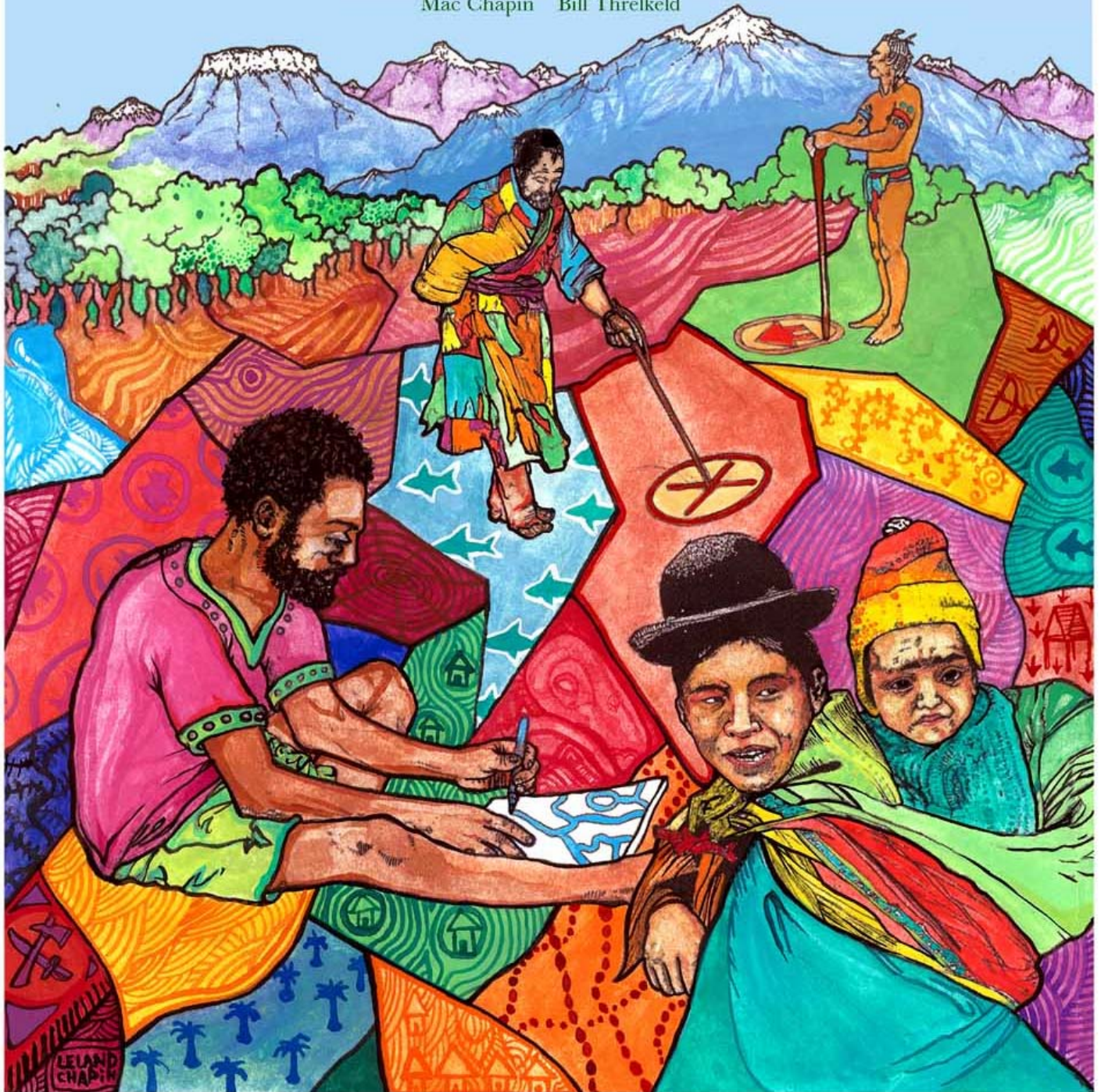# Mapping Indigenous Lands

A Practical Guidebook

Center for the Support of Native Lands

