



\*RNR =  
Renewable  
Natural  
Resources

**Bhutan-German  
Sustainable RNR\*-Development Project (BG-SRDP)**

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# **Project Document No. 24**

## **Conceptual Elements, Frame Conditions and Procedural Steps for Improved Natural Resource Management on the Basis of the RNR Concept in Bhutan-German Integrated Forest Management Project**

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## 1. Introduction

The Bhutan-German Integrated Forest Management Project (BG-IFMP) has just completed its first two-year orientation phase and prepared some readjustment of its approach and strategy (cf. Mueller-Hohenstein/de Vletter 1996; BG-IFMP 1996). While the concept of the project was to support the Renewable Natural Resources (RNR) sector in the two districts of Wangdue-Phoedrang and Punakha<sup>1</sup>, the practical focus of the first two years was mainly on improving forest management planning both in technical and social (i.e. local participation) terms. Now in the second project phase a wider approach regarding RNR shall be taken, as is evident from the general planning document for the project phase of 1997 to 2000 elaborated by all partners (BG-IFMP 1996).

This necessitates a clear-cut conceptual and strategic approach to the management of renewable natural resources by local farmers with the support of district- and national-level institutions. Such an understanding is slowly emerging in the country. The following paper shall further help in elaborating the steps to be taken for implementing the RNR concept in the two districts. It starts from a reflection of the theoretical understanding of RNR and their management. From there it takes up a reflection of the specific conditions influencing natural resource management in Bhutan which need to be understood thoroughly in order to shape appropriate strategies. Such strategic elements as well as a first proposal for procedural steps are then developed. A number of issues relevant for implementation of the concept in the two districts are then discussed, such as organizational structure, human development needs<sup>2</sup> and project-related issues. The paper concludes with proposals for the next steps to be taken by BG-IFMP and the Ministry of Agriculture. For the presentation of these conceptual elements, a number of visualized charts and figures have been developed and inserted into the report. As is known from the discussions of participatory approaches, visualization often helps to stimulate discussion among different partners and supports comprehension of complex issues (cf. Schoenhuth/Kievelitz 1994).

This written contribution had little time to germinate and should thus understood to be a very modest and preliminary contribution in conceptual and operational terms. However, I sincerely hope that it will stimulate fruitful discussions and activities in connection with RNR management by all concerned actors. I would like to express special thanks to the people from whose discussions and arguments I profited very much: Marlene Richter, Rolf Krezdorn, Dennis Desmond, Eduard Jansen and Durga Devi Sharma. However, responsibility for all mistakes contained in this document will of course remain with me.

## 2. Basic Understanding

The present understanding of what the RNR terminology and concept constitutes, five years after the introduction of the concept into the Bhutanese policy framework, is still less than clear. All the major literature of recent years which also comments on RNR (cf. RGOB 1995, 1996, 1996a, MoP/RGOB 1996, 1996a, MoA 1996, World Bank 1994) does not yet start by introducing and clarifying the basic understanding and self-definition of the sector. The main elements of RNR, according to these documents, seem to be the administrative combination of the so-called sub-sectors of agriculture (including irrigation), livestock and forestry under one roof, and the idea that on the level of the farmer, many if not all aspects of the management of these sub-sectors are interlinked and interdependent.

However, for a solid operationalization of the RNR strategy, a clear understanding of what the RNR concept is supposed to describe in the first place, is urgently needed, in order to answer questions such as:

- where shall the integration of the RNR-sub-sectors take place?
- what shall be the spatial unit(s) of RNR planning?
- what are “best bet” strategies for long-term sustainable use of different natural resources?
- how can increases in agricultural production best be reached within the RNR concept?
- how can the problems of conflicting land use be solved?
- how shall the extension service be organized?

From international discussions, and especially experiences of neighbouring Himalayan countries and regions, a number of principle aspects of RNR and their management can be developed:

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<sup>1</sup> The Orientation Phase also included Gasa as the third district; however, in view of its inaccessibility, very low population number and support through other projects, this district was dropped from further intervention measures of the project in the next phase.

<sup>2</sup> I tend to avoid the term Human Resource Development (HRD) as I see the ultimate aim of development as the development of the human personality and humanity. Therefore, humans to me cannot just be “resources to be utilized”.

### **Renewable Natural Resources (RNR)**

Renewable Natural Resources are understood to be those resources of nature which, with or without human intervention, regenerate themselves by way of mainly organic and partially inorganic recycling: these are soil, water, flora and fauna.

The overall objective of sustainable renewable resources management could read as follows:

### **Objective of RNR Management**

Good Renewable Natural Resources (RNR) management aims at a long-term beneficial interaction between man and nature. This can be achieved, on the side of nature, by allowing or supporting regular periodic self-recuperation of both soil and perennial vegetation all over the used land area via better use of available biophysical and human resources; on the side of man, it can be achieved by a long-term safeguarding of the means to nurture the respective households. Managing RNR in this way shall help to maintain the benefits of:

- high production per unit area of needed outputs for human and animal consumption
- efficient use of incident rainwater, in terms of its capture, infiltration in the soil, as well as its subsequent use for plants, animals and people, so that as much water as possible is absorbed, and as little as possible is lost as unused runoff.

