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INTRODUCTION

The basic unit of conservation and development work is a project. A collection of projects being undertaken by a group is a program.

What is a Typical Results-Oriented Program?
A typical results-oriented program involves implementing or funding a group of projects that are loosely clustered around some theme to achieve a conservation and development goal. For example, you might fund projects in a certain geographic region or academic discipline. Or you might develop projects near a specific national park or dealing with a certain policy issue. The key point here is that each project or your program is selected more or less independently of the others and, thus, there are few if any synergies. Suppose you fund 20 projects and 12 of them are completely successful while 8 are complete failures. The net benefit of the program is the sum of the impacts of the 12 successful projects plus any capacity developed in the organizations implementing the projects. A results-oriented program’s net impact is at best the sum of its parts.

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What is a Learning Program?
A learning program is a special kind of program that has two types of goals. The first involves achieving specific conservation and development objectives. The second involves systematically learning from your actions to determine what works, what does not work, and why. Under a learning program, a group of projects is selected to deliberately test a specific concept or set of hypotheses. For example, you might look, as the Biodiversity Conservation Network (BCN) did, at the conditions under which an enterprise-based approach to conservation is effective. Or you might try to determine what are the most effective strategies for conservation efforts in a country where you are working.

A learning program’s net impact thus becomes far greater than the sum of its parts.

Structure of This Guide
In this guide, we discuss the steps involved in developing and implementing a learning program. These steps are outlined in the diagram on the next page. We then discuss some of the costs and benefits that are involved in using this approach.

The Steps in a Learning Program

A. Develop Program Concept & Structure
B. Select a Focused Portfolio of Projects
C. Develop an Analytical Framework
D. Implement Projects & Analytical Framework
E. Analyze Data & Communicate Results

Examples From the BCN Experience:
The main text of this guide presents an idealized process for setting up and implementing a learning program. In the remainder of this guide, we use the sidebar and text boxes to provide specific examples of the process that BCN used. We also comment on ways in which we could have improved this process.

A Final Note About Terminology:
Throughout this guide, we use the words “you” and “your” to refer to the reader, who we are assuming to be involved in managing or implementing a learning program. In many ways, however, this use of the word “you” should be interpreted more broadly as referring to all of the people involved in designing and implementing a program. In particular, while Steps A and B must necessarily be undertaken by a limited group of people, Steps C through E should be undertaken by everyone involved in the program and its component projects.

Another Term:
Portfolio — A collection of projects organized around a certain topic or theme. A portfolio can be part of a program, encompass a complete program, or contain multiple projects from different programs.

A Note About Terminology:
In this guide, we use the following terms:
- Project — Any set of actions undertaken by any group of managers, researchers, or local stakeholders interested in achieving certain defined goals and objectives.
- Program — A collection of projects funded by a donor or implemented by an organization.
- Portfolio — A collection of projects organized around a certain topic or theme. A portfolio can be part of a program, encompass a complete program, or contain multiple projects from different programs.
Adaptive Management and Learning Organizations

The concept of a learning program is based on the principles of adaptive management and the learning organization. As outlined by Margoluis and Salafsky (1998), people in a number of different fields have more or less independently arrived at the concepts behind adaptive management. Adaptive management involves integrating program design, management, and monitoring to provide a framework for testing assumptions, adaptation, and learning.

- Experimentally Testing Assumptions — is about systematically trying different interventions to achieve a desired outcome. It is not, however, a random trial-and-error process. Instead, it involves first thinking about the situation you are working in, developing a specific set of assumptions about what is occurring and what interventions you might be able to use to affect those events. You then implement these interventions and monitor the actual results to see how they compare to the ones predicted by your assumptions. The key here is to develop an understanding of not only which interventions work and which do not, but also why.

- Adaptation — is about systematically using the information obtained through your monitoring to take action to improve your program. If your program did not achieve the expected results, it is because either your assumptions were wrong, your interventions were poorly executed, the conditions in which you are operating have changed, your monitoring was faulty—or some combination of these problems. Adaptation involves changing your assumptions and your interventions to respond to the new information obtained through your monitoring efforts.

- Learning — is about systematically documenting the process that your team has gone through and the results you have achieved. This documentation will help your team avoid making the same mistakes in the future. Furthermore, it will enable other people in the broader conservation and development community to benefit from your experiences. Other practitioners are eager to learn from your successes and failures so that they can design and manage better programs, avoid some of the hazards and perils that you may have encountered, and follow your successes. By sharing the information that you have learned from your program, you will help conservation efforts around the world.

Sources that you can consult to learn more about adaptive management as it is practiced in different fields include:

- Ecosystems Management:
- Business Management and Organizational Theory:
- Conservation and Development Project Management:

### STEP A: DEVELOP PROGRAM CONCEPT & STRUCTURE

The first step in developing a learning program is to determine what problem or question you want to address with your program, what your specific hypothesis is, how you will structure your program, and how you will monitor it over time.

#### Conduct Initial Situation Assessment

Your first task is to assess the situation in which the program is trying to operate and determine what general problems and questions you want to address. In many cases, you probably already have a pretty good idea of what system and topics you want to address. If you do not, however, you may wish to conduct an assessment that involves answering variations of the following questions:

- What needs to be done? — What is the perceived problem that you are hoping to address? A lack of knowledge about a certain topic? A lack of action in a certain geographic area?
- What have other groups done? — What work in this area is currently being done by other donors and other programs? What gaps are there?
- What should we be doing? — What types of work are consistent with our overall mission statement?
- What have we done in the past? — In which areas do we have a comparative advantage based on our past activities?