Mac Chapin   Bill Threlkeld
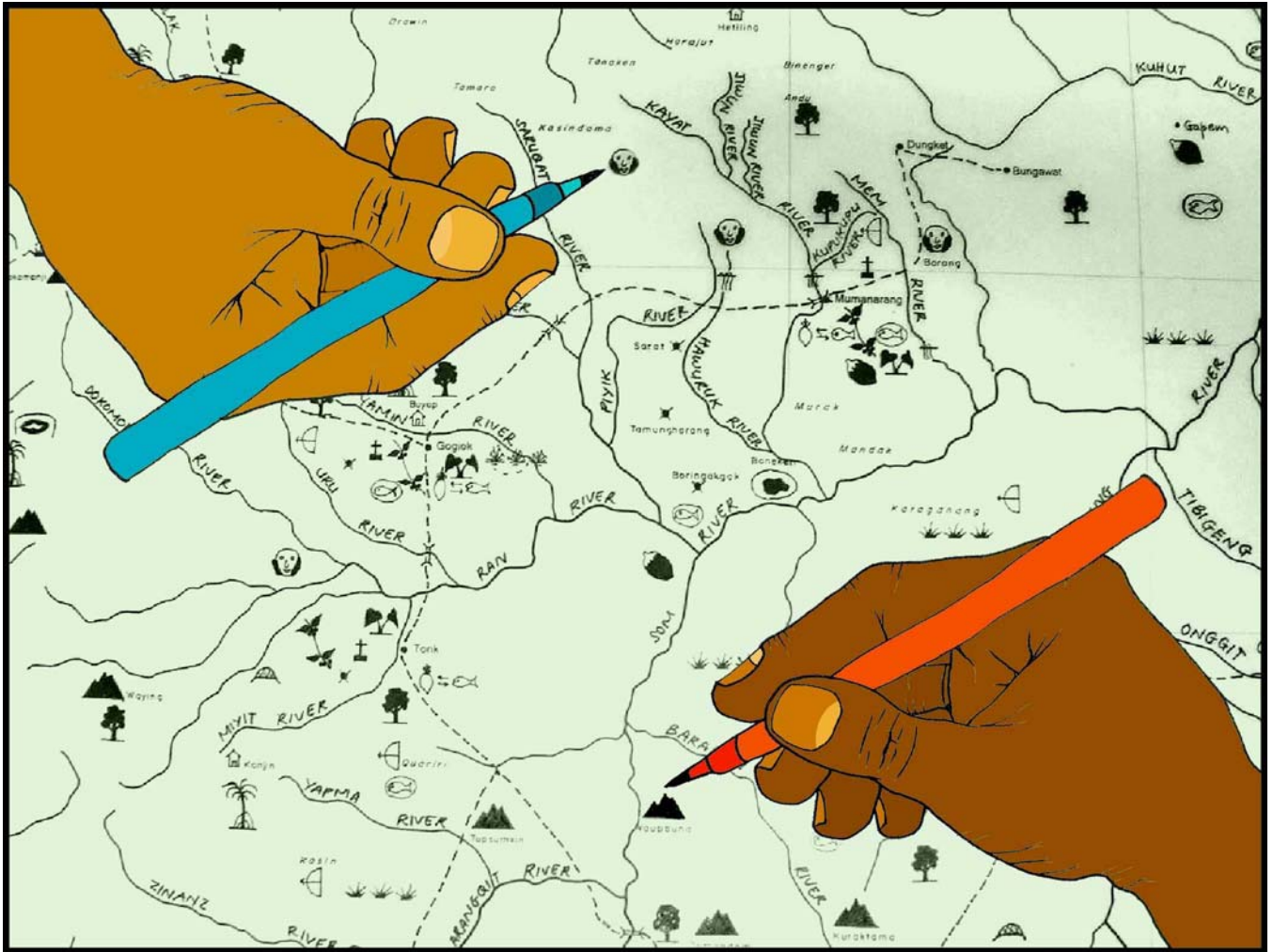
Mapping Indigenous Lands
A Practical Guidebook

