group based on the number of forces that the group has devised and the number of people in the group.

The impact/uncertainty matrix (table 2) is an illustration of how the ranking system can be used to narrow the list of forces to the most relevant for differentiating scenarios. Scenario plots should be built around high-impact/low-uncertainty issues (highly relevant issues with predictable future outcomes for which current planning *must* prepare) and high-impact/high-uncertainty issues (issues that could shape different futures which planning *should* take into account).

### Creating a Scenario Matrix to Outline Four Distinct Scenarios

The results of the impact/uncertainty matrix are seldom conclusive. A number of forces will cluster in the upper right hand corner (highly unpredictable/highly relevant). The group needs to *pick the two most relevant of these forces* and set up a scenario matrix using them as the axes. The group will then work out the four permutations of these forces and build the scenarios around them.

The scenario matrix (box 4) ensures that each scenario will be different in a logical, nonrandom way, because the top scoring factors will be key drivers in *all* scenarios. The scenario team discusses each permutation of the two

**Table 2. Example of Impact/Uncertainty Matrix**

<i>Degree of uncertainty</i>			<b>Level of impact</b>
Low	Medium	High	
<p style="text-align: center;"><b>Critical planning issues</b></p> <p>Highly relevant and fairly predictable (can often be based on existing projections). Should be taken into account in <i>all</i> scenarios.</p>	<p style="text-align: center;"><b>Important scenario drivers</b></p> <p>Extremely important and fairly certain. Should be used to differentiate scenarios. Should be based on projections but potential discontinuities also should be investigated.</p>	<p style="text-align: center;"><b>Critical scenario drivers</b></p> <p>Factors and forces essential for success and highly unpredictable. Should be used to differentiate scenario plots and trigger exit strategies.</p>	
<p style="text-align: center;"><b>Important planning issues</b></p> <p>Relevant and very predictable. Should be figured into most scenarios.</p>	<p style="text-align: center;"><b>Important planning issues</b></p> <p>Relevant and somewhat predictable. Should be present in most scenarios.</p>	<p style="text-align: center;"><b>Important scenario drivers</b></p> <p>Relevant issues that are highly uncertain. Plausible, significant shifts in these forces should be used to differentiate scenario plots.</p>	<b>Med</b>
<p style="text-align: center;"><b>Monitorable issues</b></p> <p>Related to the decision focus but not critical. Should be compared to projections as scenario is implemented.</p>	<p style="text-align: center;"><b>Monitorable issues</b></p> <p>Related but not crucial to the decision focus. Should be monitored for unexpected changes.</p>	<p style="text-align: center;"><b>Issues to monitor and reassess impact</b></p> <p>Highly unpredictable forces that do not have an immediate impact on the decision focus. Should be closely monitored.</p>	<b>Low</b>

*Note:* Shaded areas indicate key focus.  
*Source:* Adapted from Wilson 1989.

most relevant forces. The decisions made about how these forces are likely to behave sets the tone for each of the four different scenarios. This process enables the quick formulation of distinct, logical scenarios. Because the decision on the two axes of uncertainty is group-driven, it encourages group members to challenge one another and seek justification that a certain force is the best way to differentiate a scenario. Narrowing the discussion enables the group to explore ways in which these two forces could develop and how these developments can help focus the other forces around a distinct plot.

#### *What Makes a Good Scenario Plot?*

The scenario matrix approach is designed to cut through many complex issues and isolate two sources of great uncertainty and great importance for the success and sustainability of the work being planned. This process of reduction may leave members of the scenario team uncomfortable, because not all issues can be effectively addressed in terms of these two key axes of uncertainty. Although these forces will remain the skeleton of each future narrative, the next phase involves the addition of detail to the stories and the inclusion of a larger number of driving forces. A good plot combines driving forces in a dynamic, coherent story.

#### *Key Elements*

The key elements of a good scenario plot are:

- “*Critical Scenario Drivers*” from the *Impact/Uncertainty Matrix*. Each of these factors should play a role in at least one scenario. That role should work naturally with the other forces in play in each scenario, adding the twist of giving decisionmakers a chance to explore how a particularly positive or negative development might affect the operation/strategy as a whole.
  - *Systems of interaction among forces*. The numerous relevant forces and issues developed by the group should be explored systematically in each of the different scenarios. Changes in the two key axes of uncertainty can be thought of as stones tossed in a pond: their aftereffects will ripple through the host of other forces that also bear strongly on the decision focus.
- An easy way to start the process is to think of different static “end states” that could result from the interaction of two forces, and work backwards to explore how forces would need to interact to reach that point. Some of the key factors cited by the group earlier in the exercise will be precisely this sort of “end state.” It is important to remember, however, that scenarios are not descriptions of a static future world described in great detail. They are narratives about how events might unfold between now and a future date given the ways in which the forces that the scenario team has identified interact.
- Scenarios should be:
1. *Plausible*. The events in the story should be possible, and the narrative should be credible (the descriptions of what happened, and why and how it happened should be believable).
  2. *Distinctive*. Each scenario should focus on a different combination of the key forces. Scenarios should be clearly differentiated in structure and in message, not variations on a single theme. Multiple scenarios should be used to explore how different permutations of the same key forces can yield very different worlds.
  3. *Consistent*. Each scenario should have a strong internal logic. The goal of scenarios is to
- “*Critical Planning Issues*” from the *Impact/Uncertainty Matrix*. These are the comparative sureties in the future that are particularly relevant to the decision focus. The critical planning issues may concern specific aspects of the issue that the task team is studying and should have a role in all of the stories about the future. Issues such as demographic trends should be implicit in all plots, but the role they play may be quite different depending on how political, social, and economic factors affect issues such as education, employment, emigration, and consumption.