(developed on the basis of Pretty/Thompson/Hinchcliff 1996, IGCEDP 1996)

From international experience, a number of principal elements of RNR management can be drawn. The crucial issue underlying these major elements is the complex web of interactions between and his immediate environment around him as well as with outside actors who influence (i.e. either support or hinder) these interaction patterns.

### Conceptual Elements of RNR

- Human use of renewable natural resources (RNR) is usually interlinked on the household level, as households have to make use of water, land, plants and animals. By managing each of these resources, they have to be aware of, and utilize productively, the linkages between these resources.
- While in purely pastoralist economies, the utilization of renewable natural resources is somewhat more confined, in sedentary farming economies the management of the four mentioned elements takes the shape of a very intricate web (cf. fig. 1).
- In line with this fact, a conceptual thinking which takes credence of the integrated management of these resources is necessary. Management of renewable natural resources thus must be more than the (sub-)sectoral aggregation of actions, but must start from the understanding of the intricate relations between the resources when taking management decisions affecting these resources.
- The management of renewable natural resources does not happen on the level of farmers only, but on a number of different intervention levels, from the household up to the international level (cf. fig. 2). Whereas certain management decisions and actions are not taken on the individual household, but on the community level (esp. regarding common property resources - mainly forest and water), support services, incentives, disincentives and other policies are being framed by the public and private actors on district, national and international levels.
- Other issues, especially those regulating the use of the precious resource water, often have to be addressed on an inter-village level, as they involve larger areas of land and thus interests of people of different communities.
- All these different actors (internationally also called “stakeholders”, cf. fig. 3) together influence the management of the “RNR sector” of a country, both on their respective levels and through interaction between levels (cf. fig. 2). All actors influencing the use of the RNR should therefore be given the means to define their respective aims and to participate in the societal decision-making regarding sustainable management of the resources. It is thus also important when taking decisions about the management of the RNR to a) make these actors on different interaction levels transparent, and b) enhance communication between them for better decision-making.
- One of the internationally most successful ways of doing so is via participatory planning approaches on the different levels. This can be done with a focus on a (sub-)sector (e.g. forest management planning) or with regard to the integration of the renewable natural resources via participatory land-use planning, be it on community or regional level.
- Such approaches have to be specifically developed for each country, as the management of the RNR is strongly influenced by not only economic, but also social and cultural factors.

These elements of an RNR concept need discussion and further clarification, especially in order to develop

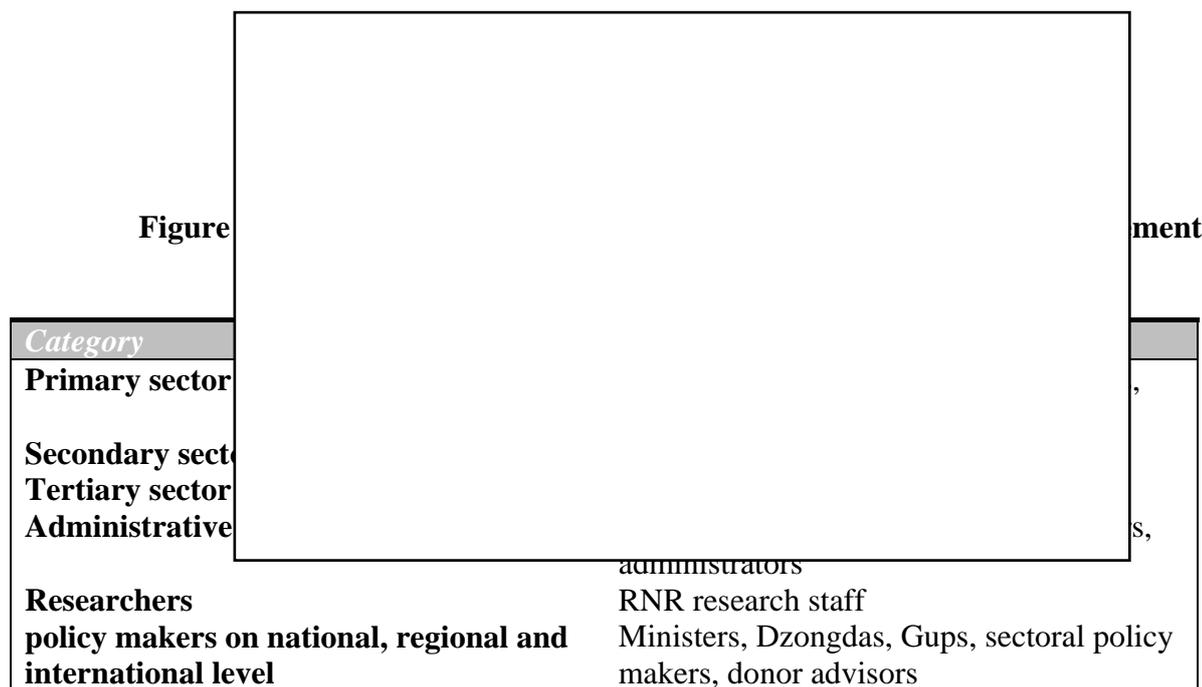
⇒ a clear description of the roles of each actor, especially of the roles on the policy framing and service rendering level (district to national/international level)

⇒ new procedures for interaction and agreement between these actors (such as in participatory land-use planning approaches).

Furthermore, the specific conditions framing natural resource management in Bhutan have to be clearly spelled out and analyzed with regard to their consequences for concept and strategy.