#### Develop an Explicit Model of What You Want to Learn

Once you have a general idea of what you want to address, your next task is to develop the basic hypothesis or hypotheses that you want to test. A hypothesis is generally best expressed in the context of a model of the system in which you are working. A model can be made out of words, mathematical equations, computer code, or pictures (see Margoluis and Salafsky 1998 for an example of how to develop graphic conceptual models). Whatever method you use, the key is to make your model in a way that everyone involved with your program can understand and discuss it.

Once you have created your basic model of the system, you can then use your model to explicitly state your hypotheses. It may seem a bit strange to be forcing yourself to write down hypotheses before you have done any real work — you may feel that you do not yet know enough. But this is exactly the point — by stating your hypotheses now, you can then come back and check and see whether you were right or wrong, and change it if necessary. By explicitly stating your hypotheses, you can also check your ideas with your colleagues and partners and make sure that everyone else working with you has a similar understanding of the situation and the changes to be made.

#### Testing the Enterprise Hypothesis:

In BCN’s case, our founders recognized that there was a lot of hype about the potential of enterprise-based approaches to conservation, but that there had been little or no systematic efforts to study whether this approach would actually work. Our parent organization, the Biodiversity Support Program (BSP), had substantial experience in helping the United States Agency for International Development (USAID) design and implement grant-making programs. It thus seemed like a natural fit to establish a grant-making program as part of BSP that would test the hypothesis outlined in the next box.

#### BCN’s Core Hypothesis:

In BCN’s case, our hypothesis about enterprise-based approaches to conservation stated:

1. Have a direct link to biodiversity, and the results you have achieved. This documentation will help your team avoid making the same mistakes in the future. Furthermore, it will enable other people in the conservation and development community to benefit from your experiences. Other practitioners are eager to learn from your successes and failures so that they can design and manage better programs, avoid some of the hazards and perils that you may have encountered, and follow your successes. By sharing the information that you have learned from your program, you will help conservation efforts around the world.

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- Ecosystems Management:
- Business Management and Organizational Theory:
- Conservation and Development Project Management:
Adapted from Salafsky and Wollenberg, in press.

Source:

Although most monitoring work comes later in our process, it is important even at this stage to mitigate threats to stakeholders.

Monitoring is generally most effective if it is built into the program design from the start. This requires an investment of time and money, this investment can save resources in the long run by ensuring that the project team will be able to take corrective action as it becomes necessary and to demonstrate to outsiders that your work is worthwhile.

The final task is to determine how you will monitor your overall program. Although monitoring requires an investment of time and money, this investment can save resources in the long run by ensuring that the program is effective in reaching its goals and objectives. Monitoring also enables you to take corrective action as it becomes necessary and to demonstrate to outsiders that your work is worthwhile.

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STEP B: SELECT A FOCUSED PORTFOLIO OF PROJECTS

The second step in developing a learning program is to establish and implement the specific process that you will use for reviewing and selecting the projects in your program. This process can be highly systematic or it can be on a completely ad hoc basis. For example, if you are a donor running a worldwide grants program, you may have to spend a good deal of time on this step. If, however, you are a program coordinator running a small program with only a limited number of projects to choose from, you may be able to go through this step fairly quickly. The key point is that all participants in the process — including your prospective grantees or partners — should have the same understanding of how the process works.

To this end, it is often very helpful to develop a flow chart outlining how proposals will be selected (see example on the next page). It is also helpful to develop and distribute an explicit statement of the criteria that you will use to evaluate proposals. This means you may have to undertake this task while you are developing your request for proposals. Finally, since you will be using this portfolio of projects to test your hypothesis, it is useful to review the tasks in Step C prior to completing Step B.

Develop and Circulate a Formal Request for Proposals

Your first task in this step is to develop a request for proposals (RFP). Your request for proposals should outline the overall purpose of your program, the specific requirements that you are setting up, and the format in which people should submit proposals. As discussed in the sidebar, it is generally better to avoid having people send unsolicited, full-fledged proposals. Instead, it is usually far more effective to have people submit two to three page concept papers that outline:

- The context of their project
- Proposed project activities
- How the project will address the programmatic themes
- Monitoring plans
- The proposed budget and timeline

This concept paper should be reviewed by your program staff, who may also wish to talk directly with the prospective applicants to further develop their ideas. Once a concept paper has been accepted, the grantee can then prepare a complete proposal. In reviewing and commenting on concept papers, it is important not to “read more into the proposal” than is actually there. There is a fine line between helping people to draw out and communicate their ideas and imposing your ideas on them.

BCN’s T wo RFPs: Based on our initial request for proposals (RFPs), BCN initially accepted full-fledged Implementation Grant proposals as well as Planning Grant proposals. We soon realized, however, that we could save both potential grantees and ourselves time and effort if we first asked for smaller, more focused Planning Grant proposals or even just concept papers. We thus issued a revised RFP. We also found, however, that in asking for concept papers and Planning Grant proposals, we created a tension between helping people to improve their proposals and creating false expectations on the part of the potential grantees. To this end, you should inform potential grantees that an invitation to submit a full proposal — or even a discussion with a program officer about their proposal — is not a guarantee of future funding.
Screen Concept Papers

Once your request for proposals has been published, you should start to receive concept papers and other inquiries. All but the most casual inquiries should be logged into a database. Concept papers should then be reviewed by one or two of your program staff members. Those concept papers that obviously do not meet your initial filters should be turned down. All other proposals should be entered into the system. Examples of initial filters that you might want to use include:

- **Basic program requirements** — Does the concept paper meet the basic program requirements to fit within your portfolio (e.g., geographic location, topic)?
- **Experience of the group** — Does the group seem to have the capacity to undertake the type of project that they are proposing? Are the group’s mission and goals compatible with your overall program?

