

- ❖ **STANDARD 14: PRODUCE A LONG-TERM FINANCIAL PLAN TO SUPPORT STRATEGIES AND MEASURES, IMPLEMENTATION, FURTHER DATA DEVELOPMENT, AND ANALYSES.**
- 

## Case Study: A Financial Modeling, Implementation and Tracking Tool for the Terai Arc Landscape

By: Martha H. Surridge, WWF-US, Conservation Planning & Design

### Purpose and region of analysis

This comprehensive financial model was initially developed as part of the Implementation Plan for the Terai Arc Landscape (TAL) in Nepal. The model provides information on the targets and the financial resources required to implement the plan and secure funding over time. The model also incorporates the cash and in-kind contributions of 14 partners and donors and depicts gaps. The model prioritizes activities across the landscape, which will help partners and donors focus their investment in critical activities to maximize conservation and sustainable livelihoods outputs. Finally, the tool provides a tracking mechanism for monitoring spending and activities by each of the 14 partners.



This tool was developed specifically for the TAL strategic plan. It contains features that are useful in modeling any other terrestrial system around the world. The WWF Conservation Planning and Design Team has developed other financial models to suit various types of conservation programs in terrestrial, freshwater, coastal and marine settings.

#### 50-Year Vision Statement

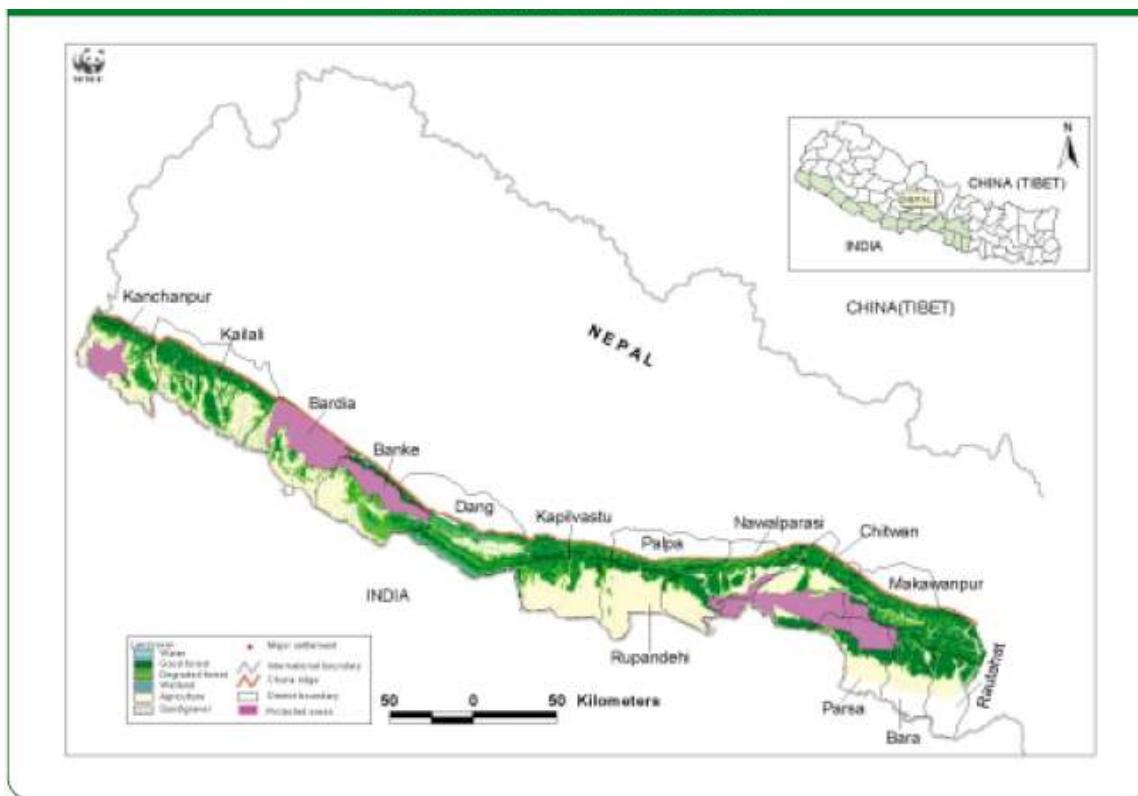
To conserve the biodiversity, forest, soils and watersheds of the Terai Arc Landscape (TAL) to ensure the ecological, economic and sociocultural integrity of the region.

