Appraising Protected Area Management Planning in Nepal

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Abstract

This paper distils Nepal's experience on protected area management planning, with particular reference to implementation of management plan. It also reviews the status of PA management plan and legal provisions related to management plan. Management plan is the road map to guide conservation efforts and sets out the desired future of protected area. Five-year management plan of protected areas have been prepared and implemented. Although park management plans were formulated for most of the parks and reserves, there remained wide gaps during its timely and effective implementation. The aim of this paper is to answer the question "what are the issues in management planning process and implementation". Building on the strength of the past and keeping the existing weaknesses in mind, the management effectiveness should be evaluated and improved.

Key Words : Protected area, Management, Implementation issues.

Protected Areas in Nepal

Protected area management and community forestry programs are the hallmarks of Nepal's forestry sector program. Protected Area (PA) is geographic entity and is widely held to be among the most effective means of conserving biological diversity in-situ (Poudel, 2007). The PA management in Nepal is swayed by the tides of changes in national and international affairs. Demographic, economic, socio-political, technological and cultural factors have direct and/or indirect implications for the PA management. These changes have stimulated moves to promote more participatory and scientific PA management.

IUCN-The World Conservation Union has developed six main PA categories (IUCN, 1994). Six different designations are used in National Parks and Wildlife Conservation Act 2029 in Nepal. They are Strict Nature Reserve, National Park, Wildlife Reserve, Hunting Reserve, Conservation Area and Buffer Zone (HMGN, 1973). Based on IUCN's international

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classification of PAs, Nepal's PAs include National Parks (Category II), Wildlife Reserve (Category IV), Conservation Area, Buffer Zone and Hunting Reserve (Category VI).

Table-1: Nepal's protected areas categories

IUCN Category	**Nepal's PAs**	**Area (Sq. km.)**	**Percentage**
Category II	National Parks	10,853.00	32%
Category IV	Wildlife Reserves	979.00	3%
Category VI	Hunting Reserve, Conservation Areas and Buffer Zones	22,353.62	65%
Total		34,185.62	100%

The World Database on Protected Areas identifies 113,707 protected areas covering 19.61 million km², and 13.2% of the earth's land surface (WCPA, 2005). With the rapid increase of number and extent of PAs worldwide, Nepal has done a commendable work by creating a network of protected areas, 10 National Parks, 3 Wildlife Reserves, 1 Hunting Reserve, 6 Conservation Area and 12 Buffer Zones, covering 23.23% of the total geographical area. It seems that the category VI areas are the most extensive in terms of size, accounting for about two-third of the total area.

Sagarmatha National Park and Chitwan National Park with typical natural, cultural and landscape characteristics were listed as World Heritage sites in 1979 and 1984, respectively. Similarly, 7 monuments and buildings of Kathmandu and Lumbini, the birthplace of Siddhartha Gautam has been inscribed as Cultural World Heritage Sites in 1979 and 1997. Nepal presently has 9 sites designated as Wetlands of International Importance (Ramsar Sites) covering 34,455 ha, and 0.23% of Nepal's area. Six of nine Ramsar sites are inside the PA system (Poudel, 2009). There are 27 Important Bird Areas (IBAs), covering about 18% of the country's land area. Thirteen IBAs are wholly within PAs, 2 are partially protected and 12 are unprotected. About 81% of the total area of IBAs is included in PA system (Baral and Inskipp, 2005). Nepal has 7 species of plants, 31 species of mammals, 27pecies of birds, 7 species of reptiles, 3 species of amphibians and 1 invertebrate species (77 threatened species=7 plants, 70 animal) are globally threatened (IUCN, 2010). A total of 54 Important Plant Areas (IPAs) complex for medicinal plants have been provisionally identified which comprise altogether 230 IPAs or rich diversity of the priority medicinal plants (Hamilton and Radford, 2007).