For programs that are trying to work with projects in developing countries and other arenas where people have less experience with proposal writing, your program officers may have to work proactively with people who have promising ideas to help them develop their ideas, concept papers, and proposals. However, as noted earlier, you need to make sure that you are not creating false expectations.

**Developing good criteria is one of the most critical steps in this whole process.**

Determine the Criteria for Evaluating Proposals

Before you can fully evaluate project proposals, you need to develop a set of criteria that you can use in your evaluation process. These criteria must be made explicit so that all reviewers are evaluating proposals by the same measures. Developing good criteria is one of the most critical steps in this whole process. This section presents a number of common criteria that you may want to think about using in your review process. Furthermore, in the boxes on the following pages, we discuss the science and the art of developing criteria.

**Basic Criteria**

These criteria are used to prescreen the proposal before it reaches the full review panel. Examples of basic criteria that you might want to use include:

- **Completeness** — Is the proposal complete? Is it in the correct (or at least acceptable) format?
- **Basic quality** — Does the proposal meet minimal quality standards?
- **Basic program requirements** — Does the proposal meet the basic program requirements? (Hopefully there will be no problems here following your initial screen of concept papers.)

---

**Overview of the BCN Planning Grant Review Process**

The process that BCN used to evaluate grant proposals changed over time as we learned from our experiences. The following flow chart illustrates an “idealized” version of the process we used.

- **Initial concept paper received**
  - **Concept right? Significant biodiversity?**
    - **Yes**
    - Send "Issues Letter" requesting revisions
    - **No**
    - Turn down letter
  - **Quality? Thematic fit?**
    - **No**
    - Potential fit & network contribution?
    - **No**
    - Turn down letter
    - **Yes**
    - Hold until competitive position clarified
  - **Portfolio fit?**
    - **Not Clear**
    - Hold until competitive position clarified
    - **Clear**
    - Do Not Need
    - **Turn down letter**
  - **USAID concurrence?**
    - **Not Clear**
    - Clarify issues
    - **Clear**
    - Funding letter

---

**Helping Groups Get Over the Bar:**

BCN had relatively strict proposal requirements, although we often loosened these requirements when dealing with non-native English speakers or groups that were unfamiliar with proposal writing. Our strategy here, however, was not to “lower the bar” but to invest staff time or resources in working with the project teams so that they could then “get over the bar on their own.”
The Science of Developing Valid Criteria...

Rules for a Valid Criterion

Criteria are formal decision rules that determine which projects should be included in your portfolio, and, just as importantly, which should not. Each criterion should outline a specific set of categories and then specify which categories are included in the portfolio and which are not. Valid criteria possess the following characteristics:

1. The criterion is bounded — the edges of the set are sharply defined.
2. Categories are of the same taxa — all of the categories are of a uniform type.
3. Categories are discreet and exclusive — the edges of the categories are sharply defined and the categories do not overlap.
4. Categories are comprehensive — the categories completely fill the area of the set.

It is perhaps easiest to illustrate what makes a given criterion valid through the use of a simple example. Let’s assume that you have a budget of $50,000 dollars and 12 proposals for projects (P1 to P12) that will cost $10,000 each. The projects come from a variety of different countries in Asia that were eligible for BCN funding as shown in the following table.

<table>
<thead>
<tr>
<th>Philippines</th>
<th>India</th>
<th>Nepal</th>
<th>Thailand</th>
<th>Indonesia</th>
</tr>
</thead>
<tbody>
<tr>
<td>P8</td>
<td>P1</td>
<td>P1</td>
<td>P3</td>
<td>P3</td>
</tr>
<tr>
<td>P6</td>
<td>P4</td>
<td>P7</td>
<td>P4</td>
<td>P2</td>
</tr>
<tr>
<td>P3</td>
<td>P12</td>
<td>P2</td>
<td>P10</td>
<td>P10</td>
</tr>
</tbody>
</table>

One criterion for selecting which projects to undertake might be geographic distribution. In this example, you can think of the overall criterion as being the set of all countries in Asia eligible for BCN funding (the shaded box) and each potential country being a category (white circles) in the set as shown in Example 1. If your decision rule is that you want to get balance across the categories in this criterion, then you might decide to select roughly one project in each of the country categories as shown in the diagram. In this example, it is clear that the criterion encompasses only a specific set of Asian countries eligible for BCN funding, that each of the categories represents a different country, that any observer could assign a proposal to and only one bucket in the box, and finally that there is no empty space within the set of the criterion. Note that it is okay if the Thailand category is empty — that there is no proposal to put into it. What is important is that a category exists for every potential proposal within the space of the criterion.