**Box 4. Scenario Drivers in the New Jersey Department of Transportation**

The decision focus was whether transportation investment should focus on sustaining existing infrastructure, expansion of highways, or the development of light rail. The group agreed on the three most important driving forces for the scenarios:

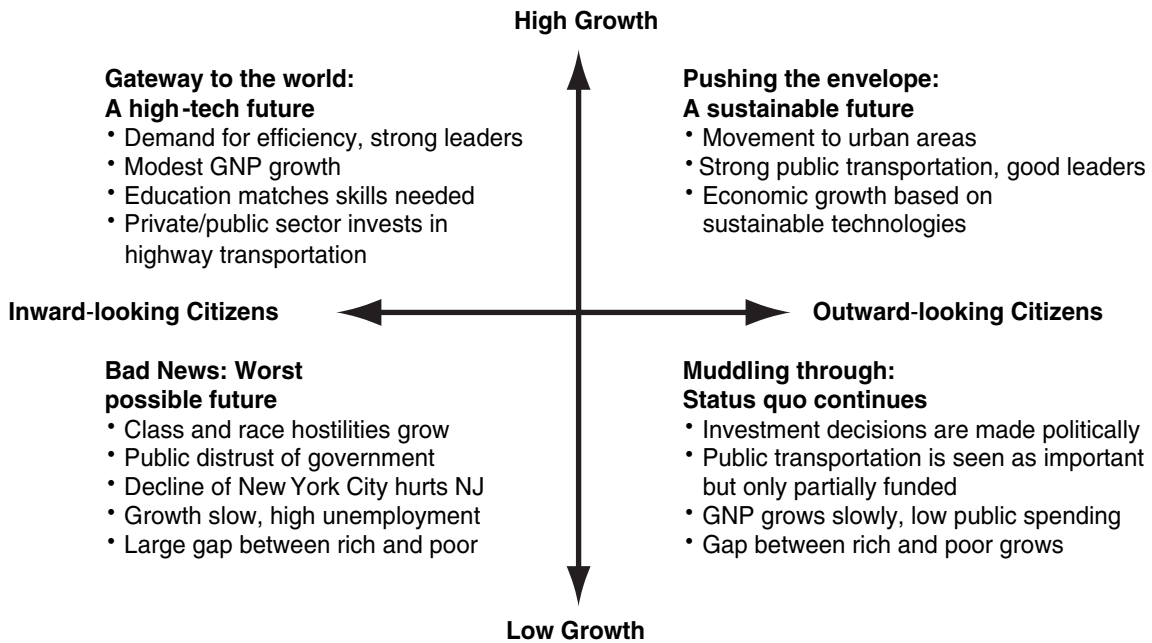
1. *Rate of regional and national economic growth.* The team looked at high, medium, and low levels of GNP growth and the rise or fall of the two major urban areas that affected the state. They studied the nature of growth (technological or industrial) and the effect of the economy on private investment in transportation and public sector revenue.
2. *Values and attitudes of citizens.* Citizens were modeled as inwardly oriented and individualistic, or outwardly oriented and communal. The inward-looking citizen had a continuing love of cars and single-family homes, a strong distrust of government, and was rent-seeking. The outwardly oriented citizen

was more urban and environmentally conscious, wanted to revitalize cities, and trusted government more.

3. *Government leadership.* The government was modeled as oriented to the short term and crisis management, or oriented to the long term and able to stay with a stable plan.

Each of the scenarios looked at the relationships among the three driving forces and their effects on factors such as the environment, investment, education (what is the workforce doing?), and traffic flows. Scenario logics were consistent. A low-growth scenario had a greater split between rich and poor, an emphasis on safety, and a government that focused on short-term solutions due to constrained resources. In another scenario, technology drove strong national and regional growth; immigrants were middle-class; and convenient transportation was emphasized in more densely developed urban areas.

**Scenario Matrix: New Jersey Department of Transportation**



Source: Adapted from Bonnet, 308-24.

explore the way that forces interact, and each action should have a reaction. Neither actors nor external factors should completely overturn the evidence of current trends and positions unless logical explanations for those changes are a central part of the plot. For example, it is highly unlikely that there will be low inflation and high growth, or that a regulatory agency that was formerly very strict will significantly loosen its requirements without some extenuating circumstances.

4. *Relevant*. Each scenario, and the entire set of scenarios taken as a whole, should contribute specific insights into the future that relate to the decision focus chosen by the group. It is important for the author to return frequently to the objectives of the exercise as she or he builds the scenario and assesses which of the external and institutional factors created in brainstorming should be explored.

5. *Creative*. The emphasis on logic and rigor in the process should not stamp out innovative thinking. Part of writing a scenario is enticing the reader into the scenario world. The author can do this by telling his or her story through parables, citing examples, or using famous figures as stand-ins for complex ideas.

6. *Challenging*. Scenarios should challenge conventional wisdom about the future. When thinking about the major sources of uncertainty, the author should try to explore alternatives that will significantly alter the basis for the assumptions that go into the “official future.” It is often worthwhile to write a “wild card” scenario that uses some of the key forces not listed in the scenario matrix. This gives the set of scenarios as a whole more breadth and strength.