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Center for the Support of Native Lands

Environmental Law Institute

3. FINANCES: PREPARING A PROJECT PROPOSAL AND SECURING FUNDS

The participatory methodology presented here is relatively comprehensive and ambitious. It involves large numbers of people, considerable travel to remote places, and food and lodging during three workshops. The heart of the process stretches out over a period of six or seven months, and there needs to be a small core staff that will shepherd the project from the very beginning – starting with Ground Preparation – through to the end, culminating with the production and distribution of the maps. All of this requires financing.

Fundraising for the mapping should be initiated as soon as possible after the decision to move forward is taken, so as not to lose momentum. The search for project funding begins with a proposal, or at least a concept paper, and a budget in some form. The level of detail in both documents will depend on the requirements of a potential donor. Some have guidelines, some do not.

3.1 What to include

When writing a proposal for a mapping project, the core pieces are as follows:

- **Explain the Problem.** Describe the geographical region in which the mapping will take place (including a location map, however crude), population and number of communities, subsistence activities, political organization, and culture. Discuss the problems faced by the people and how the mapping project will help to resolve them. What are the objectives for this project?

- **Explain the Approach/Methodology.** This is an explanation of what will be done to solve the problem. Describe how the mapping project will be structured, who the people on the project team will be, who will be responsible for what, and how the project's components will be coordinated. What follow-up activities will demonstrate how the indigenous maps will be put to use?

Accompanying the proposal is the all-important **project budget**. In Native Lands' experience, the total cost of a project will range between $75,000 and $175,000 (including in-kind contributions). This wide variance is created by a variety of circumstances. Some countries are more expensive than others; the logistical challenges vary from region to region (indigenous areas are frequently remote and of difficult access); some participating institutions are in a position to contribute in-kind support, while others are not; some projects are simply more complex than others; and some stretch out over a longer period than others.

Figure 3.1 is a sample budget format that lays out the major categories that we have used to construct a project budget for the methodology described in this guidebook. Of course, there are other ways to put together a budget; but we have found this format to be effective. It suggests a way to organize the budget information that donors are likely to request, and it will help you keep track of the project as it moves forward. Some donors will have their own guidelines for presenting the budget.

3.2 Line item descriptions

Local salaries/fees/honoraria – These costs will differ from country to country. They must be itemized by position, at least for internal purposes. Below are the types of positions that are required. The **bolded** positions are essential; the others are less essential, to be filled if there is a need and the budget permits.

Figure 3.1 **Sample Budget Format for a Mapping Project**
(with typical line items and layout)

Line Item Description	Amount Requested	Other Sources of Funding	In-kind Support	TOTAL
Budget for: [title of mapping project]				
Local salaries/fees/honoraria *(community researchers, coordinators, cartographers and draftsmen, administrative staff)*	_____	_____	_____	_____
Travel *(travel related to pre-workshop logistics, for the community researchers, coordinator(s), and others to and from the field and workshops, for outside specialists who may be needed for the project)*	_____	_____	_____	_____
Workshops *(food and lodging requirements for participants; facilities for workshops)*	_____	_____	_____	_____
Research materials, supplies, equipment *(source materials -- base maps, aerial photographs, satellite imagery; cartographic supplies -- tracing papers, pens, colored pencils, erasers, etc.; cartographic equipment -- map tubes, drafting tables, adjustable lamps, technical pens and templates, etc.)*	_____	_____	_____	_____
Map design and printing *(map production specialists and facilities; linguists; review and approval of proof sheets by communities; final printing and delivery)*	_____	_____	_____	_____
General administrative costs *(office rent, utilities, insurance, administrative supplies and equipment, etc.)*	_____	_____	_____	_____
TOTAL	_____	_____	_____	_____

Budget Notes [as needed]

- Project Management Unit: **Project Director**, **Administrator**, Administrative Assistant(s)
- Technical Unit: **Cartographer(s)**, **Draftsman(en)**, Aerial Image Interpreter
- Community Unit: **Coordinator(s)**, **Researchers**, Interpreters, Linguists, Cooks, etc.