**Fig: 1.**

**Fig. 2: Intervention levels and activities in sustainable land management  
(from ISCO 1996: 34)**



### 3. Preconditions and Frame Conditions

As mentioned in the conceptual elements of an RNR approach, it is important to take account of the main influencing factors for resource management which are specific to Bhutan.

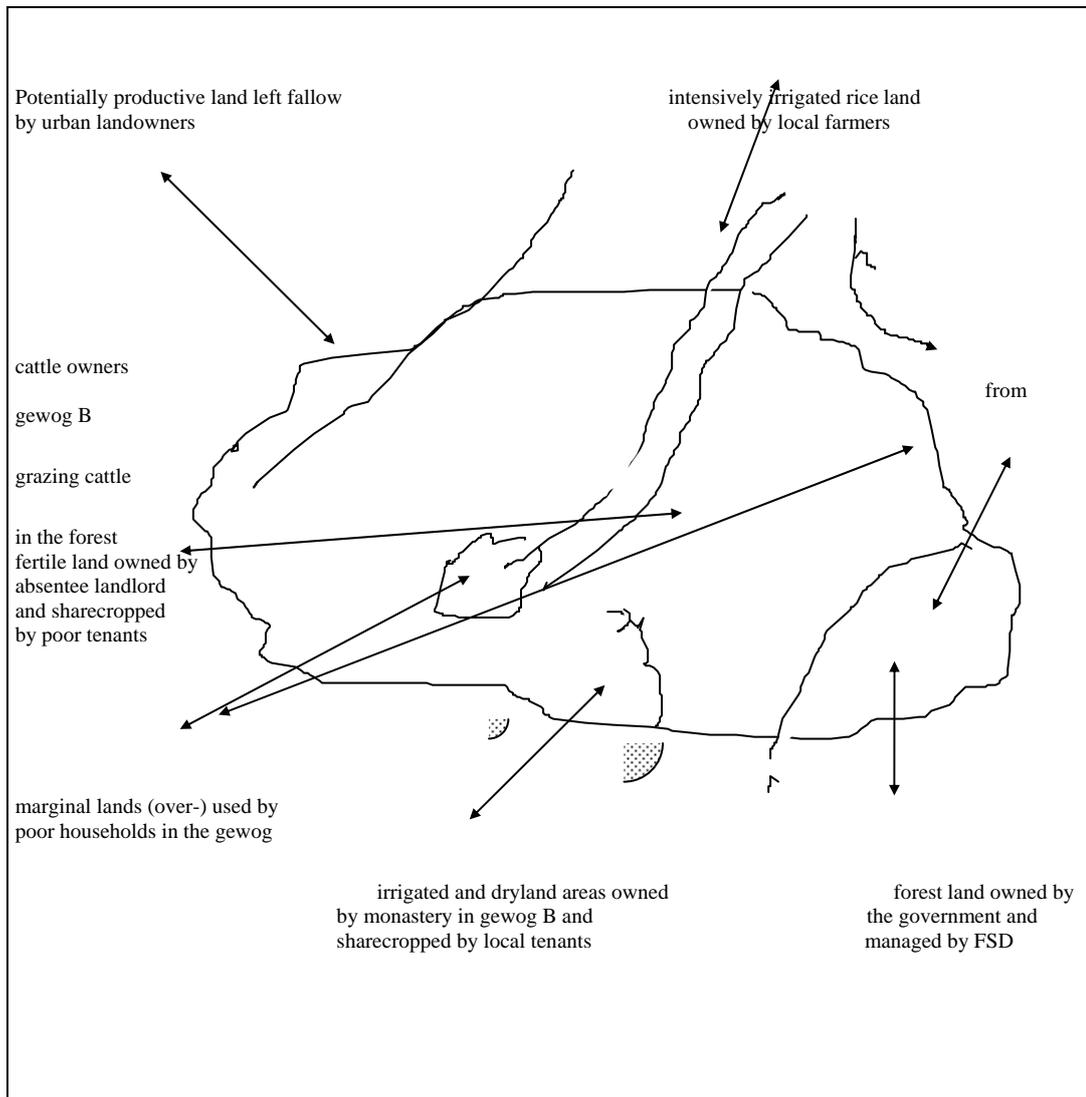
The general array of externalities is depicted in figure 4. it consists mainly of political, legal, economic, environmental, social and cultural factors. A number of these general influencing factors in the case of Bhutan are well elaborated in SNV's country strategy for Bhutan (cf. SNV 1995: 13-25). For the future RNR management in particular, these general conditions can be elaborated as a couple of specific influencing factors which are of crucial importance:

