

Topic 6: International dimensions of forests and rural livelihoods

Forest related rural livelihood strategies in national and global development

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SUMMARY

The international development scenery is characterized by changing topics, which dominate the discourse for a certain period. Like in the typical product cycle (VERNON 1966), new issues come up and replace former subjects. Actually poverty alleviation and rural livelihood development are central questions, which occupy the agenda of international development agencies and which have high funding priority. A framework is presented, which permits the classification and positioning of the country specific forest related rural livelihood strategies in the general development context.

The framework is composed of two main elements. One element is formed by the country specific forest development strategy, which is for the most part subordinated to the national development policy. A socio-economic diagnostics of tropical forest sector development and its interrelations with other sectors leads to the differentiation of six development stages (see PRETZSCH 1995). This stage approach permits the understanding of strategy changes over time. The recent stage is strongly determined by global policies like Conventions (CBD & UNFCCC) and privatization trends together with increasing trade liberalization (WTO). The second element of the above mentioned framework is composed of local and regional experiences with forest related livelihood strategies.

The comparative analysis of the information on macro and micro level permits the clustering of similar forest related livelihood strategies and development policies. This forms ground for hypothesis formulation and theory development. The framework will be tested by case studies which are based on PhD and MSc-works from the Institute of International Forestry and Forest Products (Plan Piloto Forestal in Quintana Roo/Mexico. Afforestation as JFM in Bangladesh, Gum arabic production in Sudan etc.).

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INTRODUCTION: NEED FOR A REVIEW OF CURRENT DEVELOPMENT PARADIGMS

Changing development paradigms: Myths or realities?

The international development policy debate is characterized by a rapid change of theories and models, which dominate the discourse for certain periods of time. Like in product cycles (VERNON 1966) new models come up and replace former issues. Previous themes such as modernization, industrialization or basic needs satisfaction, have been replaced by the current priority of poverty alleviation which is now high on the agenda of agriculture, forestry, health and education sector strategies.² Waves of changing development policy models influence the forest sector and shape the guiding targets and strategies of forest development. Recently the topic of forest related rural livelihood strategies and poverty alleviation gained importance and dominate the forest development discourse in a rather exclusive way. Current discourses and programs of development agencies make believe that forestry contributes massively to livelihood improvement and poverty alleviation.³ This assertion is put in an absolute and nearly paradigmatic way. It has hardly been questioned or discussed against the background of earlier dominant development models (WUNDER 2001, POSCHEN 2002). This begs the question whether this approach does hold new potential to initiate forest-based development. Is it “old wine in a new skin”, i.e. déjà-vu under a new label, or worse, a myth as some previous models.⁴

Structure of the paper

The paper starts with the formulation of hypotheses questioning the current setting of priorities in forest development policy. The hypotheses guide the reader through the discussion of two fundamentally different complexes: the genesis of forest development policies and lessons about forestry and poverty alleviation at the micro level. The main emphasis is put on a diagnostic reappraisal of the co-evolution between development policy and forest policy in tropical countries, primarily concentrating on poverty alleviation and livelihood development. The retracing of historical stages also provides insights into the short life span of dominant development themes and priorities. The interpretation of lessons from historical stages serves as the basis for the critical evaluation of the current enthusiastic perception about forest related livelihood support and poverty alleviation.

In a further step the problem is approached from a micro level. Case studies from Botswana, Cameroon, Nepal, Mexico, Sudan and Bangladesh are presented and

² see the extensive discussion in the CGIAR (Consultative Group on International Agriculture Research) on food security and poverty alleviation (www.cgiar.org)

³ see FAO & DFID (2001). Recently studies and literature on the livelihood approach and poverty alleviation are booming. (see CARNEY 2003 and the cited sources; ARNOLD 2001)

⁴ In Germany time fuelwood scarcity was interpreted in a paradigmatic way as origin and driving force for forestry development. In fact fuelwood scarcity existed on a local and even regional level. But based on historical sources RADKAU (1989; 2000) found out, that local sovereigns in alliance with the forest administration disseminated an exaggerated absolute mission of destruction by fuelwood scarcities. They made up this myth to justify a strong and powerful state.

interpreted to further enrich the hypotheses testing. The paper is mainly based on theoretical derivation and argumentation.