The TAL is a vast conservation landscape of approximately 49,500 sq km, stretching from Nepal's Bagmati River in the east to India's Yamuna River in the west. It links 11 trans-boundary protected areas (PAs) in India and Nepal. The portion of the TAL in Nepal spans 14 Terai districts. This fertile landscape, fed by the Churia (Siwalik) Hills watershed, has been dubbed the “rice bowl” of the country. However, the original forests and tall grasses across the Terai Arc have been degraded to various extents resulting in fragmented habitat. The remaining “island chain” of habitat creates critical refuge for resident populations of some of Asia’s largest mammals—Bengal

Tiger (*Panthera tigris*), Asian Elephant (*Elephas maximus*), Greater One-horned Rhinoceros (*Rhinoceros unicornis*), Guar (*Bos gaurus*), and Swamp Deer (*Cervus duvaucelii*). Restoring the TAL and its forest corridors to create an interconnected network of habitat will facilitate the dispersal and genetic exchange of wildlife populations and ensure the long-term survival of species.

The vision for the TAL is that of a globally unique landscape where biodiversity is conserved, ecological integrity is safeguarded, and sustainable livelihoods of its people are secured. The TAL represents a major shift from site-based to landscape-level conservation, which allows representation of all facets of biodiversity in the region.

**Map 1: Terai Arc Landscape-Nepal**

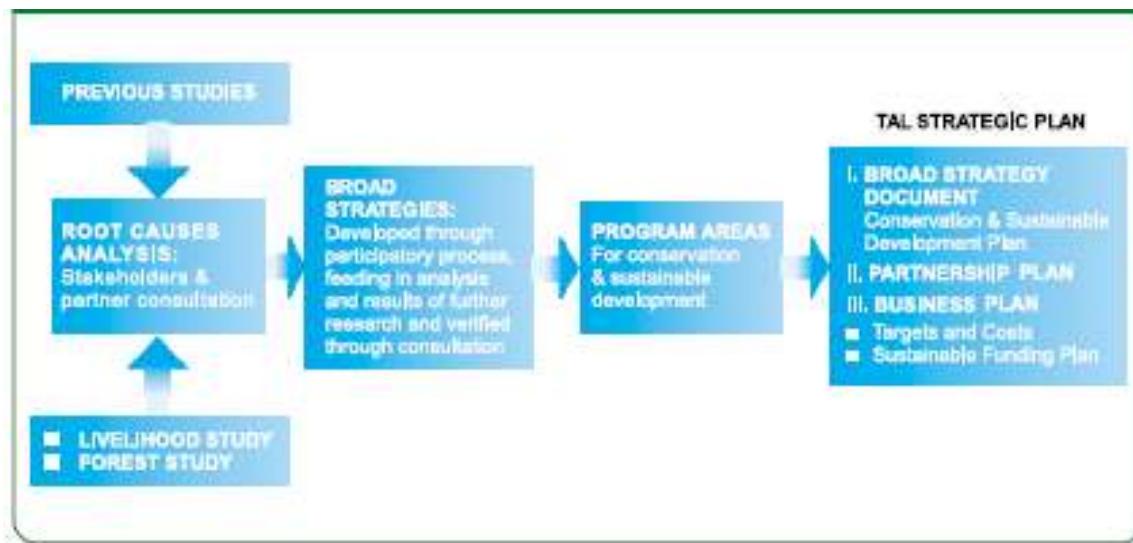


In addition to its large scale, the plan for the Terai must manage very complicated issues. The landscape is not only the most biologically rich part of Nepal, but it is also home to a multi-cultural, multi-ethnic population of 6.7 million including the indigenous Tharu people, many of whom live in extreme poverty and mostly depend upon forest resources for their subsistence. Prior to the 2004 Implementation Plan , conservation efforts in the TAL were decentralized across 11 agencies working on 16 distinct programs and projects with a total investment of over US \$38 million in the

area. Nepal's Ministry of Forests and Soil Conservation recognized the need for a common policy framework and plan to address these complexities.

Strategic Planning for TAL was conducted by a multi-stakeholder core team, including participants from local, regional and national partner groups. The TAL Strategic Plan outlined 51 broad strategies for conservation and sustainable livelihoods. The core team then worked through a consultative process to translate these strategies into specific actions.

**Figure 1: The Strategic Plan Development Process**



The Implementation Plan for the Terai includes both a Partnership Plan and a Business Plan. The key piece of the Business Plan is a comprehensive 10-year financial model which was developed to:

1. Provide a foundation to implement the TAL Strategic Plan by translating strategies and activities into financial terms.
2. Estimate total costs for the entire landscape program, including forecasts of detailed cost, revenue and gap projections.
3. Provide evidence of need to help attract new partners and donors.
4. Facilitate program tracking and future resource allocation decisions.