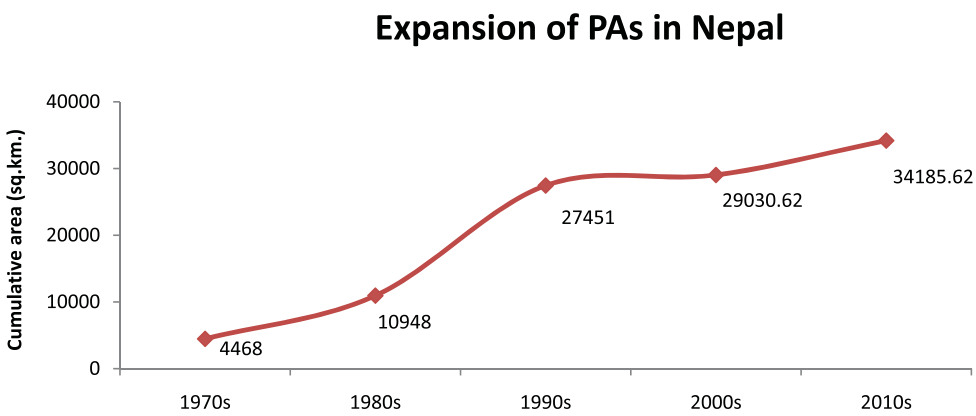

Figure-1: *Expansion of PAs in Nepal*

During the fourth amendment of National Parks and Wildlife conservation Act in 2050, buffer zone management concept was timely incorporated. Then Government of Nepal has initiated buffer zone management program and declared 11 buffer zones, so far. Similarly, conservation areas came to be added after 1990s.

PA management is diverse in Nepal. Department of National Parks and Wildlife Conservation (DNPWC) is a conservation committed governmental organization of Nepal having over 35 years of conservation experience in wildlife and protected area management in Nepal. The National Parks and Reserves are under the management of DNPWC. Annapurna Conservation Area and Mansalu Conservation Area are managed by National Trust for Nature Conservation, a nature conservation NGO whereas Kanchenjunga Conservation Area is managed by the local communities (Kanchenjunga Conservation Area Management Council) since September 2006, based on approved management plan. Nepal Army has been deployed for the protection of National Parks and Reserves except Makalu Barun National Parks and Dhorpatan Hunting Reserve. The management regime and legislations have been tailored with PA category. Broadly, NGO managed, community managed and Government managed PAs are found in Nepal. Moreover, the objectives of PA management have shifted to include livelihood improvement program and sustainable community development.

PA Management Plan

Planning moves us from the present to the future. The management planning is a process in which bridging strategies, activities between where we are today and where we want to be in some point of time in future (say after 5 or 10 years) are designed and implemented. Management planning is also an informed decision making process (Sawarkar, 2005). Management plan is a means to help managers shape their conservation agenda and steer

the management process. Management plan is the document that has relationship between means and ends with the efficient mobilization of former to achieve the later. Means may be the human, financial, social and information resources and ends is the desired level of management i.e., goal.

Management plan is becoming a central vehicle for protected area management. Management plan is also a yardstick by which we can monitor changes and track progresses. Preparation of management plan is not the end in itself. Each management plan should be descriptive and prescriptive and more importantly, it should be flexible. Successful management planning is characterized by the following features (Thomas and Middleton, 2003):

- § It is a process not an event,
- § It is concerned with the future,
- § It involves value judgments,
- § It is systematic and pre-determined,
- § It is a continuous process,
- § It takes a holistic view,

Management plan denotes many things to many people. But in real sense, it should be the basis of PA management, which directs and control PAs management activities over a specified period of time for a specific area. Management plan includes wildlife population, their habitat and peoples' concerns. It comprises activities related to planning, organizing, staffing, directing, coordinating, reporting and budgeting of an area. It includes park management, buffer zone management and eco-tourism management. It is more useful in situation where there is frequent transfer of park manager. The benefits of management are legion but can be summarized as follows.