ELEMENTS OF A THEORETICAL FRAMEWORK AND METHODOLOGICAL APPROACH

Principal objective of this paper is to introduce new aspects into the discourse on forest related livelihood strategies and poverty alleviation. The methodology consists mainly of a historical analysis of changing paradigms in development policy and tropical forest policy. The base for this is an analysis of the changing views of tropical forest policy from pre-colonial times till today (STEINLIN & PRETZSCH 1984; PRETZSCH 1995). This study is based on the revision of development policy literature and a parallel reappraisal of changing perceptions in development targets, focusing especially on the Food and Agriculture Organisation.⁵ It thus has the character of a socio-economic diagnosis (GIERSCH 1961). It was updated and shaped towards the critical review on the concept of rural livelihood support and poverty alleviation as a new development target. Dealing with the overarching macro level, a high degree of generalisation is inevitable. Results are complemented by findings from specific field studies.⁶

The following research questions and hypotheses serve as a starting point for argumentation lines:⁷

- Forest related development paradigms are subordinated to general development policy and thus externally imposed.
- The concept of livelihood support is, at least in relation to forestry, “old wine in a new skin”; it does not contribute substantially new ideas to the forestry development discussion. Experiences with previous development models are not sufficiently taken in account.
- The “riding on waves” leads to a concentration on the fashionable development model of the time, which dominates the scene during a short period (and all but monopolizes financial resources).
- The concentration on forest production for livelihood support and poverty alleviation bears the risk of a too reductive view of forest related benefits.
- The potential of forests to support livelihoods is overestimated.
- The concentration on livelihood support and poverty alleviation at the micro level bears the risk that unfavourable structural conditions at national and international level are not sufficiently taken in account.

⁵ This reappraisal is based on a revision of guiding paradigms in the FAO, analysing the Journal UNASYLVA and contributions to the World Forest Congresses; for detailed sources see STEINLIN & PRETZSCH 1984).

⁶ The framework will be tested by case studies which are based on PhD and MSc-theses from the Institute of International Forestry and Forest Products. These are accessible through the above mentioned Institute (see authors address).

⁷ For some critical aspects about the livelihood and poverty alleviation wave see WUNDER (2001); POSCHEN (1997, 2002)

It is not the objective of this paper to falsify or verify these hypotheses by quantitative or qualitative research findings. Rather it should initiate a discourse, which might lead to the formulation of qualitatively better hypotheses. Methodologically, the paper is a plea for a better and more holistic integration of forestry in development theory.

FOREST RELATED LIVELIHOOD STRATEGIES IN THE CONTEXT OF DEVELOPMENT POLICY

Learning from six historical stages⁸

Support of rural livelihood was the dominant target of traditional forest use in the tropics (stage 1). Sources on pre-colonial forest use and management practices and their institutional framework are scarce. Often this local knowledge was handed down orally between the generations. It was lost in the colonial and post-colonial era, when priority was given to scientific forestry approaches originating from Europe. Only since around the mid-1980s has increasing attention been given to traditional forestry knowledge⁹. Traditional forest use practices are characterised by an extreme variety of benefits, which the rural population derived from the forests. Even subsistence production was in some cases regulated by informal rules, assuring a certain level of sustainability. The institutional framework was complemented by religious and symbolic functions of trees and forests. Rural population often disposed only of use rights (*usufruct*) over land and vegetation, the property right was in the hand of the ancestors and of future generations (*patrimonium*¹⁰). Sometimes, very well organised and intensive land use systems were elaborated, in which the natural tropical forest was simulated.¹¹ Positive examples of traditional forest management stand in contrast to instances of destructive use of forests. Often internal control mechanisms failed in communities and cycles of degradation started. Unfortunately explanations for the different causes of events rarely go beyond generalities. Detailed information about causes and effect of forest destruction is often lacking.¹² Today a basic discussion about the practical relevance and use of traditional local knowledge has started (PRETZSCH 1987; WARREN et al. 1995). It is evident that origins of the social forestry and the livelihood concept are rooted in this traditional local knowledge.