- ⇒ The complex situation regarding actual land ownership and land rights in Bhutan is of crucial importance for any common RNR management attempt. Issues in this context are land ownership by, and tenancy for, the monasteries; or larger-scale livestock ownership and consequent land use by inhabitants of Thimphu.
- ⇒ An accompanying issue is the whole institutional set-up on the local level which is shaped by specific social and cultural factors. Hereby the role and functions of formal institutions like the gap, the GYT, the monasteries, Water Users Associations etc. have to be differentiated from informal structures such as traditional neighbourhood cooperation, tenant-landowner relations or the like. In essence the combination of social institutions and social regulations concerning land use build a complex web which shapes the practical forms of the management of natural resources on the local community level (cf. fig. 5).
- ⇒ In this context a special feature of Bhutanese society, due to the small size of its country and population as well as the traditional "medieval" structure of society (cf. Ura 1993) is of key importance until very recently, had an elaborate system of informal network structures and mostly hierarchical patron-client relationships (cf. SNV 1995: 15). Especially the patron-client relations which have an influence on RNR management, forge a link between the farmer and the state bureaucracy, as well as between rural and urban regions (cf. fig. 5).
- ⇒ Somewhat in contrast to the view on social institutions influencing RNR management "on the ground" is the prevailing settlement and cooperation pattern. As examples from different parts of the BG-IFMP project region show, the settlement pattern influences interaction and cooperation among farmers. In a mostly scattered settlement structure - which is for example the case in Nahi Valley or Kothoka - formal cooperation patterns among farmers seem to be limited. This situation has implications for attempts and methods for common planning of resource use.

⇒ The Royal Government's attempts at decentralization are a crucial factor for RNR management. Since the last Five-Year Plan the Government has increasingly strengthened regional and local administrative bodies such as the district and gewog authorities, and created new coordinating and decision-making bodies such as the GYT and DYT (cf. Ura 1993; Labh 1996). Nevertheless, the decentralization of planning as well as of financial authority is still in its beginning and participation of the local population in decision-making is still more nominal than real.

**Fig. 4**

**Fig. 5: Exemplary map showing socio-institutional linkages which have an influence on renewable natural resources management**



- ⇒ An important influencing factor for any RNR strategy is the present situation with regard to the educational and professional qualifications of the main actors involved. The Bhutanese Government has launched a large Human Resource Development campaign in the context of the Seventh and Eighth Plan, in view of the fact that there is presently a shortage of skilled manpower for many areas of development. This has important implications for project strategies in the RNR sector.
- ⇒ A further important issue is the, as of now, limited legalization of rights regarding RNR management. This is an important, yet potentially overlooked issue which is different from most other countries. A case in point is the social forestry legislation whose implementation rules have been developed newly, but not passed yet. The limited legal formulation in written law gives implies that in practical terms, the rural population has still a fairly wide access to many resources, mostly common property resources. The typical example in this context are the non-timber forest products. While the limited legalization does open up the potential for conflicts concerning competitive use<sup>3</sup>, it also leaves open the possibility for the fulfillment of basic needs, especially for the poorer population. Changes in regulatory practice thus have to be carefully looked into in order to estimate their positive and negative consequences in social terms.

<sup>3</sup> This is for example the case in the use of wood products from the forest, a typical form of potential conflict between the local population and the forest administration; as a case example cf. Nahi Valley in Kievelitz 1995

- ⇒ An important economic factor which is specific to Bhutan is the rather high incidence of barter economy and the low prevalence of the cash economy (cf. for example the case of Zhemgang in de Wit 1996). This indicates that the international market system has not yet penetrated very much the rural hinterlands. And this influences, among other things, issues such as the forms and values of transfer of land, or the forms of socio-economic interactions.
- ⇒ Another key economic factor is the high prevalence of sharecropping, which according to SNV (1995) reaches up to one-third of rural households and has been increasing in recent years as a result of changing inheritance patterns. This fact again highlights the strong informal social patterns in terms of patron-client relations which have been mentioned above.
- ⇒ Another important frame condition for RNR management is the situation of the young generation. It becomes obvious from a number of observations that the social norms and values of the future generation are changing, due to the overall change in society which is taking place with increasing pace. On the one hand, the rural economy only offers limited opportunities for sustaining one's life; on the other hand the attractions of a slowly modernizing urban life become more prominent. Thus, rural-urban migration has become more pronounced in recent years; and it is a disturbing fact that for many school children, apparently the life of a farmer is not viewed at all as desirable (cf. Kievelitz 1995).<sup>4</sup>
- ⇒ Issues of Buddhist religious values potentially play an important role in the decision-making of the people. One contributing factor in young people's apparent lack of interest is the connection of farming life in Buddhist philosophy with the collection of negative karma (due to killing animals). This shows that religion has an influence on people's behaviour towards RNR management.
- ⇒ Finally, an important factor for any larger-scale systematic attempt at natural resource management is the status of the natural resources in view. While in many neighbouring Himalayan countries the degradation of most RNR is already quite pronounced, and thus the need for changes in management practices is evident to many direct users as well as to decision-makers and service institutions, the situation in Bhutan is evidently different. Especially in the West of the country most people still have easy access to most of the renewable natural resources they need (water in some areas might be an exception). However, pressures especially on the forest resources are quickly increasing due to growing human and livestock populations and heavy utilization of wood products, especially for energy consumption and construction purposes. In any case, the interest and the subjective need for changed management practices - even in view of the need for preventive measure in order to preserve these resources - needs to be elaborated with the people before attempting any changes. However, at least for Punakha district this should be less the case, as Punakha is the district with the highest population pressure on the land (cf. Bhardaj 1996 and chart in annex 1).

Without wanting to overstress the relative importance of preconditions and frame conditions for the RNR sector, the above discussion of some key issues should make evidently clear the need for a Bhutan-specific approach to the management of natural resources.

An overview of the main influencing conditions for RNR management has been prepared in fig. 6.