Table-2: Benefits of management plan

Benefits of management plan	§ get away from ad hoc approach, § reflect the current state of management, § assess values and conservation significance , § identify program gaps, challenges, issues and threats, § outline the goals, objectives, strategies, outcomes and activities, § figure-out resources required, § identify possible stakeholders and their role, § build consensus and seek review, § define scope and boundaries, § facilitate the park managers, § direct and control the management, § facilitate to monitor changes and track progresses, § integrate with other planning processes, § more proactive in conservation,

The country's legislations are dominant means to practice protected area management in Nepal (Agrawal and Varughese, not dated). National Parks and Wildlife Conservation Act is the key instrument in managing country's protected areas and biological diversity. Like in Forest Act, there are no such provisions in National Parks and Wildlife Conservation Act 2029 (HMGN, 1991; HMGN, 1973) that the PAs will be managed based on management plan. There are different provisions on management plan preparation process in Act and Regulations. Some plans seem more participatory than others. The degree of participation depends on management regime. But, all plans have some degree of control from higher authority. The basis of managing protected areas should be clearly spelled-out in legal instrument.

Table-3: An overview of legal provisions for management plan

Management regime	**Management plan preparation**	**Plan approval**	**Implementation**	**Related legal provision(s)**
Government managed forests	Department of Forests	Ministry of Forests and Soil Conservation	District Forest Office	Forest Act (21)
Protected forests	Department of Forests	Ministry of Forests and Soil Conservation	District Forest Office	Forest Act (24)
Community forests	Forest user group	District Forest Office	Forest User Group	Forest Act (25)
Leasehold forests	Lease holder	Ministry of Forests and Soil Conservation	Lease holder	Forest Act (32)
Religious forests	Concerned group or community	District Forest Office	Concerned group	Forest Act (36)
Buffer zone	National Parks/ Wildlife Reserve Office	Ministry of Forests and Soil Conservation	National Parks/ Wildlife Reserve Office	BZ Management Regulation (5)
Annapurna Conservation Area and Manaslu Conservation Area	Conservation Area Management Committee and Project	Management Institution (NTNC)	Conservation Area Management Committee and Project	CA Management Regulation (14 &15)
Krishnasar Conservation Area	Conservation Area Office and Council	Ministry of Forests and Soil Conservation	Conservation Area Office and Council	CA (Govt.) Management Regulation (7, 8&9)
Kanchenjunga Conservation Area	Management Council	Department of National Parks and Wildlife Conservation	User Committee and Council	Kanchenjunga CA Management Regulation (6, 7&8)

PA management planning has been initiated since the establishment of PAs in 1970s. FAO had assisted Nepal in preparing few PA management plans in early years. The first PA management plan was prepared for Chitwan National Park in 1975-1979. Similarly, The Royal Karnali Wildlife Reserve Management Plan (1976-1981), Langtang National Park Management Plan (1976) and some others had been prepared. In 2001, new five-year management plan of Chitwan National Park was prepared and implemented. Now, Chitwan National Park and Buffer Zone management plan (2007-2011) is on run. Chitwan and Bardia National Parks have been implementing second management plan. The management plan of few PAs is yet to be developed. There is a time lag between preparation and approval management plan such as Parsa, Koshi Tappu and Suklaphanta Wildlife Reserve. Some management plan (for example, Koshi Tappu Wildlife Reserve Management Plan: 2002-2007) became obsolete without formal endorsement.

Management strategy framework of Terai PAs and Rara National Park have been prepared with the support from the UNDP. Resource profile of seven PAs have been developed. Moreover, there are separate tourism management plan (such as Bardia National Park and its Buffer Zone Tourism Plan 2001-2006) and buffer zone management plan such as Makalu Barun National Park). Special management zones with special management strategies and actions have been formulated in some PA management plan. The management plan has incorporated conservation education, buffer zone, eco-tourism, habitat management , anti-poaching, resource sharing and institutional strengthening program. It is hereby, pertinent to state that there are attempts in managing protected areas based on multi-year management plan despite annual work plan and budget included in the Red Book.