Some positions will be needed over a longer period of time than others, and adjustments will have to be made. For example, the Project Director and Administrator will be required through the life of the project. The Community Researchers will be needed for a much shorter period of time. The Technical Unit may vary in size during different stages of the project. The budget should be prepared with careful consideration of the timelines for each position. If an outside specialist is required to help set up the project and oversee the initial key workshops, that specialist will collect a fee and the budget should reflect it.

Salaries and honoraria

To insure that the mapping moves forward in timely and orderly fashion, the bulk of those involved should receive some form of payment. Community Researchers, for example, will be devoting up to six months of their time to the project. They cannot be expected to volunteer their time without pay because they need to feed their families for the duration of the project. For this reason, they need to receive some form of compensation for their time. This will differ from country to country, from region to region, and should be calculated with local standards in mind.

The project is intensive work. It moves forward virtually without a break, jumping from initial workshop to the first field period to the second workshop and on through to the end. If this is to be done efficiently, the added incentive of cash or some other form of payment will help considerably.

Travel – These costs vary widely depending on the size of the area mapped, the distance between the workshop site(s) and field, the number of Community Researchers involved, and the type of transportation required (plane, boat, ground). It must be said, however, that indigenous regions tend to be remote and of difficult access, so that moving in and out is frequently time-consuming and expensive. Travel costs begin during the ground preparation stage as project leaders will need to meet with the communities involved and with governmental and non-governmental offices, to inform them of the project and encourage support. Once the core work of the project is scheduled, travel costs become significant as the people involved move to and from the communities and around the communities. There are often unexpected travel expenses so it is wise to add in some additional money to this line item.

Workshops – The sequence of workshops will require fairly predictable costs associated with food, lodging, and meeting expenses. Sometimes a workshop site can provide both work areas and lodging; in other circumstances, they are distinct locations. Meals may be prepared on site or catered. It is always wise to budget additional funds for the period of time in which the workshops are underway. Often, there are unforeseen expenses. For example, participants may get sick and require medicines, a visit to the doctor, or even hospitalization. Equipment may break down and need to be replaced. Unexpected guests may arrive at the workshops, and they will need to be accommodated. It is not possible to foresee every possible expenditure; frequently the unanticipated costs will occur during the workshops.
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Research Materials, Supplies, Equipment – These costs can vary widely, depending on whether materials and equipment can be loaned to the project or must be purchased. Calculating these costs is really the domain of a competent cartographer, one who will recognize the needs of the project and will be familiar with local availability and pricing of cartographic source materials, supplies, and equipment. If such a person cannot be consulted, the project director and administrative staff will have the difficult task of estimating costs on their own, perhaps seeking advice from local businesses and government offices.

As with other budget categories, for potential donors it is probably not necessary to itemize the vari-

ous materials, supplies, and equipment that will be needed, unless there is an extraordinary expense involved. However, internally, administrators will need to keep a sharp eye on these expenses.

Map Design and Printing – As with the previous category, there are a number of technical matters to consider when estimating the cost of map design and printing. Cartographers are the most appropriate people to handle this task, for they will have the contacts and know what to ask. The method of production will determine cost. Will the maps be produced through traditional cartographic techniques (i.e., pen and ink or scribing) or a digital process (i.e., with geographic information system software)? Other critical questions: Can production and printing be done locally, or will they have to be done in a distant city or even another country? How many maps will be produced and on what quality of paper?