Example 1. A Valid Criterion

Example 2. An Invalid Criterion

The second example, on the other hand, violates all of the rules for a valid criterion. It is not clear where the right edge of the box is located and which countries are in and which are out. Two of the categories contain items other than countries, and it is not clear what would go into them. A proposal from New Delhi, for example, could go into its own category, into the India category, or into the South Asia category, making allocation difficult. Finally, no category exists for every potential proposal within the criterion — if a proposal from Thailand were to come along, there is no place to put it.

Using Multiple Criteria

A good portfolio generally uses multiple criteria. For example, in addition to geography, you may wish to pick only those projects that have good leadership. Let’s assume that the numbers 1 to 12 represent a ranking of the leadership of the project teams where 1 is the best and 12 is the worst. You might create a second criterion that involves setting up four categories of leadership ability (I to IV). Using only this criterion, the portfolio selection might look as follows:

<table>
<thead>
<tr>
<th>Leadership</th>
<th>Philippines</th>
<th>India</th>
<th>Nepal</th>
<th>Thailand</th>
<th>Indonesia</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rank I</td>
<td>P3</td>
<td>P1</td>
<td>P1</td>
<td>P3</td>
<td>P3</td>
</tr>
<tr>
<td>Rank II</td>
<td>P6</td>
<td>P5</td>
<td>P4</td>
<td>P6, P5</td>
<td>P6, P5</td>
</tr>
<tr>
<td>Rank III</td>
<td>P8</td>
<td>P9</td>
<td>P7</td>
<td>P8, P9</td>
<td>P8, P9</td>
</tr>
<tr>
<td>Rank IV</td>
<td>P10</td>
<td>P10</td>
<td>P10</td>
<td>P10</td>
<td>P10</td>
</tr>
</tbody>
</table>

To decide which projects to select in this case, you can move across the columns from left to right until your budget is exhausted. First, however, you need to decide which criterion is more important. If it is more important that you have geographic balance in conjunction with the best available leadership, you would select the projects in this order:

{ P3, P1, P2, P3, P4 }  

If, however, it is more important to have high quality leadership with as much geographic distribution as possible, then you would select:

{ P1, P2, P3, P4, P6 }  

In either case, if you are not restricted to making decisions at this particular time from this particular list of projects, you might want to proactively solicit or develop projects from Thailand to obtain better geographic balance.

The above example shows how balancing portfolio considerations works across two dimensions. To increase this to more criteria, you merely add additional dimensions to the table by adding additional valid criteria. This process gets complicated to show visually. However, you can easily do this by creating a table placing each criterion in a column and the candidate projects in rows. You can then assign points to each project under each criterion or rank the projects relative to one another (see Margolis and Sibulsky 1998 for more detailed discussions of matrix ranking techniques). The relative priority of the different criteria can be addressed by assigning weights to each column or by sequentially evaluating the columns.
Criteria Pertaining to the Project’s Merits
These criteria are used to assess the basic merits of the proposal. Examples of criteria that you might want to use include:

- **Feasibility** — Does the project seem feasible as planned?
- **Results** — Does the project seem like it will produce desirable results? Does the project have a plan for monitoring and reporting these results? Will the project provide sufficient impact for a given level of investment?
- **Dissemination plans** — Is there a mechanism for getting results to key audiences?
- **Budget** — Does the budget seem realistic so as to enable the group to carry out the proposed project? Are there specific line items that should be reduced or eliminated?
- **Moral standards** — Does the project respect key moral issues (e.g., intellectual property rights, affirmative action, gender issues)?
- **Overall quality** — Does the proposal present a compelling case? Is it well thought out and written? Does it inspire confidence?

Criteria Pertaining to the Group’s Capacity
These criteria are used to assess the basic merits of the proposal. Examples of criteria that you might want to use include:

- **Credibility** — Does the group (or the individuals in the group) have an established track record in this field?
- **Capacity** — Does the group have the technical and financial capacity to take on this work? Is it in a position to be able to take risks?
- **Self-reflection** — Does the group interested in and able to do the self-examination and criticism necessary to run a learning program? Will it be willing to share both successes and failures?
- **Development** — Will the project enable the group to improve and grow?
- **Funding** — What other funding does the group have to implement this work? Is it in a position to be able to take risks?

Portfolio Criteria
These criteria are used to weigh the different projects against one another in respect to key factors related to the specific hypotheses that you wish to pursue. For each criterion, you must decide whether it is desirable to have projects in the portfolio clustered in a few categories or to have projects more evenly distributed across the range of categories. In scientific parlance, your ideal goal should be to hold background categories constant while maintaining adequate variance across the key experimental factors. For example, we may choose to have all of our projects focus on one thematic approach to be able to test that approach. Within this approach, however, we would want to have a wide variance across key factors. Examples of criteria that you might want to use include:

- **Type of implementing organization** — government agency, NGO, university/research group, religious organization, private sector firm.
- **Scale of organization** — community, state/provincial, national, regional, international.
- **Focus of organization** — domestic, international.

- **Previous funding from your program** — more to a lot.
- **Ideological perspective of organization** — liberal to conservative, centralized to grassroots.
- **Thematic focus** — options within the thematic focus of the portfolio.
- **Potential confounding factors** — other factors that might influence the hypothesis that you are trying to test.

...and the Art of Developing Meaningful Criteria
The previous text box outlined how to develop valid criteria by using a simple set of rules. However, just because a criterion is valid does not mean it is meaningful. For example, one criterion that you might develop would be to sort projects by the last letter in the name of the group implementing the project. This criterion is valid — it satisfies all four rules. However, it would obviously be pretty silly to develop a portfolio of projects whose names end in “g” or “r”.