Table-4: Present status of PA management plan

Name of PA	**Management Plan**	**Plan period**
Chitwan NP	Approved	2007-2011
Bardia NP	Approved	2007-2011
Shivapuri Nagarjun NP	No	
Khaptad NP	Draft	2009-2014
Rara NP	Approved	2009-2013
Shey Phoksundo NP	Approved	2006-2011
Langtang NP	Draft	
Makalu Barun NP	No (Approved BZ Plan)	2004-2009
Sagarmatha NP	Approved	2007-2012
Banke NP	Draft	2010-2014
Suklaphanta WR	Approved	2007-2012
Parsa WR	Draft	
Koshi Tappu WR	Approved	2010-2014

Dhorpatan HR	No	
Annapurna CA	Approved	2008-2012
Manasalu CA	No	
Kanchenjunga CA	Approved	2006-2011
Krishnasar CA	Draft	
Api Nampa CA	Draft	
Gauri Shankar CA	No	

Species Conservation Action Plan (SCAP)

For the long-term conservation and management of endangered species, Government of Nepal has been involved in preparing and implementing species action plans. Keeping in mind the persistent efforts needed to protect and conserve them in perpetuity, Species Conservation Action Plan (SCAP) have been prepared. The reasons for species plan are legion but can be summarized as:

- § to define objectives of management,
- § to identify management gaps,
- § to describe strategic actions,
- § to define monitoring requirements,
- § to communicate with others,
- § to help to obtain financial resources,

Government of Nepal has approved SCAP for five species so far and they are; Snow leopard, Tiger, Rhino, Vulture and Elephant. Current Rhinoceros and Tiger Action Plans were revised since their first plan period had been completed. These were approved from Ministerial decisions. These action plans are applicable to both within and outside the protected areas. Similarly, species action plan for a particular PA (for example, Red Panda Action Plan for Langtang National Park and Buffer Zone: 2010-2014) is recently approved. Blackbuck Conservation Action Plan (2007-2011) is prepared for the long-term conservation and management of only population of Blackbuck in Nepal. Twenty-fifth Warden Seminar (2009) held at Kathmandu recommended preparing SCAP for Swamp deer, Gaur and Musk deer.

Table-5: Approved species conservation action plan

Species	**Period**	**Objectives/ outputs**	**Activities**	**Cost (USD)**
Rhino	2006-2011	9	94	29,00,000.00
Tiger	2008-2012	5	22	11,50,000.00
Snow leopard	2004-2014	8	44	29,20,000.00

Vulture	2010-2014	6	42	07,99,623.00
Elephant	2010-2019	6	21	26,25,000.00

Though the SCAP is species focused, it also integrates the social and economic objectives into species conservation and management.

Planning and implementation issues

1. Involvement of PA staff and stakeholders

PA staff, stakeholders and local communities should be actively involved in management planning process as the participatory management approach has a much better chance of success. A certain percent of the PA staff are unaware of the status of management plan and most of the Parks/Reserves staff are unaware of the management plan contents i.e., objectives, issues, strategies and activities. The same situation exists for other stakeholders and local communities. A meaningful participatory approach to management planning will build commitment towards its implementation in the future. Therefore, involving stakeholders and parks staff from the outset of the planning process helps to define priority concerns and implementation (Chattarjee et. al., 2008) and it must be ensured. Sometimes, local communities compel the management plans to release the buffer zone fund.

2. Lack of clarity

In general, the management planning process should be value-based. The PA goal and objectives should be oriented towards maintaining, conserving and augmenting those values. However, the objectives are often expressed in a very broad terms which are not measurable and achievable. The PA management plan should have at least 20-years vision and 10-years management plan. The zonation, the strategies, the program and activities are not clear. Often, the management prescriptions are not clear, specific and sometimes, not on the basis of strong scientific principles.

3. Too many plans, too many confusions

There is a significant overlap in management planning. Many plans are applied for the same landscape unit. For example, the park manager of Chitwan National Park is concurrently implementing Chitwan National Park and Buffer Zone Management Plan, Rhino Action Plan, Tiger Action Plan, Elephant Action Plan, Vulture Action Plan and few more. Likewise, the management plan, Snow leopard action plan, Red Panda action plan, Gosainkunda and associated lakes management plan, rangeland management plan and some others are applied for Langtang National Park. It is hard to harmonize activities from too many plan documents. There are some conflicting provisions too in these documents.