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<sup>4</sup> The same has recently been reported by Durga Devi Sharma of NCS in the context of a RRA activity in Khotokha, Wangdue Phoedrang, after having undertaken a vision drawing exercise with primary school children (personal communication).

**Fig. 6: Twelve Conditions Influencing Sustainable Management of Renewable Natural Resources (RNR) in Bhutan**

Legal Conditions

- Limited legalization of RNR rights
- land ownership shows high degree of tenancy

Political Conditions

- serious efforts of decentralization of the governmental system is evident, but needs to be further pursued in the area of decentralized RNR management

Social Conditions

- high prevalence of patron-client relations
- elaborate system of informal network structures
- limited formal institutions on village level
- limited educational and professional qualifications for RNR management available

Cultural Conditions

- changing social values and aspirations especially of the younger generation

Economic Conditions

- high prevalence of barter economy
- high prevalence of sharecropping
- dispersed settlement structures

Environmental Conditions

- limited actual degradation of RNR influences local peoples' perceptions and management practices

#### **4. Basic Approach**

The specific approach to be taken for natural resource management in Bhutan, can be developed from the elaboration of the major conditions framing it. Basic principles for RNR management can be drawn, for example, from GTZ's recent manual on land use planning (cf. AGILNP: 8-11), but then need to be adapted. First of all, due to the complexities of RNR interrelations and due to the options open in the Bhutanese system, the approach should be decentralized and as much as possible localized. This is possible due to the decentralized administrative system, and it will be conducive to strengthening decentralization. Working with a decentralized/localized RNR approach means that the principle of stakeholder participation will be taken seriously.

With regard to individual natural resources, however, a complete decentralization of management is not possible, as the forest resources practically are owned by the government. Nevertheless, as there are important use rights connected with the forest (e.g. sokshing, i.e. gathering of leaf litter, or tshamdo, i.e. forest grazing), and as social forestry rules are just about to be legally introduced, an attempt at co-management of forest resources should be made.<sup>5</sup>

The major subject-matter issues on which an improvement of RNR management should be conveniently focused should be forest co-management, water use and livestock management.

The central aspect of the RNR approach to be developed sensitively will be the social and institutional issues. Due to the preconditions in rural Bhutan, the approach should be very much people- and relationship-focused. All important stakeholders/actors, whether marginal farmers or large-scale landholders, have to be personally and informally involved. Common interests are to be elaborated. This can be most effectively done via participatory land-use planning. However, due to the dispersed settlement structure, work with appropriate local representatives will have to receive particular attention. Also, an even more decentralized planning approach might be necessary, which accomplishes plan "mosaics" on settlement level, which can afterwards be integrated to a common village (gewog) or other spatial unit plan.

<sup>5</sup> Details about the implementation of such an approach can be taken from "Joint Forest Management" in India.

Such a participatory land use planning approach should consider two further aspects: on the one hand, clear measures for improvement of resources management have to be identified which at the same time render improved income of natural products (for subsistence and bartering) in the short term, and are not only positive in terms of resource protection or long-term benefits only. This also regards the checking of potentials for alternative income generation, such as in agro-processing. Secondly, the land use planning approach should be attempted with a view on legalization of resource use and lessening the potentials for conflict. The main issue in this context is helping to establish security of tenure for local resource use by the people; and in the context of co-use by the local population and the government (as in the case of forests), to support the furthering of co-management approaches.

Finally, the specific interests of the young generation should always be considered when starting this RNR management process. Thus, representatives of the young generation should be involved in all major steps of planning. Schools should be included in the activities on gewog level, in order to sensitize the young generation for natural resource management issues.

In order to implement such a complex and situation-specific approach, however, careful capability improvement of the support service staff on district and even national level is necessary. This includes issues such as integrated thinking, learning process approaches, participatory approach with its concomitant value base and methodologies, as well as regional and/or land use planning skills.

### 5. Procedural Steps

The support of RNR management on district and local level has to be based on flexible learning processes and should not turn into a rigid “straightjacket” of minuscule steps; however, a clear stepwise procedure can be developed based on the above considerations for the basic approach. It should be tested in a few pilot cases and then further adapted and elaborated. The proposed starting procedure - also as a basis for a discussion between project management and the main concerned institutions (MoA and Dzongkhag administration) - is as elaborated in fig. 7.

**Fig. 7: Procedural Steps for RNR Management in Punakha and Wangdue-Phoedrang**

STEP	TASK	TIME	INVOLVEMENT
1. Elaboration and Agreement on Policies and Strategies for RNR Management in the two Districts	<b>Clarify what is meant by RNR management; discuss the proposed conditions, approach and procedures</b>	<b>2 months</b>	<b>MoA policy staff, Dzongkhag Administration, LUPP, BG-IFMP, consultant</b>
2. Improved district resource analysis and establishment of suitable RNR information system	<b>Identification, on basis of LUPP information, of major problem and potential areas with regard to Natural Resources Management; institutionalization of spatial data on district level</b>	<b>2-4 months</b>	<b>Dzongkhag Administration, Dzongkhag Planning Staff, RNR Supervisors, LUPP, BG-IFMP</b>
3. Improved general district strategy and land use planning	<b>Development of major strategies for improvement of natural resources management overall in the district and in specific areas, and clarification of institutional responsibilities</b>	<b>1 month</b>	<b>Dzongkhag Administration, RNR Supervisors, LUPP, BG-IFMP</b>
4. Participatory situation analysis in focal areas	<b>Local analysis of situation, vision, needs and potentials</b>	<b>1 month</b>	<b>Local Population,</b>