## Scenario Plot Types

Scenario plots should differ from one another without being wildly positive or negative. It is important that they challenge assumptions while remaining balanced enough that they are not dismissed out of hand. Here are some plot “types” that can help create stories about the future:

- *Winners and losers*. These scenarios explore the future in terms of ascendant versus declining organizations, nations, or social forces. Examples include scenarios that look at trading blocs, focusing on dominant groups and exploring how different nations would fare in a climate of struggle and change.
- *Good news/bad news*. These scenarios use large external factors, such as currency devaluation, a massive increase in corruption, or breakdown of the rule of law, to encourage rethinking existing strategies and priorities. These stories ask decisionmakers “what if?” questions about the logic of their long-term plans in the face of key forces that can move in unexpected directions.
- *States of change*. This model is one of additive change, a world in which a series of alterations feed off one another to move society into a different mode. These alterations can involve a series of innovations leading to improvement, or a series of mistakes leading to political gridlock and economic stagnation. Some models focus on structural change in a nation (the ending of apartheid in South Africa), an industry (the introduction of software to produce online reports, removing the need for specialized printers), or a sector (environmental movements spur strong pressure to build public transportation and reduce pollution) and how the change will affect different actors and the viability of investments.
- *Cycles*. Another way of looking at change is through cycles, both economic and political. In this model, the rise and fall of social groups or stakeholders can be charted in relation to the economic cycles of relevant industries or international trends.
- *Wild cards*. Wild-card stories explore how catalytic developments could completely reshape a society. For example, the development of the internet and its effect on business in the United States is a wild-card scenario that is still being played out. Other examples might include the unexpected discovery of oil reserves or other resources. An example of this is Tuvalu, an impoverished South Pacific island nation, which discovered it had a unique asset. Tuvalu’s

internationally designated internet country domain is “.tv.” Tuvalu has sold the rights to its domain name to a Canadian company that will market it to television and radio websites. This sale will earn the 10,000 Tuvalu islanders as much as \$50 million over the next 5 years.

### Investigating and Writing the Scenarios

A thorough investigation of the trends underlying the scenario plots is essential to writing credible scenarios. If scenarios are not based on significant quantitative data and a careful review of a country’s political and cultural situation, the scenario process amounts to a brainstorming session. Writing the final scenarios should include a process of triangulation whereby the ideas and principles discussed in the workshops are investigated through original research and consultations with experts. Qualitative and quantitative research on relevant issues should be carried out before the scenarios are written. The former is based on interviews and follow-up questions with participants and key stakeholders identified in the scenario meetings. The latter includes economic projects, financial sustainability research, demographic studies, and statistical analysis.

Key research tasks follow:

- *Interview experts.* Speak with academics, sectoral and regional experts in the Bank, and other specialists on the best way to address technology, the political situation, social issues, and trade and economics. Interviewing is an excellent first step because interviews can be combined with the scenario team’s requests for help in identifying the best way to quickly gain an understanding of a subject or the nation.
- *Assemble and disaggregate existing information.* These steps involve reading relevant stories in the local press, conducting quick literature reviews on key subjects, collecting best practice cases, and assembling quantitative information on the predictable and relevant forces in the scenario.

- *Synthesizing quantitative work.* Projections of trends for all of the key forces should be set up on a single chart. How do they interact in existing projects? Do they move together? How does this “official future” compare with that shown in the scenarios? Compare national, regional, and international trends along the driving forces. If possible, economic models for the predicted forces should be created and looked at for how they compare to past data.
- *Carrying out original qualitative work.* This may involve conducting stakeholder interviews to analyze the strength and importance of political or cultural tensions, working with local universities to create profiles of likely user groups, or other field work. Other tasks might include disaggregating household surveys, and analyzing the geographic distribution of the poor and best practice projects.

### Writing Full-length Drafts of Each Scenario

Once the scenario plots have been sketched out by the whole scenario team in a workshop, they should be thoroughly researched and written up as full-length drafts. These drafts should be written by key decisionmakers, ideally the task manager and a highly placed government official in the client country. It is essential that the authors be present for the entire scenario discussion and have a clear stake in developing and implementing effective scenarios. *Decisionmakers will be asked to shape the strategy for a project or a nation using these scenarios, and the best way to ensure that they own, understand, and believe in them is to give them authorial control.*

A scenario should have a creative title that sums up its central message. It is best to begin the scenario with a brief summation that explains the title and sums up the elements of the story agreed in the workshop. The finished drafts of the scenarios should be smooth narratives that are easy to read and understand. Each scenario will be built around a series of specific events, but the underlying forces and their interactions also should be

made clear. This phase of writing involves interweaving the social, economic, political, and technological scenario drivers into a smoother whole.

The scenario in box 5 was created by a scenario team funded by the Colombian private sector and led by private consultants. It reflects the input of economists, politicians, academicians, military officials, guerilla leaders, church officials, and peasant and student leaders. It is a good example of a smooth narrative form for a complex story. It moves from economic events to political and social issues and explores the way that forces influence one another over time. The entire scenario is written in the first person plural (we) to immediately connect the reader to the events and decisions being described. It works chronologically, highlighting the impact of a failure of leadership along economic, political, and social lines as the country moves from bad to worse.

## Using Scenarios to Make Strategic Decisions

The final task of the scenario team is to explore the relationships among the plausible futures they created and the strategic decision at hand. The strategic options presented by each scenario should be discussed in a workshop with the whole team present. This process enables decisionmakers to reap the full benefits of group involvement in the process. When looking at each scenario, the scenario team should take the following actions:

1. *Step into the narrative.* This involves re-reading the scenarios and questioning them a second time. The team is thereby able to re-engage intellectually and emotionally with the material. The team members should envision themselves in this future world and think about how the conditions that define it would change their professional and personal lives.

### Box 5. Destino Colombia Scenario: “When the Sun Rises, We’ll See”

*Weariness, laziness or inability to face problems are all justified by the phrase “When the sun rises, we’ll see.” Darkness turns into a pretext for dreams and apathy, but the clear light of dawn, rather than inspiring important decisions, simply gives rise to a new period of uncertainty. In the face of the country’s crisis, this irrational confidence in unexpected, miraculous outcomes, this recourse to halfway solutions, this generalized tendency to put off basic actions until later, have combined to the point of becoming a collective alternative. Before its enormous and rapidly growing problems, Colombia seems to be saying “When the sun rises, we’ll see.”*

— Quote from the Destino Colombia scenarios

As crises repeatedly rock the country, exhaustion seeps into the government and the populace. Continual crises lead to a focus on solving problems day to day. The government wastes valuable time and energy negotiating without a strategy and is captured by pressure groups including the wealthy, various regional warlords, and corrupt officials. This “law of the strongest” leads to the extraction of the greatest costs from the most successful industries, the growth of the drug trade, the rise of regional governments with their own taxation systems, and the end of a national oil industry and economic independence.