Developing meaningful criteria is where the art of this entire process comes into play. We can’t give you any hard and fast rules for this part. The specific criteria that your group chooses to deem meaningful depends on what hypotheses you are trying to test and what you are. Indeed, to borrow a concept from Robert Pirng (1974), it is not so much that your group is determining what is meaningful as much as your group defines itself by what it chooses to view as meaningful.

For example, a program being implemented by a government agency might choose as one of its “meaningful” criteria to have projects more or less equally distributed among all the provinces in the country. An environmental NGO, by contrast, might care less about political geography and instead choose as its meaningful criterion sites where there are local leaders interested in implementing and testing locally managed protected area strategies. Neither group is right or wrong — they just have different interests and needs.

In retrospect, perhaps one of the most important criteria that we should have used was the ability of the group to engage in self-reflection. Many project teams are either unwilling or critical to examine themselves or do not have an innate curiosity, both of which are required for effective hypothesis testing.

In addition, when providing funding for projects, it is important to try to identify those groups who are genuinely interested in the focus of your portfolio, as opposed to those who are merely trying to design a project that will get funded.

In looking at enterprise-based approaches to conservation, we wanted to ensure all kinds of eco-enterprises were represented so we could more adequately test the hypothesis. Categories that we included in our portfolio included non-timber forest product harvesting, timber harvesting, ecosystem service, nature tourism, and research tourism enterprises.
STEP C: DEVELOP AN ANALYTICAL FRAMEWORK

The third step in developing a learning program is to figure out how you and your partners will collect the data necessary to test your hypothesis. Your analytical framework is best developed as early as possible in the overall program. It should be developed by the project team members who will be directly responsible for collecting and analyzing the data. This means that outside consultants and experts should only play an advisory role if they have any role at all. It also means that you cannot merely include the directors of each project, but must include the project field staff. As a result, most of the tasks in this step are probably best conducted in the form of one or more workshops that involve the various project teams in your portfolio (see Step D). Alternatively, they could be conducted by exchanging information through e-mails, web sites, or letters, although this can be more difficult and time-consuming.

Determine Your Key Audiences

Your first task is to broadly determine who it is that you want to reach with the information about your hypothesis and what it is that they would like to know. There are two main types of audiences:

- **Internal** — The members of your project teams and overall program.
- **External** — People outside of your program, including other implementing groups, donors, policy-makers, and the general public.

Each of these audiences will have its own specific information needs in relation to your hypotheses.

Develop Conceptual Models of Projects

Your next three priorities are to ensure that each of the project teams has a solid conceptual understanding of its project, that all of the teams develop a common language that they can use to discuss the project, and that all of the teams are focused on similar target conditions. All three of these priorities can be addressed by having each project team develop and then present a Conceptual Model of the system its project is dealing with and a Management Plan outlining how the project will affect this system (see Margolis and Salafsky 1998 for a description of how to develop these items). Each team should present its model to the group and the models should be discussed and critiqued.

Combine Models to Identify Key Questions

Once each team has developed its model, the next task involves having all of the teams combine their models to identify commonalities and differences and then begin to develop a program-wide model. As a general rule, no two models will look exactly alike. However, if the portfolio has been carefully selected, there should be a fair amount of overlap among the models. In many cases, what might appear to be substantive differences between models may instead turn out only to be the result of different terminology or of splitting and lumping the same factors in different ways. It is thus worth spending some time discussing these issues to see where the true similarities and differences exist.

In any event, the goal here is not necessarily to create one unified model. Instead, you want to identify key sections or “chains” across the project models that seem to have
either strong similarities or interesting differences. Developing a sense of what is truly "interesting" is a large part of the "art" of doing this type of work.

Based on these chains, the group should be able to determine a series of research questions (sub-hypotheses) about the models. In cases where there is substantial agreement among the models, you may only formulate one basic sub-hypothesis. In cases where there is disagreement, you may need to formulate a series of sub-hypotheses that are perhaps linked to different conditions. This series of sub-hypotheses should show the different potential mechanisms by which two or more factors are related.

Three Alternative Sub-Hypotheses

In this example, suppose we are interested in the relationship between migration and resource use. The model shows three potential mechanisms or sub-hypotheses (SH1-SH3) that could explain the relationship. By collecting data about each of the boxes across a portfolio of projects, we could determine the conditions under which each of the relationships holds.

Determine Data Collection Needs and Methods

The next task involves having the group decide what data are needed to test these sub-hypotheses and how these data will be collected. If you were starting with this task from scratch, it could be an extremely difficult proposition. However, if the group has completed the previous steps (and each project team has completed its own draft project-specific monitoring plan), this task should be relatively straightforward.

For each of the sub-hypotheses that you have identified earlier in the process, you should determine what data you would ideally need to test it. You should then consider what data you can realistically get. You then need to decide as a group what data you will actually try to collect. In making this decision, keep in mind that, as illustrated by the parable in the sidebar, it is generally better to have "approximate answers to exact questions" rather than "exact answers to approximate questions."