> **Items to consider in the budget**
>
> **Research materials**
>
> Base maps/other maps ♦ Aerial photographs ♦ Satellite images
>
> **Supplies**
>
> Colored pencils ♦ Correction fluid ♦ Regular & technical pens ♦ Markers ♦ Tape (clear/masking) ♦ Large sheets of paper ♦ Erasers (pencil & ink) ♦ Notebooks ♦ Tracing paper (roll)
>
> **Equipment**
>
> Map tubes ♦ Stereoscopes ♦ Rulers & triangles ♦ Backpack ♦ Map measure ♦ T-squares ♦ Flipchart & easel ♦ Planimeter ♦ Drawing templates ♦ Drafting tables ♦ Calculators ♦ French/flexible curves ♦ Magnifying glasses ♦ Computer ♦ Pencil sharpeners ♦ Erasing shields ♦ Desk lamps ♦ Dusting brushes ♦ Map weights

These questions are best answered in consultation with experienced technicians. If all you can get is a rough estimate, it is best to overestimate the time and human and material resources you will need to print the maps, so as not to be caught short. Native Lands' experience has shown that this part of the project invariably takes longer than it should and ends up costing more than projected.

General Administrative Costs – This category, known variously as "Overhead" or "Indirect costs," should not be overlooked (as it often is, especially by those who have not prepared many budgets). These are the operating costs of any organization that all projects must share. They might include a portion of the rental and utility costs for the office, the cost of maintenance, repair, or replacement on supplies and equipment used in the project, the cost of accounting, audits, and general insurance expenses, and the cost of telecommunications services (phones, internet access).

Normally, the amount calculated for this category is a set percentage of the total project budget. The Project Administrator will be in the best position to determine the project's fair share contribution to indirect costs. Sometimes donors stipulate a standard amount that they will allow. If a donor does not allow indirect costs to be included in the budget, then these costs should be converted to direct costs, to the extent possible. Any indirect costs that are not covered in the grant request should be described as in-kind contributions (see discussion in box next page).

Budget Notes – Almost any budget should have at least a few explanatory footnotes. Doing so allows for a clean presentation of the numbers without the clutter of myriad explanatory texts in the budget columns themselves. Footnoted numbers and text are used to:

- explain what numbers are included or excluded in terms of products or services to be purchased (e.g., the rental of a site for a workshop might include lodging and meals);
- identify line items that stand out and beg some explanation (e.g., "charter flights" might sound like luxury travel but, for some remote areas, it is definitely not luxurious and it is often the only option available);
- explain line items that appear redundant (e.g., travel for community researchers vs. travel for

other team members);
- define currency exchange rates;
- list contributors who provide cash or in-kind support;
- demonstrate how an amount has been calculated;
- in general, help the reader interpret the budget.

Remember that while proposals serve the crucial function of bringing in money, they are also important for project planning. For this reason, they should be detailed and carefully put together. It is also important to remember that one of the primary goals of these projects is to create a process with a great deal of community participation. This means involving many people, often from very remote villages, and this means covering their travel to and from the field. If the budget is very slim, there will be a tendency to cut corners. This will mean restricting the number of people from the communities, cutting back on travel expenses, and generally paring back the budget in as many areas as possible, including room and board for the workshops. A general rule is that a complete budget will allow for more participation. Conversely, a lean budget will mean diminished participation by villagers. The maps may be attractive in the end, but the process will be substantially impoverished.

In-kind contributions

These are contributions that are non-cash donations such as work carried out with no remuneration, the use of office space or equipment, and food provided by the communities. Donors like to see that their contributions are, in some way, complemented with other donations. For a mapping project, some common, in-kind supports include:

From the Communities
- Meals, lodging, and meeting facilities during the first workshop (as the first workshop is often held in an indigenous community)
- Local transportation and expert assistance during the field periods

From Collaborating Institutions
- Any contributing personnel not paid by the project
- Any office space, equipment, and supplies, and so on not covered by an indirect costs line item (for example, a government mapping office could calculate a value for its work space, use of its equipment and materials, etc.)