As the situation deteriorates, the poor suffer the most. International organizations step in but are able to provide only stopgap solutions. Ultimately, increasing human rights violations and economic disorganization lead to the country’s becoming economically and politically isolated. This isolation leads to military threats to the borders by neighboring countries and increasing levels of emigration. The scenario closes with the comment that the disintegration was slow enough that people simply “became numb to the proliferation of their misfortunes.”

Source: Adapted from Kahane, 11-14.



2. *What are the implications of this world?* Each scenario provides a different world for the intervention. This step involves a discussion of the implications of each scenario for the central strategic decisions that need to be made. A standard set of questions designed to apply to these decisions should be created for this phase of discussion and used for each scenario. A team might want to look at which ministries are most affected by each scenario or which geographic areas would experience the most change.

3. *What is the best strategy for this scenario?* Each scenario presents risks and opportunities. The team should focus on the broader strategic context and answer the following questions:

- *What is the best strategy for dealing with this situation?* The scenario team should look first at how the intervention can most effectively move toward its desired outcome in this future world. What general strategic position should be taken? Should it be one of intervention in certain areas, or restraint to allow the situation to run its course?
- *What are the major opportunities and threats in this scenario?* This may involve looking at how different sectors will be affected by the changes outlined in a scenario. It may also involve looking at the effects that different scenarios have on specific social groups, identifying the winners and losers in each story.
- *If we know this scenario will come to pass, the Bank/client should (name one action)? It should stop doing (name one action)?* These questions concretize the discussion by relating it to the specific set of actions that are being performed (or proposed) as part of the intervention. In addition, the scenario team should develop exit strategies for all or part of the intervention based on each scenario. What situations will trigger the abandonment of a project or set of projects?

By answering these questions, the scenario team has in effect developed a series of simple contingency plans for each potential future. The next phase of the process is to assess how much these strategies have in common with the

current strategy of the Bank and the client. In the case of a specific loan, this encourages the scenario team members to look at how what they have learned about likely impacts on the intervention fits into the national development strategy.

When scenarios are designed to create a framework for a series of loans, it is more appropriate to compare the conclusions reached to the consensus about development in the country. This consensus can be identified through Country Assistance and/or Poverty Reduction Strategies as well as through comparisons with the national strategies of other donor agencies.

The team should look at the contingency plans suggested by the scenario team and identify:

1. *Which alternatives seem to be suggested by a majority or all of the scenarios?* These should be key parts of any strategic plan. They reflect an interaction of forces that is very relevant to the intervention and that the scenario team feels is likely to occur.

2. *Which alternatives challenge most strongly the assumptions underlying the current strategy?* The team should look to these alternatives for guidance in rethinking strategic orientation. Even if the scenario from which they are drawn does not come to pass, they highlight a blind spot in current plans. When making final strategic decisions, the scenario team should look for creative ways to include these insights in the intervention.

3. *Which alternatives are logical extensions of the current strategy?* These alternatives give decisionmakers an idea of how alternate future developments could be leveraged to push forward an agenda or program that is already in place.

Each alternative strategy presented by the scenario team should be carefully considered during the workshop. The final step in the exercise is deciding which strategic alternatives should be adopted. Again, a simple set of questions can serve as a guide:

1. *What events would trigger each strategy?* What impact (positive or negative) would those events have on the project? How effective is the strategy at addressing these issues?

2. *What is the evidence to support the assumptions* underlying the strategic suggestion? What aspect of the scenario serves as the underpinning of the strategy?

3. *Is it feasible for the organizations involved to execute the alternative?* What would prevent them from being able to do so?

#### *Develop Monitorable Progress Indicators toward Each Scenario*

Once each scenario has been tied to a set of strategic actions, the team must develop a way to look at what is happening in the country and the world to determine which scenario is coming to pass. The changes described in different plots (unified vs. disintegrated polities, outbreaks of ethnic violence) do not occur overnight. The scenario team should identify both indicators based on *fixed events* and indicators based on *trends*.

- *Fixed events.* Fixed events are pivotal incidents that push groups into conflict or create economic opportunity. They can be external or internal events and may be time-sensitive (elections) or ongoing external processes (currency fluctuations due to the collapse of markets in Asia). The group should identify at least four “turning points” for each scenario. Events such as oil prices reaching an all-time high or a 20 percent decline in tourism can serve as signs that the world is developing along the lines of the scenario. One way to identify such turning points is to invent newspaper headlines from the future that sum up crucial turning points or symbolic indications of the forces at work in the scenario. As these events occur, it is important to look at how their outcomes are related to the scenarios that have been created.
- *Trends.* Indicators of trends can include measurable changes in attitudes, demographic shifts (urbanization), and macroeconomic

changes. These indicators should be tracked throughout the life of the project and compared to the scenarios developed at its outset to determine progress toward a given future. Monitorable indicators can include (1) economic figures, such as export and growth levels; (2) demographic trends, such as rate of migration to geographic areas; and (3) employment trends, such as the number and type of jobs created in the formal sector.

- When choosing trends to monitor, scenario team members should look at where they can obtain data, how much it costs to produce that data, and how feasible it is to regularly track it. Another strategy is to look at how data that is already collected would be influenced by the driving forces of a scenario. By tracing the likely impact of a scenario on an already monitored set of demographic or poverty indicators, the team can ensure that the information will be recorded in a standardized and reliable way. Thinking about how each scenario would translate into migration, poverty rates, or other affected data helps make the world the scenario team describes more real.