The development of the financial model was a joint effort between the World Wildlife Fund (WWF-US) Conservation Planning and Design Program and the IBM Global Strategies Group (which provided pro-bono consulting support).

## Criteria/Methods

The financial model was built using a set of Excel spreadsheets via a collaborative process over the span of one year. In December 2004, the core team and the IBM consultants held an initial meeting to discuss the requirements for the tool. Across the next seven months, data for the model was gathered and validated during meetings and workshops at the national and district level with donors, partners, implementing agencies, project staff and other key stakeholders. Final adjustment and validation of the model occurred from August-December 2005.

For the TAL region, financial information was classified into the following groups or “dimensions” for modeling and reporting purposes:

- **Landscape Level:** The TAL financial model was created to plan for conservation at the level of an entire landscape.
- **Protected Areas:** The TAL model includes four Nepalese protected areas. (Note: The TAL also includes seven Indian Protected Areas; however, because only Nepal was included in the Implementation Plan they were not a part of this model.)
- **Districts:** The TAL model also covers part or all of 14 Nepal districts.
- **Strategies and Activities:** The TAL model reflects the costs and financial needs of carrying out 51 strategies and nearly 300 specific activities.
- **Partners/Projects:** The model also accommodates the cash and in-kind participation of 14 strategic partners, including government agencies, bilateral and multilateral donors, and both conservation and non-conservation NGOs.
- **Years:** The model spans 10 years (2004-2014) to match the Nepal 10 year planning cycle.
- **Priority:** For each geographic unit, all activities were heat mapped (*i.e.*, color-coded) as high, medium or low. Project managers can use this prioritization to help them make decisions about which activities to carry out in the case of a funding or staff shortage.
- **Revenue:** The cash or in-kind commitments of each of donor and partner are incorporated in the model. A gap analysis can be carried out based on the total cost required and the total contribution by partners.

The defining feature of the TAL Financial Model is that it is a strategy and activity-based model. The cost section of the financial model was developed directly from a set of nearly 300 activities. These were consolidated to about 100 cost categories by clustering similar activities with a unit cost assigned to each cluster.

Activities are thus the principal calculation unit within the model. A unit cost is assigned to each activity and then multiplied by the number of units (based on a unit

cost driver)<sup>1</sup> to calculate the full cost for an activity. For example, the activity of community planting to restore forests is assigned a specific unit cost. The unit cost driver for this activity is hectares. Targets (number of units) for each activity in a geographic area (PA or district) are set based upon the available information and past experiences of implementers. Thus, to calculate the cost of this activity for a given area, the unit cost is multiplied by the number of units (in this case hectares) targeted for community planting in that area. The model allows users to roll up the costs of each activity to compute the total costs across any dimension of the model. In addition, the model allows users to spread out costs over time when applicable. According to special coding, the model could distribute costs equally across time, assign portions of the full cost to designated years or set the cost to increase or decrease gradually over time.

**Figure 2: Snapshot of Master List of Activities and Unit Costs**

			F	G
			Unit Cost Driver	Unit Cost
		Hectare	NFUs	
185	2	2. SUSTAINABLE FOREST MANAGEMENT		
187	2.1	2.1. Hectare Degraded Forest		
188	2.1.1	Restoration by government agencies	Hectare	17,000
188	2.1.2	Restoration by Communities	Hectare	17,000
190	2.1.3	Natural Regeneration	Hectare	3,000
191	2.1.4	Private Plantation	Hectare	4,000
192	2.1.5	Restoration at household forest level	Hectare	3,500
196	2.1.10			
197	2.2	2.2. Reduce forest degradation through better protection		
198	2.2.1	Support CRFG to Reduce Forest Degradation	# of CRFG	50,000
198	2.2.2	Support CRFG to Reduce Forest Degradation	# of CRFG	300,000
200	2.2.3	Support Government District Forest Office to Reduce	Hectares of Govt Forest	1,000
201	2.2.4	Support CRAPD	# of CRAPD	75,000
212	2.2.15			

## Outcomes

The three main functions of the TAL financial model are to help with securing new sources of funding and partner participation; program implementation and management; and progress tracking. The process of building the model also helped to build consensus and buy-in among the stakeholders involved. In order to decide on the model inputs (*i.e.*, specific activities or priorities), the team had to agree upon how they would act to implement the strategic plan for the TAL. The financial model will serve as a roadmap for the implementation of the TAL work by all partners over ten years.