In determining what data you collectively need, it is helpful to think about the following items (see Marylouis and Salafsky 1998 for a detailed discussion of each item):

- Monitoring strategy — What comparison will each project be making over time? A case compared to itself over time? Or a case compared to control cases?
- Indicators — What specific unit of information will each project collect? Is this unit measurable, precise, consistent, and sensitive?
- Methods — What methods will each project use to collect these data? Are these methods accurate and reliable, cost-effective, feasible, and appropriate? Do the project teams have the capacity to use these methods in a reliable fashion?

In general, keep the monitoring plan as simple as possible. It is far better to have a few key pieces of data collected in a consistent manner across the entire portfolio rather than extensive but patchy data sets. It is also better to have all teams using similar methods and indicators to ensure consistency in the data.

Develop Data-Sharing Plans and a "Social Contract"

Traditionally, project data are seen as proprietary assets of the project that is collecting them. They are valuable for use in publications and can also contain sensitive or private information that can be misused. As a result, people tend to feel that data must be "guarded" to ensure that outside parties do not use them in unauthorized ways. Accordingly, it is vital that all the project members in the portfolio agree in advance how data that they collect will be stored, accessed, and used. This agreement needs to be explicit so there are no future misunderstandings.

As discussed in the introduction to this step, it is also important to develop the monitoring plan in conjunction with the project teams in your portfolio. A learning program will only work if all members of the portfolio "buy into the process." However, in light of field realities and human nature, you cannot rely exclusively on this “buy in” to get the monitoring work done — it is a necessary but not sufficient condition. When people are implementing a project in the field, day-to-day crises and problems mean that monitoring work will inevitably be postponed in favor of more urgent matters. To this end, it is necessary for the group to agree on some form of "social contract" with regard to enforcing the implementation of the mutually agreed-upon analytical framework. This may be a role that the donor will have to take on, perhaps even tying disbursement of funds to the timely submission of data to the group.

Identifying Chains:

All the project team members involved in the portfolio should be involved in developing these "chains." However, it may be more efficient for a small group of people to compare the different project models and identify common factors which can then be presented back to the group as a whole.

Looking Outside the Lamplight:

There is an old parable about a woman walking down the street one night who sees a man searching for something under a street lamp. She asks the man what he is looking for and the man replies that he has dropped his keys. So she helps the man look. After about five minutes, she remarks how it is strange that he has not yet found the keys. She then asks the man if he knows where he dropped the keys. The man tells her that he dropped them about half a block earlier. She then asks with amazement, "Then why are you looking here?" He replies, "Because this is where the light is." In many cases, the initial monitoring plans that BCN received from projects were looking under the lamplight. Academic researchers involved with the projects proposed highly specialized studies that generally seemed to fit with their academic research interests. Over time, however, we and the project teams realized that less-exact work that is focused on the key variables can be far more valuable.

Each project must collect data on the same indicators using similar or, at least, comparable methods. For example, in doing our analysis we had a difficult time expressing benefits per capita in a consistent and meaningful way. This problem occurred because each project recorded household family size in different ways. Some groups reported population in terms of number of individuals; some in terms of numbers of children and adults (with the cut-off between the two at different ages ranging from 12 to 18), and some in terms of households. To solve this problem, BCN developed its Analytical Framework as a way of standardizing data collection.

Enforcing Mutually Agreed-Upon Contracts:

In BCN's case, although we had good relations with most of our grantees, it was still a struggle to get consistent and timely data. We did not tie the disbursement of funds to our receiving data, but, in a next iteration of the program, we would certainly do so — especially with regard to baseline data at the beginning of project implementation.
STEP D: IMPLEMENT PROJECTS & ANALYTICAL FRAMEWORK

Implementing the projects and monitoring plans is obviously the most important step in this whole process. There is, however, very little specific advice about this step that we can outline here. Nonetheless, it is worth discussing the key roles that need to be filled to make a learning program work, and which of these roles donor staff might be able to play.

Ensure That All Roles Are Covered

Some of the most important roles that need to be filled in a learning program are:

- **Program Designer** — Develops the blueprint for the overall program.
- **Program Manager** — Implements and manages the overall program.
- **Program Officer** — Acts as a liaison between specific projects and the overall program.
- **Program Administrator** — Manages the logistical and financial details of the overall program.
- **Program Coordinator** — Manages the flow of information through the network.
- **Research Coordinator** — Coordinates the overall analytical work being undertaken by the program.
- **Review Panel Member** — Reviews potential grant applications and makes decisions about which will receive funding.
- **Technical Resource Person** — Provides technical support on specific issues such as project design or use of a particular monitoring method.
- **Mentor** — Works on a day-to-day basis with a project team to help them develop their capacity and skills. Can be employed by the project team or the overall program.
- **Information Pollinator** — Gathers information from one project to another and promotes linkages.
- **Data Collector** — Develops databases and manages data entry and storage.
- **Research Analyst** — Analyzes the data based on the framework.
- **Workshop Facilitator** — Develops and facilitates workshops and meetings.
- **Outreach Coordinator** — Designs, edits, and coordinates production of outreach products including papers, books, videos, and other media.
- **Webmaster** — Designs, maintains, and works the web site or any other means of electronic communication.

Many of these roles are similar to existing roles in most programs. All of them, however, have elements that are different in the context of a learning program. And a few of them, such as the mentor or information pollinator, are uniquely demanded by a learning program.

BCN Staff Roles:

BCN occupied an interesting position between being a donor and an implementing organization. We received funds from USAID which we used to design and implement a competitive grants program, and to conduct research to evaluate our core-hypothesis. As a result of this intermediary role, BCN staff ended up filling most if not all of the roles outlined in this section.