#### **Make It a Reality**

The final stage of the scenario process is the dissemination of the message and its implementation on the ground. These two goals are fundamentally linked. One of the keys to successful implementation is giving the public and key stakeholders (especially those who will be carrying out the strategy) a good understanding of the lessons learned from the scenarios and the changes in policy that have been made as a result of them.

The basic steps are to:

*Simplify scenarios and prepare them for dissemination.* Reduce each scenario to a 1- to 2-page narrative that can be read or explained to an audience in 2 minutes. Use newspaper inserts, radio and television broadcasts, and videos shown during clinics and seminars to disseminate the scenarios. In Colombia, a video was made with various team members explaining their scenario with the aid of cartoons.

*Develop support for the scenarios.* Once the scenarios have been written, it is essential to involve larger groups of stakeholders to discuss them. During the dissemination period, the scenario team should build relationships with local politicians, influential figures, and important civil society organizations. The team can organize clinics and seminars for client country officials, local political leaders, and other figures and use handouts and videos to explain the scenarios and the strategy that resulted from them. It is important to monitor local and media responses to the scenarios and adjust for them in presentations and seminars.

*Build accountability systems.* The scenarios should lead to the definition of clear goals and pathways to alternate scenarios. It is important to involve the individuals who will generate the data in designing the implementation. The team should develop incentives and mandates for data collection and reporting. Responsibilities should be clear, and the relationship linking the data collected, the scenarios, and strategy should be explained. For example, insights from scenarios should be tied to the choice of baseline survey during the design phase and to the strategy for monitoring and evaluation during supervision.

*Implement.* Clarify the expected results of the intervention and define a clear strategy. Resolve residual conflicts between previous ways of doing business and the current system. Target priority areas for strategic resource allocation. Provide guidance and training (including a background on the scenarios) to all of the line managers who will implement the program.

*Monitor progress and test results.* Tie decisions about proceeding with the intervention to the indicators of progress toward certain scenarios. Scenario indicators should be a part of the Mid-Term Review process and should be examined during supervision missions to chart progress.

*Re-examine environment and strategy.* The scenario team should review for major problems, adjust objectives based on observed results, and revise time tables and priorities.

The team also should rethink scenario plots in light of new developments (ideal at Mid-Term Review) and adjust them so that they correspond to the most recent information.

### **Common Pitfalls in Developing Scenarios**

Despite its usefulness, scenario analysis is not a panacea. Scenarios are a process, not a product. To become truly effective, they need to be used and refined over time. This requires sustained commitment on the part of high-level decisionmakers and a skilled and dedicated scenario team. It also requires the government to carefully develop and track indicators to help decisionmakers tie what is going on in the outside world to the scenarios.

Scenario development is not easy. The process demands significant effort, thought, and creativity of the scenario team. To help the scenario team avoid mistakes made by others, common pitfalls are listed below.

1. *Failure to gain the support of key decisionmakers.* To be credible, scenarios need to be integrated in the decisionmaking apparatus of the organization in which they will be implemented. Without real buy-in at the top, the scenarios will not be implemented.

2. *Unrealistic goals and expectations.* Scenarios do not produce action plans; they help decisionmakers envision what will happen. The methodology is not suited to addressing specific tactical issues. It is meant to provide a broad view of the uncertainties facing an intervention. Strategic decisions *flow from* this understanding, but they are not a direct product of the exercise.

3. *Failure to develop a clear map of the future with monitorable indicators.* It is essential that the team develop clear, monitorable milestones of progress toward the various scenarios. These milestones should have a direct relationship to the goals and planned outcomes of the intervention.

4. *Scenarios that are not credible.* Scenario workshops are not brainstorming sessions. Scenarios must be based on solid quantitative as well as qualitative projections if they are to be credible to

those implementing them. Because scenarios do not assign probabilities or project against current trends, it is important to make sure that they are based on strong research.

5. *Scenarios that are not tied to the planning process.* The indicators and thinking in scenarios must be directly built into the way that an intervention is planned. Scenario indicators should be closely monitored and associated with explicit changes in strategy, including exit strategies. Similarly, scenarios should be related to the client's and the Bank's budget and policy cycles.

6. *Not enough time to carry out the scenario process.* The process requires discipline and attention. It can be divided in two phases: *scenario building* and *relating scenarios to strategy*. Although these two phases may take place at separate times to conform with the Bank's project cycle and the client's policy cycle, the scenario team should have enough time to think through the logic of the scenarios and ensure that they are properly researched.

7. *Inappropriate time frame and scope.* Scenarios that focus on current crises and existing problem areas rather than looking at the interaction of broader forces do not generate the kind of new thinking necessary to jump-start an agenda.

8. *Mistaking projections for scenarios.* Projections are based on past data and often posit a continuation, or slight variation, of current trends. Projections are not well suited to dealing with the potential for significant discontinuities brought on by external events. Scenarios are designed to highlight "what if?" situations for decisionmakers. Scenarios should be built around the forces that shape society. Trends are symptoms of these forces rather than their cause. These unexpected changes cannot be predicted with a study of current trends.

9. *Failure to tell a dynamic, internally consistent story.* Scenarios should be movies, not still

frames. Each scenario should be a smooth narrative that makes intuitive sense to the reader. The main aspects of the future should be internally consistent; the outcomes postulated for the two key uncertainties should be able to coexist; and the actions of stakeholders should be compatible with their interests.

10. *Lack of diversity of inputs.* If the scenario team members are of homogeneous educational backgrounds and institutional affiliations, they will be much less likely to come up with innovative solutions. To build successful scenarios, the participation of a diverse group of people is essential.