---

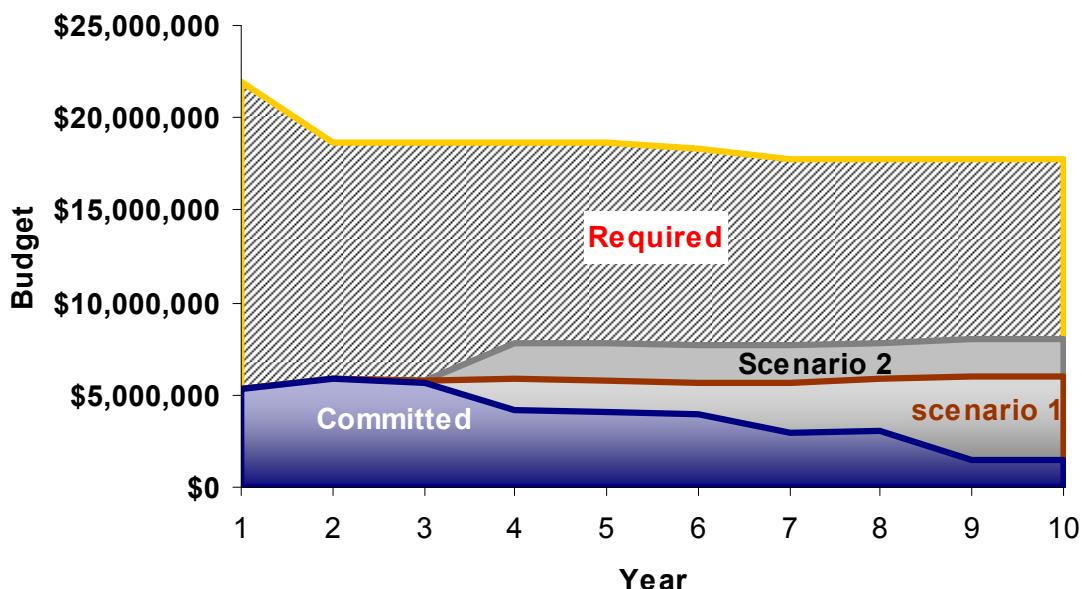
<sup>1</sup> A unit cost driver is a common descriptive unit used in financial modeling which when multiplied with the unit cost provides the total required budget for that activity. A hectare or the number of a certain output (*e.g.*, number of events or plans) are examples of unit cost drivers.

### Gap Analysis and Fundraising Support

The capability to conduct detailed gap analyses makes this model a powerful tool for fundraising and for securing new partners. The model can graph the difference between required and committed funds across the 10-year time span. The model can project funding gaps at any level including strategy, activity and district.

Model users can also insert assumptions about the continued support of current donors and additional support from new donors in the future. By adding in such scenarios, the model can provide a more accurate picture of the funding gap the program will most realistically face. The TAL Implementation Plan identifies several sustainable funding mechanisms to help close this gap.

**Figure 3: Simple Gap Analysis by Year**



From the donor perspective, the financial model serves as a convincing tool because it:

- Provides context for a gift relative to total landscape cost
- Identifies the highest priority activities and those with the greatest financial need
- Demonstrates coordination across partners
- Shows the leveraged effect of partners' contributions
- Tracks progress against financial and program targets

### Decision and Management Support

The total funding need calculated by the model shows the ideal situation needed to achieve the 10-year plan. If funds are not raised, not all of the activities can be

implemented in the stipulated time. In this instance, the prioritization “heat mapping” of each activity noted earlier will allow managers to carefully prioritize the activities in each district which will result in more precise investments of limited funds.

Across the 10-year span of the TAL strategic plan, the financial model will serve as a decision-making tool to guide the relevant government institutions, including the TAL Support Unit, to make decisions on timing and allocation of funds. The principal owners and operators of the model can input new cost or revenue information when it is available and can obtain new cost projections gaps or other financial information from the model to support ongoing implementation. The model also includes rough projections of the overall management and monitoring costs for implementing the plan, including research, travel, meetings of the core team, information exchange in the field, and results monitoring.

### Tracking Progress

The model was built to allow regular updating of financial and activity data (in units), so that it remains up-to-date and accurate over time. This enables the model to serve as a mechanism to track progress of the targets, activities and financial indicators. For example, a manager can review the number of units completed and the money spent to see how it compares with the planned amounts.

### **Products and Tools**

The financial model for TAL is an interactive Excel-based tool, which is but one integral piece of the TAL Implementation Plan. All of the completed pieces include:

- TAL Strategic Plan
- Completed financial model or “business plan”
- Gap analysis, and basis for sustainable funding plan
- Partnership Plan, and strategies to engage and manage partners
- Implementation and monitoring framework for coordination of partners’ projects, and overall TAL management, and progress and results monitoring.