Colonial occupation with the forced dissemination of European value systems (stage 2) led to a far-reaching dissolution of the complex traditional forest use and

⁸ An overview on the stages is given in Figure 1. There is feed back between traditional forestry and the 4th stage of the polarization of forest related development goals. Traditional forest knowledge represents one of the roots of social forestry.

⁹ ANTWEILER & MERSMANN (1996) give an extensive overview on local knowledge characteristics, definitions and sources. For further literature see SEELAND (1997).

¹⁰ MINSCH (1992) refers to the development of property rights in Europe. He distinguishes between the Germanic use right (*patrimonium*) and the Roman property right (*dominium*).

¹¹ Examples are the forest gardens of the Maya population of Yucatán in México (NEUGEBAUER 1987) or the development on Ukara Island (LUDWIG 1968)

¹² See PONTING (1993) who analyses the causes for collapses of great civilizations. He explains the relation between deforestation and cultural decline on the Eastern Islands.

management systems. Colonial forest policy was predominantly focused on the satisfaction of the need of the mother countries: world market oriented use of forests for raw materials and the creation of a land reserve for mainly export oriented plantation crops like coffee, cacao, oil palm and rubber. Complex and holistic forest use systems were substituted by a one-dimensional relationship colony – motherland with a narrow concept of forest benefits. The forest use rights of the local population were limited drastically. Private property land titles were introduced (*dominium*), thereby creating a two-class society: people with and without land title. Traditional rules were substituted by the *paradigm of modern European forestry*, which at that time was based on the maximisation of sustainable volume production of timber. The typical WEBER type of line organisation and Prussian top-down approach characterized forest administrations. With the introduction of taxes and charges for the use of forest products and the increasing perception of the forest administration as police, an alienation of the local people from the forest started. This was the origin of the disruption in the relation between forest and rural livelihood.