The fact that BCN staff had to simultaneously function as both donors and researchers was initially quite difficult. In particular, given the common perception that it is important to impress a donor, it was hard for our grantee partners to “trust us” and to feel that they could be candid about their project’s challenges and problems.

Over time, however, by assigning staff to work with specific projects, we were able to develop working relationships with the project teams. More than anything else, these relationships enabled learning to take place.

Because BCN staff had to play so many roles, we had to hire people who were comfortable in an interdisciplinary environment. Hank Casely, the former BCN Director, speaks about having a “T-shaped” mix of skills — depth in one area and then a broad range in complementary fields.

Many of these roles are similar to existing roles in most programs. All of them, however, have elements that are different in the context of a learning program. And a few of them, such as the mentor or information pollinator, are uniquely demanded by a learning program.

Depending on the size and resources of your program, these roles can be assigned to separate people or combined in appropriate ways. Furthermore, they can be assigned to members of your staff, to members of the various project teams, or to outside parties. As a rule, however, it is better to have these roles played by people involved with the entire process rather than to have outsiders drifting in and out over time. Continuity is extremely valuable.

Invest in Face-to-Face Meetings

No matter how the different roles are allocated, it is vital to have the people involved in the program meet in regular face-to-face sessions. Regular e-mail, fax, and telephone contact is important and should be used as much as possible. It is also possible to work collaboratively by sharing documents back and forth — indeed, capturing all your thinking on paper or computer and then using it to promote discussion is an essential part of this overall process. Nonetheless, there is no substitute for people meeting and working directly with one another. Key face-to-face meetings that need to be held include:

- **Preliminary site visits** — Prior to selecting a project for inclusion in the portfolio, it is extremely helpful if the program officers or review panel members can meet the project team and, if possible, visit the project site. One glimpse of a site often gives far more information than a whole written project proposal.
- **Administrative visits** — Many projects often get overwhelmed by logistical and financial issues. Sending your program administrators to meet with project administrative teams early in the process can help identify and develop solutions to small issues that could later derail the entire project. This meeting will also enable the program administrators to develop a sense of the conditions under which field offices function. And, ideally, it will enable them to establish solid personal relationships, which will help resolve problems later on and will minimize friction and misunderstandings. The value of this interaction should not be underestimated.
- **Training workshops** — It is important to train people early on so that all projects use methods in a comparable fashion.
- **Ongoing site visits** — Have program staff regularly visit with project teams to get updates about the situation at the project site and to be able to play the information pollinator role.
- **Cross-site visits** — Encourage meetings between members of different project teams. These meetings sometimes require an external catalyst, but are almost always incredibly beneficial.
- **Program team meetings** — Have your entire core program team meet at least once a year, preferably twice, to discuss the progress of the program and key analytical issues.
- **Network meetings** — These meetings should involve either critical subsets of the network or the entire network. These meetings should be used to develop and update the monitoring and analysis plan.

Meetings are very expensive in terms of both people’s time and money. As a result, they should be planned with care and only held when absolutely necessary. It is vital to get the right people there — there is no point in having a meeting with the wrong people. There is generally a tradeoff between the number of groups involved in a meeting and the number of people who can come from each group. As a rule, limiting the number of groups involved but increasing the participation from each group is desirable.
STEP E: ANALYZE DATA & COMMUNICATE RESULTS

The final step in developing a learning program is to analyze your data and communicate the results to your key audiences. Although this step is necessarily the last one in our process, you should actually be thinking about these issues throughout the entire process.

Compile Data in a Standardized Format
The first task in this step involves gathering data from the various projects and entering them into a common database. Different types of databases that you may wish to develop include:

- **Quantitative information** — This is best stored in a database program or a spreadsheet program.
- **Qualitative information** — This is best stored in a text information program.
- **Photographic information** — This is best stored in a slide file or on a compact disc in digital format.
- **Spatial information** — This is best stored as part of a Geographic Information System.
- **Video information** — This is best stored as a film, video cassette, or digital library.

In each format, data need to be clearly labeled and standardized as much as possible. You should also design your database as early as possible in the overall process so that you can work out the bugs.

**Analyze Data on an Ongoing Basis**
If you have developed a good monitoring plan, analysis should be relatively straightforward. Nonetheless, it is essential not to wait until the end of the program to start your analysis. By doing analysis on an ongoing basis, you will be less likely to forget the context in which data were collected. You will also be able to make any necessary modifications to your monitoring plan to address gaps or problems. A second critical point in doing analysis is to have everyone in the program involved in the process. You should thus plan one or more workshops at which this joint analysis can take place.

It is important to always keep your audiences in mind and to try to develop analyses that meet their needs. For example, if you are interested in helping practitioners, it might be helpful to try to develop general and yet non-trivial guiding principles as outlined in the box on the following page.

What Are General and Yet Non-Trivial Guiding Principles?
In navigating the conservation and development landscape, there is no single path — no magic formula — that will lead a group to success. There are no guarantees that an intervention that works at one site in Indonesia will work equally well at another site in Brazil — or even at the same site in Indonesia the next year. On the other hand, it seems likely that there also is not an infinite number of paths leading to success. To be sure, the exact path that any group needs to follow depends on its starting point, its goals, the changing conditions at the site, and the conditions in the broader social, political, and economic context in which it is operating. But to say that there are no common aspects — that everything is site-specific — implies that there is no need for any kind of systematic science.