The TAL model represents an early version of WWF’s use of financial modeling as a part of implementing its Standards for Program Management. WWF has produced a number of other financial models for both terrestrial and marine use. Examples of this work are outlined in Appendix B and available via the WWF web site [panda.org/standards](http://panda.org/standards). You may contact the WWF-US office for further details or for copies of the materials on CD. To make such a request or for other inquiries, send an Email to: [strategies@wwfus.org](mailto:strategies@wwfus.org)

## Strengths and Limitations

### Strengths

- Cost, strategy, partner and contribution data and assumptions can be changed with new information and the whole model updates automatically.
- The model responds to questions and needs of different stakeholders including partners, implementers and donors.
- The tool has a great capacity for assigning criteria for analysis: by size, geographic location, district, priority or other criteria that influences management costs.

### Limitations of the Tool and/or of its Use

- Large file size limits the computers on which the model can run.
- Using Excel as a platform requires reports to be written manually.
- The overall complexity of the model requires a trained and experienced user.
- The TAL model had a large number of dimensions making it overly complex and necessary to input data at a very fine scale.

For more guidance on financial planning, please refer to the “Comprehensive Financial Plan Check List” in Appendix A.

## **APPENDIX A:** **COMPREHENSIVE FINANCIAL PLAN CHECK LIST**

### **Preconditions**

1. Review conservation strategies and priorities that the plan or model needs to incorporate
2. Identify the owner(s) and user(s) of the model. (Who will maintain it? Who will use the data? What are their objectives?)
3. Identify and clarify the roles of any partners that affect the model. (Who provides information? Who needs to give buy-in or acceptance for the model and its findings?)

### **Overarching Considerations**

4. Identify key dimensions or parameters of the model that will be used to organize activity and cost information or used for reporting outputs of the model (*e.g.*, countries, landscape types, protected areas, partners, strategies)
5. Identify the major assumptions and variables that affect costs (or revenue) and make decisions on how to handle them in the model (*e.g.*, major cost drivers, rate of spending, inflation, currency exchange, cost of money, interest rates, etc.)
6. Determine priorities for each type of activity and cost (or other dimensions as needed)
7. Determine total time horizon for model (5-year? 10-year? Longer?).

### **Cost Analysis**

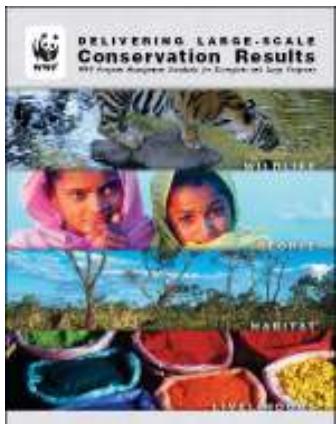
8. Determine whether costs will be based on activity cost data (unit costs) or sample budgets
9. Address how cost data will be projected (phased) across the time horizon of the model
10. For PAs, determine whether using two or three program phases (*e.g.*, start-up, consolidation, full management) is the appropriate way to project costs
11. Identify which costs are one-time (and/or capital expenses) and which are recurring
12. Project and incorporate program-wide costs such as management, monitoring, research

### **Revenue Projections and Gap Analysis**

13. Determine revenue categories in the model; identify if revenues are one-time or recurring
14. Address the means by which the model projects endowment revenue and growth (if at all)
15. Develop a gap analysis or scenario projection tool within the model to evaluate gaps in revenue over projected expenses

**APPENDIX B:*****DELIVERING LARGE-SCALE CONSERVATION RESULTS: WWF PROGRAM MANAGEMENT STANDARDS FOR ECOREGIONS AND LARGE PROGRAMS***

In the summer of 2007, WWF-US Conservation Planning and Design published a new Field Guide entitled *Delivering Large-Scale Conservation Results: WWF Program Management Standards for Ecoregions and Large Programs* for planning, managing and monitoring the organization's largest conservation programs. This Guide is based on the WWF Standards of Program Management; a set of guidelines, tools and best practices sanctioned by WWF-International as the principal means by which all of Network will carry out conservation worldwide.



To access the online PDF of the field guide, go to:  
[http://www.panda.org/standards/field\\_guide](http://www.panda.org/standards/field_guide)

Financial models are a part of creating a full Operational Plan under Step 2.3 of the WWF Program Management Standards. The full Field Guide and numerous online tools and examples are available online at [www.panda.org/standards](http://www.panda.org/standards)