## Conclusion

If scenario development is carried out with commitment and purpose, it can be a powerful tool for improving development interventions. Scenarios are useful tools for task managers operating in environments in which long-term thinking, flexibility, and the inclusion of stakeholders in decisionmaking are needed. Scenarios bring insight to the potential futures in which an intervention will operate, what it will need to do to succeed in each future, and what needs to be done to make that success possible. By addressing rather than minimizing uncertainty, scenarios spur innovative and robust solutions. Because they are developed with a team of knowledgeable stakeholders, they are an effective way to gain buy-in for strategies. Furthermore, the research and discussion that accompanies scenario development promote collaborative learning by both World Bank staff and the client. Ideally, all members of the team walk away with a better understanding of the interactions among the country's social, economic, political, and technological forces.

## Note

1. The steps that follow owe a significant debt to P. Schwartz, *The Art of the Long View*.

## Appendix 1. Preparation

The first step in the scenario analysis process is for the task manager to define the intervention with a counterpart in the client government. The task manager decides how scenario analysis will be used in the project and works out a general plan to incorporate it in the project cycle. She or he then assembles the scenario team in consultation with the client government and local and international NGOs. Once the team is assembled, the task manager conducts a series of one-on-one, preliminary interviews to determine the team members' points of view regarding the intervention. These interviews can help the guide the organizers of the exercise in assembling useful background material before the first workshop.

### Scenario Team

In the broadest sense, the scenario team is the group of leaders and experts who gather to create four or five distinct narratives about the future over the course of several workshops. Each of the members gives his or her time, energy, leadership experience, and technical expertise to the group for the duration of the workshops. Team members should be chosen based on their ability to represent distinct viewpoints on the issue being discussed, be it technical or political. Ideally, all also will be champions of the scenario process and generate support for its ideas among their colleagues and communities.

There is also a smaller group within the scenario team that plays an active role before, between, and after the series of workshops during which the scenarios are created. This smaller group, known as the *core scenario team*, should be led by key decisionmakers at the Bank and in the country. The finished scenarios need to be authored by, or in collaboration with, the people who will be asked to lead the implementation of the intervention. Other members of this smaller core team will conduct

preliminary interviews, analyze the country situation, and ground-truth the assumptions in each scenario.

### *Assembling the Scenario Team: A Preliminary Checklist*

Although it may not be possible to include multiple representatives from each group listed below, the best scenario teams are diverse. Below is a list of individuals likely be part of a scenario team:

1. *Decisionmakers.* The task manager and a senior representative from the borrower government should jointly lead the process and write the final scenarios.
2. *People with a thorough knowledge of the World Bank and its role in the country.* A representative from the Country Office or the task manager can fill this role.
3. *People with an understanding of the borrower government and its role in the sector/field (when appropriate).* This includes senior staff at the appropriate ministry and officials who are interested in the scenario process and are active in the field.
4. *Experts and specialists.* This includes Bank, engineers/technical specialists, local academicians, and other relevant experts from other donor agencies or international NGOs.
5. *Line ministry staff and/or implementing NGOs.* These individuals will carry out the operation if it is an investment loan. In a strategy context, the net can be cast more broadly, but there is nonetheless a clear need for practitioners to give input on the realities of implementation.
6. *Leaders from the private sector and from trade unions.* In an investment loan, these representatives should come from the industry or field most closely related to the project. In a strategy context, a diverse group of dynamic businesspersons can be considered. It is important that

both local and international interests be represented when they will be equally affected by the intervention.

7. *Leaders from NGOs, activist groups, religious organizations, and beneficiary organizations.*

8. *Politicians.* Members of all relevant political parties should be included in strategy discussions. In Colombia, politicians included guerillas and revolutionaries.

## Preliminary Interviews

Preliminary interviews engender comfort with the project in the participants, give the team a sense of individual styles, and help identify potentially explosive issues. It is essential that *all* participants in the scenario process be interviewed. This includes Bank staff and members of the client government. The key outcome of these interviews will be a better understanding of the mental models (the outlook and expectations) of each member of the scenario team.

Most interviews will take between one and two hours to conduct. Interviews can be conducted by Bank staff, members of the client government, or staff from an external agency or NGO that is running the process. The ideal interviewer would be a locally based individual or team with experience in facilitation and an understanding of the policies of both the client government and the Bank. Interviewers should be fluent in the language of those interviewed (interviews should not be conducted through an interpreter unless absolutely necessary) and be fully conversant with both the details of the project and the scenario process. Interviewers must establish trust and credibility with participants from the beginning. This can be accomplished by clearly explaining the goals of the process and highlighting the fact that the data collected will remain confidential.

### Interview Questions

Interviews are meant to be conversations rather than formal surveys. The interviewer should participate in a reactive rather than active role, feeding back responses and asking questions to

clarify what has been said. The challenge in this sort of interviewing is to remain unobtrusive and affect the interviewee's train of thought as little as possible. The following list of open-ended questions should help interviewers to move the conversation without directing it. All questions should be phrased so that they apply primarily to the organizations/situations with which the interviewee has the greatest interaction/association.

**Clairvoyant:** *If I could answer three questions about the future for you, what would they be?*

This question helps interviewers identify the greatest sources of uncertainty while encouraging the interviewee to prioritize their concerns.

**Good scenario:** *Imagine that the future were very good, happening exactly as you would wish. How would you answer the three questions that you asked the clairvoyant? What would have to happen to cause this future?* This question encourages the interviewee to revisit the three uncertainties he/she introduced in his or her first question and resolve them while creating a story in which all the elements interact.