By carefully considering the value of resources contributed by the communities and collaborating institutions, it is easy to demonstrate tens of thousands of dollars of support provided in-kind.

3.3 Meeting with donors

Finding donors for this kind of work is often difficult and time-consuming; there is no recipe for success. Sometimes project leaders will spend more time trying to hunt down project funding than they spend doing the project. Receiving the entire amount from a project from a single donor is the exception rather than the rule. It is more common to have money flowing in from two or three or more donors to complete a project budget. Difficulties often arise because donors invariably have different requirements, expectations, and timelines. Some will fund one line item but not others. The timing for proposal approval and the arrival of funds is different with each donor, and this can cause delays in the work and shortages in specific budget line items.

It is essential that all of the money for the project be assembled **before** project activities are initiated. Once the sequence starts, it moves forward rapidly and needs to be allowed to follow its course without interruption through to the end. To have to stop at midstream to search around for

more money to continue will divert everyone's attention and (1) take important momentum out of the project; (2) cause undue anxiety among project leaders; and (3) possibly lead to breakdown. Everyone will be fully occupied once activities are underway and there is simply no time to stop and look for funds.

This is a tricky point because it is often the case that people want to begin working as soon as possible, even before all of the funds have been raised. This tendency, which can be very strong, should be resisted. In an early project in the Darién of Panama (1993) we gave in and started working with just over half of the projected funds in hand. Trying to manage the project and fundraise at the same time brought on anxiety of the highest order, especially when we came to the brink of bankruptcy and considered taking out a loan – which is something one should *never* do, even in the direst of circumstances. We finally managed to raise the necessary funds, but by the time we finished everybody was a nervous wreck. (We ended up pulling in cash and in-kind contributions from more than a dozen organizations – a complex situation that only added to the confusion.)

> **The "scientific" quality of maps**
>
> There is a widespread belief that maps produced by indigenous peoples are not "scientific." When we approached private foundations for support for some of the earlier projects, several of them replied that they were not interested in funding this sort of thing: while it might be interesting, or even important, from a social point of view, it was not scientific. When we tried to explain the Darién project to the Director of Panama's Instituto Geográfico Nacional (IGN), he smiled and shook his head: The notion that Indians wandering about in the jungle with colored pencils and sheets of paper might produce something of value was for him absurd. Yet when we finished the project, one of his cartographers who had worked with us showed him that the maps produced were the most detailed and accurate ever done of the Darién. Several months later, the IGN used the project maps to do an update of the official map of Panama.
>
> In fact, maps done with this methodology combine "scientific" cartography with a thoroughly systematic, "scientific" gathering of local knowledge to produce maps that are of the highest quality. And they are useful to boot.

One reaction on the part of donors is that the amount requested is a lot of money for a couple of maps. We have heard this sentiment expressed on numerous occasions. The reality, however, is that projects of this sort do a good deal more than produce "a couple of maps," and the maps are of a very special kind.

First, the maps themselves are unique. They are unlike any other maps in that they contain a wealth of information that is not found in the usual government-issued maps. Government maps of remote indigenous areas are notoriously inaccurate and lacking in information, for they have invariably been put together without any visits to the region or consultation with local communities. The maps produced with the participatory methodology, in contrast, provide a more accurate and intimate portrait of the land and its people.

Second, when a donor supports participatory mapping projects, the donor is making possible a very rich process that involves (1) extensive interaction among villagers as they gather information about their region for the maps; (2) collaboration among villagers, technicians, representatives of NGOs, and government officials; and (3) the acquisition by villagers of skills to read, interpret, and use maps – all valuable skills in negotiating land and natural resource rights with outsiders. Beyond this, there is a tremendous sense of accomplishment and pride among villagers that put together *their* maps, on *their* terms, with *their* information. This will serve to strengthen the communities and give them greater self-confidence.