4. Lack of guidelines/frameworks

There is a lack of guidelines for preparation of management plan. The national guidelines/ frameworks could be developed to facilitate the process. Rather than preparing by service providers, the preparation of management plan by park managers with the aegis of Department of National Parks and Wildlife Conservation would yield a realistic plan and permit better implementation.

5. Selection of service provider

Generally, the external consultants prepare the plan. In many cases, the consultants do not have knowledge, expertise and experience of PA management in the local scenario. Moreover, a single person was found to prepare PA management plan within a few to a dozen of weeks. Management planning is not just an event, it is a process and produces not only plan document but also several other outputs. Actually, multidisciplinary team is necessary to prepare the management plan.

6. Plan applicability

Most of the plans are in English language-making it difficult to understand by the frontline staff who are the backbone of the protected area management. Management plans of Kanchenjunga Conservation Area and Sagarmatha National Park, and buffer zone plan of Makalu Barun National Park are written in Nepali language, which is easily readable and understandable to the locals and field staff. In fact, very few management plans are published. Some plans are only in DNPWC computers. No matter of contents of the plan staff. It should be prepared in a brief and lucid manner. Management plans should not be prepared as a showcase and library document. It is suggested to prepare and implement a clear, systematic scientific management plan incorporating all the ecological and biological needs of the endangered species and their habitat with social and economic objectives to contribute to livelihood of local communities. This will enhance the implementation of the management plan.

7. Review, monitoring and evaluation

Research, monitoring and training is not explicitly articulated in the document and non-existent in some plan documents. Even if there are many plans applicable for the same areas, management prescriptions are neglected during annual planning and budgeting. There is a lack of review of previous program. The experiences of past and ongoing program should be critically analysed and the lesson learnt should be internalized.

8. Ambitious plan

For many people, it has been said that adequate fund is the bottleneck for successful implementation of management plans. I don't think this is always true. I think it's the inadequate and inappropriate planning process that does constitute the bottleneck. Generally, wish-list is attached to the management plans, there is not a priority listing and the large gaps exist between plan and reality.

9. Resource consumption

As discussed elsewhere in this paper, there are too many plans. All these plans demand quite a good amount of resources. There are fewer amounts available for the implementation than preparation. There are hardly any resources for some programs stipulated in the plan. Consultants are enjoying the availed resources. The implementation of program activities and expenditure should not be viewed as a progress but should be judged by an extent to which it is protecting the values and achieving the objectives.

10. Narrow perspectives rather than visionary

The PAs alone are inadequate for large mammals conservation as they are smaller in size. Corridors and bottlenecks are, therefore, of much importance, which offer additional habitat for wild animals outside PAs but these neighbouring land use elements are not considered. Nepal has adopted landscape level planning approach in forestry sector and endorsed Terai Arc Landscape Plan (2004-2014) and Sacred Himalayan Landscape Plan (2006-2-16). However, the harmonization is necessary.

PA Management Effectiveness

Lack of management effectiveness has led to criticism and questioning of the current practice. The Convention on Biological Diversity (CBD) and UNESCO's World Heritage Centre have both placed a priority on management effectiveness evaluation and are setting concrete targets for member states. Nations have committed to develop systems of assessing management effectiveness and to report on 30 percent of their protected areas by 2010 (Hockings et al, 2000). IUCN-WCPA provides a framework for evaluating management effectiveness by incorporating six important elements: context, planning, inputs, processes, outputs, outcomes. These six elements reflect three broad themes of management: design (context and planning), appropriateness and adequacy (inputs and processes) and delivery (outputs and outcomes).