**Bad scenario:** *Imagine that the future developed along the worst possible lines. How would you answer the three questions you asked the clairvoyant in this case? What would have to happen to create this future?*

**Lessons from the past:** *What does (the country/the government, your agency/NGO/the World Bank, the agency that provides you services/the sector or field) need to forget? What does it need to remember?*

**Important decisions ahead:** *What are one or two critical strategic decisions on the immediate horizon for your organization/group?*

**Constraints in the system:** *What are the obstacles to this process? To the "good scenario"?* This question should elicit strong responses and will be closely tied to the organization the interviewee knows best.

**Epitaph:** *What would you like to be remembered for having accomplished?* This very open-ended question allows for identification of the role of the organization and individual's goals and commitment.

**Closure:** *What should I have asked you that I didn't?*

### *Visual Clustering to Analyze Interview Results*

Immediately after the interview, interviewers should sit down for at least 30 minutes to go through their notes to identify important observations to be processed further. A simple guideline for identifying key points is: "Is the view expressed relevant and significant in the context of the organization's relationship with beneficiaries and the external environment?" Issues that are related to internal processes of the organization should be included only insofar as they affect the way that the interviewee or organization will react to the outside world. Interviews normally yield from 40 to 60 statements. Each statement should be reduced to a single line.

In the next stage of analysis, the interviewer combines the statements from all of the interviews to create logical cause-and-effect chains of reasoning. At first, statements will seem like random, unconnected thoughts, but as interviewers read through them, patterns and connections should emerge. Clustering, or grouping these statements, serves three purposes: (1) it forces the analysts to pay attention to the conceptual meaning of what has been said; (2) it organizes the thoughts of a diverse group into more coherent stories; (3) it is an iterative process that promotes serial appraisal of the outlooks of each of the people interviewed. This technique is best suited to cluster comments from a set of 5 to 10 interviews. It is important to remember that with only 9 interviews, the core scenario team could be dealing with as many as 450 statements.

However, up to 25 persons can participate in a scenario exercise. The interviewer can simply take the statements from several related interviews and cluster them separately. Say, for example, there are 20 interviews, and 5 interviewees are from the Bank, 6 are from NGOs, 4 are from the client government, and the other 5 have no particular affiliation. The statements of NGO representatives could be clustered separately, as could those of the other related groups. Clustering enables the interviewer to work with a manageable number of statements. Each related group of interviewees will then yield a smaller number of "clustered" statements that synthesize the thinking of the

group. The final stage consists of using the "clustered" statements from each related group of interviews, which should not total more than 15 statements per group of interviews, as the basis for a last clustering to form a final, overall map of interview responses.

### *Visual Clustering Process*

The core scenario team should write the statements from the interviews on adhesive notecards and place them on a display surface or a wall. Statements should be written in large, heavy characters so that they can be read from a distance and text should be limited to a few (at most 8) words. As team members read the statements, they should be able to note patterns emerging. The idea is to organize the separate comments into higher-level concepts that can be related to one another.

1. When clusters are finalized, team members should rephrase each one into a one-word statements that sum up the logic of the various statements brought together to form it. For example, a key internal constraint to educational planning is the lack of efficient disbursement mechanisms, which affects both teacher pay and procurement.

2. Statements that do not fit naturally into existing categories should be put aside and separate categories created for them later.

3. As the process progresses, team members begin to arrange the clusters hierarchically according to higher level concepts. For example, it may be possible to sum up 15 statements about disbursement in a cluster, which should then be organized under a larger cluster focusing on, say, internal budgetary issues.

At the end of the process, there should be five to six larger concepts and enough clusters to ensure that no cluster holds more than 15 or so statements. Statements should flow from simple clusters to larger ideas.

### **Assembling Background Information**

The clustered results of the preliminary interview should give the core scenario team an

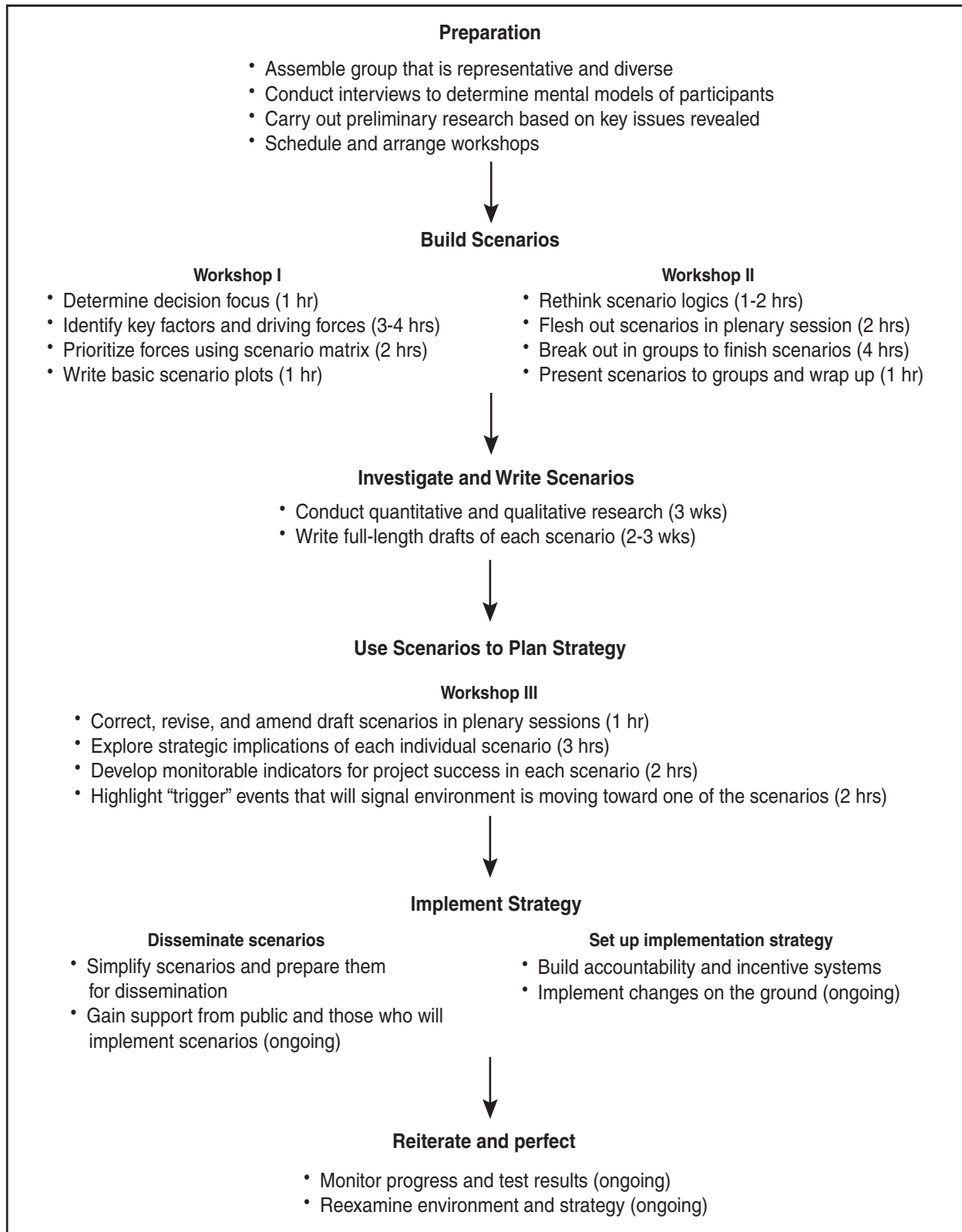
idea of the expertise of the group and the information that team members are likely to need to make informed judgments when building scenarios. If possible, the core team should draw together basic information on relevant issues and present it to the group as a packet. This background can help the group start off with the same basic reference points.