Between the endpoints of this spectrum of possible paths is a vast middle ground in which there is some finite number of paths through the landscape. It is impossible to advise a project team exactly when and where it will encounter a given obstacle or catalyst, or what it should do upon encountering them. But is it possible to provide advice about commonly occurring catalysts and obstacles? Can we develop general knowledge about the obstacles groups are likely to run into — how to avoid them if possible and how to deal with them if they must? And can we discover catalysts that help groups to move towards their goal in a more efficient manner? If this middle ground exists, it is most likely to take the form of general and yet non-trivial guiding principles.

As shown in the right side of the diagram, at any given site there are specific principles that are of great use to people working at that site. For example, project team members working at a site in Papua New Guinea might develop a principle such as:

**Use Chief John to help settle any conflicts that arise between different clans.**

Unfortunately, site-specific principles do not really help a person working at the next site over, let alone at a site halfway around the world.

On the far left side of the diagram are general principles that apply to most or all sites as illustrated by the example:

**Avoid conflict between clans.**

Unfortunately, most of these principles tend to be trivial — they are true but not very helpful to practitioners.

The question thus becomes, “Are there general and yet non-trivial guiding principles?” as shown in the center of the diagram. It is most likely that, if these general and yet non-trivial principles exist, they will take the form of conditional probability statements. For example, we might develop the principle:

**In Melanesian type social systems, it is generally better to work with the big man to solve conflicts, unless he is corrupt.**

This principle applies in more than one place (throughout Melanesia) but not everywhere. Furthermore, it is not guaranteed to work in all instances. The user has to be smart enough to apply it to his or her own situation — for example, to determine if the big man is corrupt or not. Our job thus becomes determining not just what the principles are, but also under what conditions and with what probability of success each principle is likely to work.
DISCUSSION

Costs of Learning Programs

Now that you have gone through the process for setting up a learning program, we’re sure you realize that this approach has some definite costs. In particular, compared to a typical program, this type of program requires:

- **More staff** — You need a much greater investment in skilled interdisciplinary program staff than with a typical program. This staff must be housed within the donor organization, within the project teams, or (as was the case with BCN) in an intermediary organization.

- **More money** — As a corollary to the above point, you need more money to pay for the staff as well as all the meetings required.

- **A willingness to value failure** — The process that we’ve described depends on openness and honesty. It requires people who are willing to openly talk to donor staff or their bosses about failure. And it requires that the donor or program managers take a “safe-fail” approach in which an honest appraisal of problems is valued above bottom-line results.

- **A willingness to experiment** — Undertaking a learning program means that you are not sure about the best course of action to take — if you were certain, there would be no point in testing alternatives. A learning program thus requires groups that are willing to deal with uncertainty.

- **A necessarily narrow focus** — One of the interesting aspects of a learning program is that it requires you to restrict your focus so that you can test your hypothesis. This restriction can at times be frustrating. For example, with regard to BCN’s first goal of making conservation happen, we learned that a given project should employ a wide range of strategies that are appropriate to the specific conditions at the project site. This selection of strategies may or may not include enterprise-based approaches. With regard to our second goal of testing our hypothesis, however, we had to restrict our focus to only enterprise-based strategies. This led to some serious contradictions and tough choices.

Benefits of Learning Programs

By this point, we hope, you will also appreciate that a learning program has some major benefits — that an effective program is truly greater than the sum of its parts.

- **Improved knowledge** — The major benefit of a learning program is, of course, the knowledge and learning that comes from the collective research being done.

- **Cross-project learning** — Another major benefit is the learning that occurs from both successful and less-successful projects, and the cross-project networking and capacity building that happens through meetings and workshops.

- **Improved partnerships** — Another important, but less obvious, benefit is that a learning approach can break down the traditional hierarchy that separates donor or program management and project staff. Instead of an unequal donor-grantee relationship, there is now a transaction between equal partners involving funding in return for information. Instead of having managers primarily serve as paper-pushing bureaucrats,
they become "scientists" involved in research. It has been our experience that this shift in perspective makes everyone’s job much more enjoyable and interesting.

Balancing the Costs and Benefits

Unfortunately, there is no simple cost-benefit equation that can be used to compute whether you should undertake a learning program approach. We can’t guarantee that spending an additional $100,000 on staff and travel will buy $150,000 worth of knowledge and job satisfaction. On a more instinctive level, however, we can say that having been through this process once, BCN staff and grantees agree that this process has been very rewarding. It seems that at first some of the partners viewed BCN’s more proactive approach as being potentially meddlesome. Almost all agreed over time, however, that working in partnership with a donor that is truly interested in helping a project maximize its conservation impact and learning is preferred over a traditional grants program that relies on occasional reporting and pro-forma site visits. Most of us feel that we will endeavor to try a similar approach in the future. We’re hooked.

BCN staff and grantees agree that this process has been very rewarding.

The Future

At a meta level, the process described in this guide represents a hypothesis in and of itself. At this point, we do not know under what conditions a learning program can be most effective. The BCN program was a first iteration from which we learned a great deal; our learning has hopefully been captured in this guide. But there are undoubtedly many ways in which this process can be improved.

We hope that you too will experiment with this approach to programs and that you will adapt our ideas, test them, and share your findings with us. In this way, we can work together to improve this approach and, ultimately, our collective ability to do effective conservation.