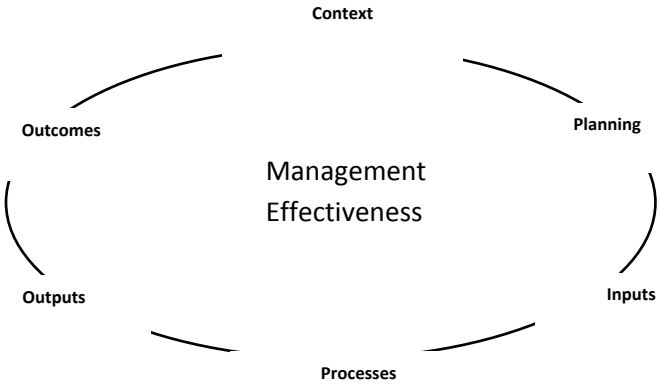

Figure-2: *Framework for management effectiveness evaluation (Source: Hockings et al, 2000)*

Management effectiveness evaluation was carried out for Chitwan National Park in 2003 and 2007 by UNESCO/IUCN project: Enhancing Our Heritage- Managing and Monitoring for Success in Natural World Heritage Sites. The status of management plan implementation status in 2007 is given below.

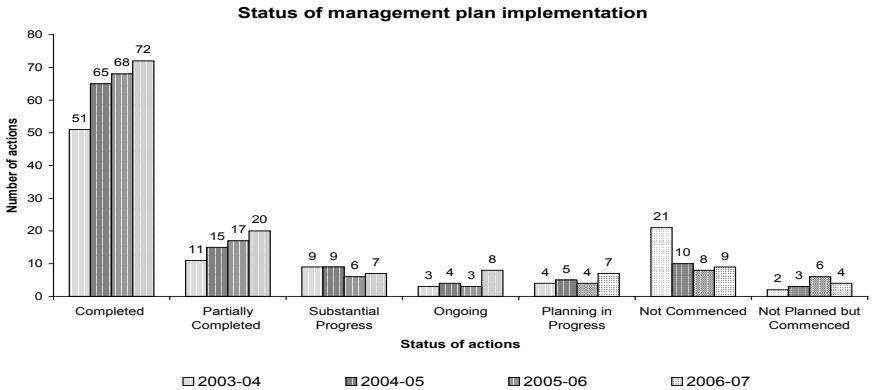

Figure-3: Implementation status of Chitwan National Park Management Plan

There is not a single assessment about how well the protected area is being managed by NGO or local communities. The management assessment of protected areas handed over for management (ACA, MCA, KCA) is almost non-existent. Reports from sporadic reviews and inspection visit of officials of Governmental departments showed disappointing news and recommended that conservation should get priority in conservation area. The voices and reports of concerned officers are rarely heard by policy - and decision - makers. In general, wildlife and natural resource management in conservation area is not satisfactory. A good model may fail due to weak implementation (Durst et al, 2008). There is a strong need to promote the development of monitoring and evaluation system.

Conclusions

This paper is prepared with the intention of discussing the current status, trends and approaches to PA management planning in Nepal. Management plan provides managers and concerned stakeholders with a lucid review of strategies and actions in a highly understandable form. The link between management plan and management effectiveness is apparent to everyone dealing with the Protected Area management, and management plan is thus the currency by which the effectiveness is ultimately judged. But, many protected areas in Nepal are limited in their ability to effectively implement their management plans. Management plan should be detailed, clear and scientific guiding document. However, it should not be a wish-list of all the activities that needs to be done on protected areas. The interest, ability and capacity to manage conservation areas are weak and must be strengthened. The existing practice of management planning is not satisfactory and needs to be improved. It is recommended to have management plan of all PAs. The basis of PAs management must be management plan and it should be clearly spelled out in legislations. It is nice to approve all PAs management plan including plans of conservation areas by Ministry of Forests and Soil Conservation. Effective biodiversity conservation is achieved through effective implementation of management plan for which the dedication and motivation of staff is prerequisites. The management audit of conservation areas should be immediately initiated. Strengthening the capacity of PA authority and staffs should be accorded top priority. DNPWC should assess the management effectiveness of all PAs. With the present involvement of PA manager and staff in buffer zone program, there is a danger of mission-drift that the core area could be left unattended. Therefore, the focus and priority should be on park and reserve management.

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