The collection of relevant information regarding these forces should focus on the country itself, its neighbors, trading partners, and (when appropriate) regional trends. The general areas for preliminary data gathering are:

- *Predictable, relevant forces.* This information might include short-term economic forecasts, relevant demographic data, household type and composition, and population growth rates.
- *Unpredictable, relevant forces.* Unpredictable forces such as the price of oil, international investment flows, aid levels, and the sustainability of debt can significantly affect an intervention. Research into these topics is more involved. Industry and academic experts could be consulted, and historical trends affecting these forces could be assembled to aid comparisons with the current situation.
- *Sociopolitical information.* A focused analysis of the historical and political situation in the country as it relates to the intervention should be assembled for the benefit of outsiders. It could become the focus of a brief discussion during the workshop to enable people from the affected areas to add detail.



## Appendix 2. A Roadmap to the Scenario Analysis Process



## References

- Bonnet, T. W., and R. L. Olson. 1998. "How Scenarios Enrich Public Policy Decisions." In *Learning from the Future: Competitive Foresight Scenarios*, edited by L. Fahey and R. M. Randall. New York: John Wiley & Sons. 308-24.
- Butcher, J. 1999. "Advance Interviewing for Scenario Analysis." San Francisco: Global Business Network. (Unpublished presentation.)
- Fahey, L., and R. M. Randall, eds. 1998. *Learning from the Future: Competitive Foresight Scenarios*. New York: John Wiley & Sons.
- \_\_\_\_\_. 1998. "What Is Scenario Learning?" In *Learning from the Future: Competitive Foresight Scenarios*. 3-21.
- Fahey, L. and R. M. Randall. 1998. "Integrating Strategy and Scenarios." In *Learning from the Future: Competitive Foresight Scenarios*. 22-38.
- Georgantzias, N. C., and W. Acar. 1995. *Scenario-Driven Planning: Learning to Manage Strategic Uncertainty*. Westport, Conn.: Quorum Books.
- Godet, M., and F. Roubelat. 1985. "Creating the Future: The Use and Misuse of Scenarios." *Long-Range Planning* 29 (2):164-71.
- Kahane, A. 1999. "Destino Colombia." *Deeper News* 9 (1). Berkeley, Cal.: Global Business Network.
- \_\_\_\_\_. 1998. "The Mont Fleur Scenarios." *Deeper News* 7 (1). Berkeley, Cal.: Global Business Network.
- Kaplan, R. S., and D. P. Norton. 1996. *The Balanced Scorecard: Translating Strategy into Action*. Cambridge, Ma.: Harvard Business School Press.
- Noonan, P. S., and M. S. Tenaglia. 1998. "How Information Technology Helps Scenarios Advance from Consensus to Decisiveness." In *Learning from the Future: Competitive Foresight Scenarios*. 384-401.
- Ringland, G. 1998. *Scenario Planning: Managing for the Future*. New York: John Wiley & Sons.
- Schoemaker, P. J. H. 1998. "Twenty Common Pitfalls in Scenario Planning." In *Learning from the Future: Competitive Foresight Scenarios*. 422-32.
- P. Schwartz. 2000. "The Official Future, Self-Delusion and the Value of Scenarios." *Financial Times*. "Mastering Risk," Part Two. May 2.
- \_\_\_\_\_. 1996. *The Art of the Long View: Planning for the Future in an Uncertain World*. New York: Doubleday.
- Schwartz, P., and J. A. Ogilvy. 1998. "Plotting Your Scenarios." In *Learning from the Future: Competitive Foresight Scenarios*. 57-80.
- Van der Heiden, K. 1998. "Setting the Agenda." San Francisco: Global Business Network. (Unpublished.)
- Wilson, I. 1998. "Mental Maps of the Future: An Intuitive Logics Approach to Scenarios." In *Learning from the Future: Competitive Foresight Scenarios*. 81-108.