		<b>with PRA methods</b>		<b>RNR Field Staff, BG-IFMP</b>
5(a) Participatory land use planning in focal areas	5(b) Forest management planning on the basis of a Forest function analysis, including participatory social forestry planning	<b>(a) delineation of major strategies for improvement of natural resources management on gewog level (b) Improved steps towards sector planning in the forest, including social forestry delineation in suitable locations, based on interaction with the people</b>	<b>3-6 months</b>	<b>Local Population, RNR Field Staff, FRDS, BG-IFMP</b>
6. Capacity building and human development activities		<b>Staff development on dzongkhag and field level in issues of planning and socio-institutional approaches</b>	<b>periodical</b>	<b>Dzongkhag Planning Staff, RNR Field Staff Social Forestry Staff Village Reps.</b>
7. Support to organizational development of local population in focal areas		<b>Establishment of user or interest groups for different areas of natural resources management (e.g. WUA, SHO); potentially supporting them in establishing a gewog interest committee</b>	<b>6-12 months</b>	<b>Local Population, RNR Field Staff, (b) FRDS, SFES Rep., BG-IFMP</b>
8(a). Participatory implementation of agricultural priority activities in focal areas	8(b). Participatory implementation of social forestry priority activities with established user groups	<b>(a) Extension support to group activities in agriculture and livestock and participatory innovation development and exchange of experiences among farmers (b) planning and implementation, with forest extension staff, of specific forestry activities in the local interest</b>	<b>One to several years</b>	<b>Local SH Organizations, RNR Field Staff, (b) SFES Rep., BG-IFMP</b>
9. Monitoring and Evaluation of activities for further strategy development		<b>Development and implementation of participatory methods for assessing the achieved changes</b>	<b>ongoing</b>	<b>Dzongkhag Administration, FSD BG-IFMP</b>
10. Policy and Strategy Feedback and Adaptation		<b>Analysis of experiences gathered in the approach and the methodologies</b>	<b>periodic</b>	<b>MoA policy staff, Dzongkhag Administration, LUPP, BG-IFMP, consultant</b>
11. Scaling Up the Process		<b>Implementing the approach in new areas, and devising means to speed up and enlarge the process</b>	<b>cyclic</b>	<b>MoA policy staff, Dzongkhag Administration, LUPP, BG-IFMP, consultant</b>

## 6. Planning Cycle and Phasing

From the experiences of comparable projects, a several-year long pilot phase - between two and four years - has to be envisaged as the time horizon (cf. AGILNP 1995: 142f.). While this seems to be a rather long period, it should be understood that with the approach proposed here, a gradual, cyclic “scaling-up” and thus enlargement of impact is already foreseen. The approximate timing involved for each of the steps in the procedural overview is given there in absolute terms. In the following figure this absolute timing is translated into an overview of the compact timing of all 11 major steps. However, it should be realized that this is again an approximate overview, not already a detailed phase-wise plan. Nevertheless, it gives a clear indication of the respective phasing of each activity with regard to the other activities.

## 7. Potential Regional Emphasis

From the procedural approach proposed it becomes evident that an implementation of these activities in terms of equal emphasis over the whole area of both districts is not possible. Two arguments speak for an emphasis, over the next two to four years, on selected pilot areas:

- the complexity of the approach which needs manpower which is not available in such an amount and trained quality to allow activities over the whole district;
- the intricacy of procedural steps as well as inter-institutional cooperation, which still has to be refined in further detail. This can only be done by means of carefully staged, well-reflected and -documented cases which will provide the empirical base on which the finally developed approach can then be spread over the whole districts.

Such a “learning-process approach” (Korten 1980) would be the suitable path for the present discussion and conceptual development regarding RNR in Bhutan. It is proposed that in the project region, over the next three years a phased approach in selected pilot locations should be attempted. This means that activities following the above-described procedural steps should be started in one or a maximum of two locations; then a few months later, a second or third location should be taken up, and so forth. Each location would thus already provide a learning cycle for the next location.

The following criteria for the choice of such locations are proposed:

### Criteria for Selection of Pilot Sites for RNR Management

- Available land use information (potentially from LUPP and RRAs)
- Already started BG-IFMP activities, especially those involving the local population
- Integration of forest planning and other land-use planning issues (i.e. prevalence of an FMU site or potential social forestry site)
- interest expressed by representatives of the local population in working on RNR with the people
- preferably clearly defined area in terms of natural (e.g. watershed), economic (e.g. market system) or social boundaries
- Agreement on the selected pilot sites between MoA, Dzongkhag Administration and BG-IFMP

Obvious first sites for implementation of an RNR approach along the proposed procedural steps are: Nahi Valley, Kothoka and Kashi gewog. For all three sites the elaborated criteria are given, and processes of participatory forest management planning and/or inquiries into local-level management of RNR have recently been undertaken. Thus these are ideal sites for starting the next steps of the approach.

At the same time, testing and further fine-tuning the proposed approach in these locations would help to obviously reduce the complexity spelled out so far.

## **8. Financial Implications**

Any activity in RNR management implies costs, either in financial, material or personnel terms, in order to be realized. Some of these costs will be quite limited, while others like for example the renovation of a larger irrigation canal might involve major investments. For the larger-scale investments financial means need to be sought either from national budgets or from other donors who focus on Financial Cooperation (in contrast to GTZ which focuses on Technical Cooperation). For smaller investments, however, flexible means have to be developed so that actions planned especially on local level can be adequately and quickly supported, so as not to lose the trust and confidence of the population. Thus, a flexible financing instrument has to be found. The development of an RNR action fund on district level, managed by a committee consisting of representatives of the Dzongkhag administration, the Ministry of Agriculture, and GTZ, might be the right instrument for doing this. From the side of GTZ, it should be handled as a financial contribution (*Finanzierungsbeitrag*) to each Dzongkhag administration; however, an advisory and financial controlling function by the GTZ representative should be built in for the first years. For the management of such a fund, clear guidelines including transparent criteria for the funding of individual activities have to be developed. This can be done via employment of an appropriate short-term consultant.

## **9. Institutional Implications**

In order to implement the proposed strategy for sustainable RNR management, the best institutional preconditions have to be set. This regards both the organizational set-up within and between different institutions, and the qualification of personnel.

organigramme

The project intervenes with its RNR strategy on three distinct levels: the national level, the district level and the local level. However, clearly the district is the main intervention level. The proposed organizational structure has to reflect this three-pronged approach.

The present main actors on these three levels are given in figure 8. The organigramme shows that on national level, the main actors are the Ministry of Agriculture and the BG-IFMP. Within the Ministry, a number of departments are, or need to be, involved in RNR management to different degrees. So it is not possible that only one division can be the only partner of the project: Suitable coordination mechanisms have to be found. On district level, likewise, a number of departments are potentially involved in RNR management; due to the integrated, intersectoral nature of RNR this is not otherwise possible. Again, suitable mechanisms for decision-making and coordination have to be found. Potentially, the District Planning Officer in the planning cell of the district can play such a functional role.

Finally, on gewog level formal as well as informal structures play an important role in RNR management. Formally, the gup and the GYT are the main institutions, whereas informally, there might be user groups or self-help groups existing or developing which can play an important role in planning and implementation of resource management activities.

For the project it means, in turn, to work operationally at least on two levels (cf. fig. 8): on the national level, in order to help elaborate policies, develop a conceptual basis, approaches and strategies, and to help set up planning, monitoring and evaluation (PME) functions for RNR activities; on the district level, in order to support implementation of the approach via the district planning and the RNR extension staff, and again to support the development of the PME functions which go along with this approach. The local level does not need any official project support structure, as the main interaction should come from the RNR extension staff who is directly in the field. Here the main task of any project should be capacity development of the supporting staff.

For the national level, the best liaison (or “counterpart”) for the project seems to be the Secretary of the MoA, as the main issues will concern policy and approaches for the RNR sector. For the more operational and detailed issues, however, it might be wise to form a small coordination committee composed of representatives of the main divisions/agencies involved within the Ministry. Such a committee could also involve, as need arises, other donors and projects in the sector such as DANIDA, SNV or World Bank. This is also in accordance with the recommendations of the Project Progress Review (PPR; cf. Mueller-Hohenstein/de Vletter 1996: 40). For the district level, the main partner/counterpart for general advise would seem to be the Dzongda. However, the mentioned coordination functions might be taken over by the District Planning Officer in the planning cell within the Dzongkhag administration. Depending on the possibility for planning and coordination in that cell, it should be left open whether an additional coordination committee structure on district level is necessary or not. In any way, the already existing coordination and decision-making structures on dzongkhag and also on gewog level - the DYT and GYT - should be made use of as much as possible, so as to integrate the project-supported RNR strategy and implementation within the overall planning cycle.

## **10. Capacity Building and Human Development**

For the implementation of the approach in the two districts, specific expertise is needed. As the previous elaboration has shown, know-how and experience is needed mostly in the fields of:

- (participatory) land use planning
- social and institutional development.

Especially the social science know-how is necessary for issues such as process advise and counseling, support of self-help development on local level, support of organizational development in the public administration, new extension approaches focusing on communication and participatory learning (cf. Chambers 1993, chapter 5 on the “farmer first” paradigm). This know-how is presently hardly available in the country, partly because there are no social science faculties in the country, and partly because the focus on these skills in Bhutan has so far not been very strong.

While the Natural Resources Training Institute (NRTI) has been conceptualized to develop new cadres for the challenges of integrated RNR management, and while its course offers are sound, the number of

graduates presently is still low<sup>6</sup>; furthermore, they have only limited practical experiences. Furthermore, the need for the specific capabilities mentioned above is only partly taken account of in the NRTI curriculum. In consequence, the project has to concentrate considerable emphasis to capacity building in the areas and skills mentioned. The elaboration of a human development/training plan for the next phase would be a requirement. It should include the further training, exposure to other regional experiences in natural resources management, and upgrading of the skills of recent NRTI graduates as well as of other suitable candidates of the public and private sector. The whole array of human development approaches shown in figure 9 should be employed.

**Fig. 9: Alternative Human Development Strategies**

<b>Type of Human Development Approach</b>	<b>Potential Target Group</b>	<b>Time Frame</b>
exposure visits	key policy-level staff as well as implementation staff	1 day to 1 week
farmer-to-farmer extension	farmers, field extensionists	1-3 days
“One-off” training workshops	key ministry staff	1-2 weeks
Procedural training workshops	key institutional partners, potential consultants/advisors	periodic 1-2 weeks
Supervision and backstopping from an external advisor	middle-level ministry or district staff	Once or repeatedly several weeks
Upgrading course	extension staff, district staff	2-3 months
On-the-job training through GTZ long-term staff	counterpart staff, key ministry and/or district staff in implementing roles	from a few months to a few years, ongoing
Masters or Ph.D. course in the region or overseas	selected RNR staff of very high professional quality	1-3 years

In any activities chosen, close cooperation and coordination with the DANIDA-supported LUPP project is vital, as LUPP apparently plans to enlarge its mandate also to the district level and to include planning officers in training courses and other activities to further develop their capacities (personal communication by LUPP leadership).

<sup>6</sup> However, it is estimated that after about another five years the demands of the government for RNR personnel will have been satisfied.

## 11. Implications for Project Staffing

### 11.1 Permanent Staffing

The approach of support to integrated and sustainable RNR management, with a methodological focus on participatory land-use and (social) forest management planning, has implications for the project structure.

First of all, with regard to project staffing, the following is proposed:

- in line with the PPR results and the ZOPP workshop planning, two international advisors should be present who have a different specialization. While the team leader should be an advisor with a forestry or rural development background and with experiences in participatory forest management, including social forestry approaches, the second expatriate should have a stronger background in participatory land-use planning, natural resource management and rural extension.
- additionally, it is necessary especially due to the complex social and cultural background of RNR management in Bhutan and the importance of these issues, to hire a local expert with a background in agriculture or forestry, but an in-depth understanding and sensitivity for the main social, institutional and cultural issues influencing the management of natural resources in Bhutan (cf. proposed profile of the local expert in annex 2).
- In contrast to the proposals of the PPR mission (cf. Mueller-Hohenstein/de Vletter 1996), it is proposed that the team leaders main office and range of activities, at least over the next one to two years, should remain in Thimphu. Here, emphasis - aside from managing the German contribution to the project - should be focused on RNR strategy and policy advise at the national level, as well as close liaison with the main other actors in RNR development.
- In contrast, then, the main focus of both the second advisor and the local expert should be on the district. While each one of them should concentrate on liaising with one district, and thus should take over a close backstopping role, they should still support each other in the respective district, as they have different subject-matter specialization as well as different cultural background.

### 11.2 Backstopping Support

It seems necessary that there be three types of regular, periodic backstopping support from the same outside advisor with international experience in the respective field:

- Backstopping on participatory land use planning
- backstopping on forest management
- Backstopping on participatory learning = communication/extension

The first area is obvious. Except from the LUPP project staff, there exists only very limited know-how in the country regarding land use planning. The LUPP project and staff, however, do not implement. Therefore, specific expertise regarding approaches and methods of participatory land use planning on local level and its scaling up to the district level is necessary.

The second area is already set up since the orientation phase in BG-IFMP, and has been very competently supported by a German forest consultant. This consultancy backstopping should remain as it is, with a potentially stronger emphasis on issues of co-management, including the introduction of experiences from Joint Forest Management in India, as well as with regard to a bridging function to the overall land use planning approach. A consultancy mission carried out by the chosen personnel from both areas mentioned could help to establish this conceptual and practical link.

Finally, the external support with regard to current models of extension along the lines of “Farmer back to Farmer” or “Participatory Technology Development” approaches with a strong focus on communication, farmer links and participation should also be introduced to Bhutan in the context of the RNR approach. Here, likewise some international support will be necessary, if this area is not substantially covered by the second advisor for the project.

Aside from such specific backstopping support, a stronger sharing of experiences with similar resource management projects in neighbouring countries, esp. India (Watershed Management) and Nepal (Churia Forest Management, RRD projects), but potentially also including Cambodia (Rural Development Project Kampong Thom) and Laos, is deemed very valuable.

## 12. Conclusion: Next Steps of Activities

The proposal developed above shall help the Bhutanese Government and specifically the BG-IFMP to chart its future course for sustainable RNR management in the two districts of Wangdue-Phoedrang and Punakha. As a next step it is recommended to carry out a short but clear-cut strategy workshop on the above issues and proposals within the next two months, with participation from the Ministry of Agriculture, the two Dzongkhag administrations, a few representatives of field staff and BG-IFMP personnel plus one external consultant. The main topics of such a workshop should be:

- reaching a common understanding regarding RNR
- reflecting upon the major influential factors and conditions for sustainable RNR management
- developing and agreeing upon a concept and strategy for RNR management
- agreeing on the necessary institutional set-up for the implementation in the two districts.

Another step which could already be initiated is some further qualification of key partners. GTZ offers a specific workshop for process consultants in natural resource management in South Asia; this workshop will be held in February of 1997. A few seats are reserved for Bhutanese representatives, and it would be very helpful for the project to have two qualified partners further trained.

Finally, shortly after and on the basis of the proposed workshop, the necessary backstopping support for the three areas mentioned in the previous chapter should also be elaborated and agreed with potential consultants, so that their backstopping will be available on time.

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