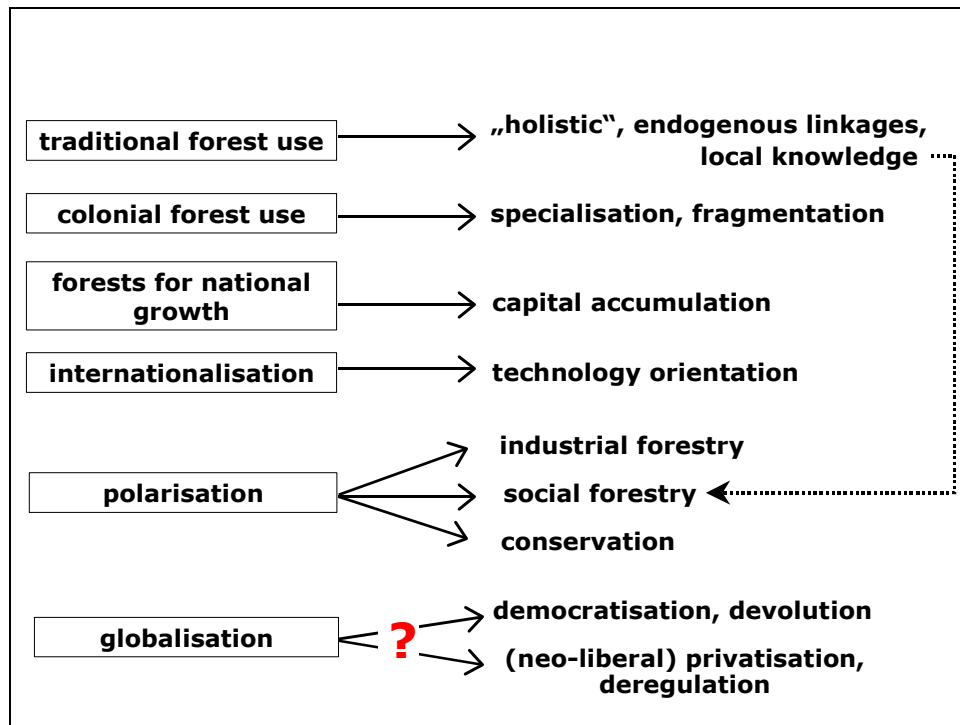
After de-colonisation, forest resources were seen in many tropical countries as a potential to accelerate economic growth (stage 3). The European paradigm of forest management practices was adopted by the new post-colonial administration. In some countries, like in India, even more power was attributed to the state forest administration. Often the lack of capital was seen as the main obstacle to economic development (NURKSE 1953; ROSENSTEIN-RODAN 1961). This concept as well as the notion that tropical forest resources constitute a capital stock which should be liquidated rapidly was spread by industrialised nations and even by the FAO. According to ROSTOW (1960) the lack of capital was the main bottleneck to proceed from the stage of the *traditional society* to that of *take off*.¹³ This concept was taken up by ZIVNUSKA (1966). At the 6th World Forest Congress in Madrid, he argued that under the conditions of initial growth and transition towards industrialisation, the application of the principle of sustainable forest management would not be recommendable. Only a massive short-term liquidation of forest resources, capital investment in timber industries and later reinvestment in plantations would permit the necessary growth of forest sector. Many tropical countries followed this concept. In the majority of the cases this strategy failed because of the weak institutional structure, lack of know how and political will and – last but not least – misuse of the released capital¹⁴. Thus this concept contains a severe threat for local people and their livelihood. Because of deficiencies in the institutional framework, most of the released capital left the locality, the region and even the country and incentives for local development were minimal.¹⁵

¹³ See also DOUGLAS (1983), who presented a valuable appraisal of the changing models of this time.

¹⁴ Especially drastic examples are the Philippines, Indonesia, Liberia, Ivory Coast; see PRETZSCH (1986; 1987)

¹⁵ This does not mean that the capital oriented approach failed always in forestry development. Finland and Sweden and Canada represent positive examples (PALO 1988). These cases show that it is worthwhile to include these experiences as a development option for tropical countries. Arguably, plantation development in Chile and Brazil has at least elements of successful industrialization.

Figure 1. Historical stages in tropical forest policy



With the continuing dissolution of colonial links and the noticeable improvement of infrastructure, forest production entered a stage of increasing internationalisation (stage 4). The mobility of the production factors capital and labour in forest and timber enterprises increased. On the output side timber markets became less transparent with a rising number of actors involved. With the emergence of multinational forest and timber enterprises the whole sector became even more complex. Internationalisation of forest production led to a strengthening of international organisations like the FAO and the World Bank. Both, international organisations and large forest enterprises followed one common paradigm: tropical forest management and plantation development are feasible in the framework of good planning and require above all technological skills. A certain euphoria towards large-scale projects gained ground. Still following the “lack of capital for growth” paradigm it was argued, that development incentives should not focus on the poor, because their first preference was consumption. They were hence not in a position to save money for investments. A certain support of the poor would be assured by the *trickle down* from the leading growth sectors. All components of this concept led to a disregard for the livelihoods of local people. Following this line of thought, significant amounts of internationally lend money were invested in large-scale projects, which often failed and burden many countries with high repayment obligations till today. Similarly the negative effect on local livelihoods is still felt today.

Failures with the previous concepts led to a polarisation in tropical forest policy (stage 5). In 1973, when MC NAMARA became World Bank President, development policy shifted towards *redistribution with growth* (CHENERY et al. 1974). It became obvious, that although there was an increase in the gross national product of developing countries, the poorest segments of the population did not participate. With

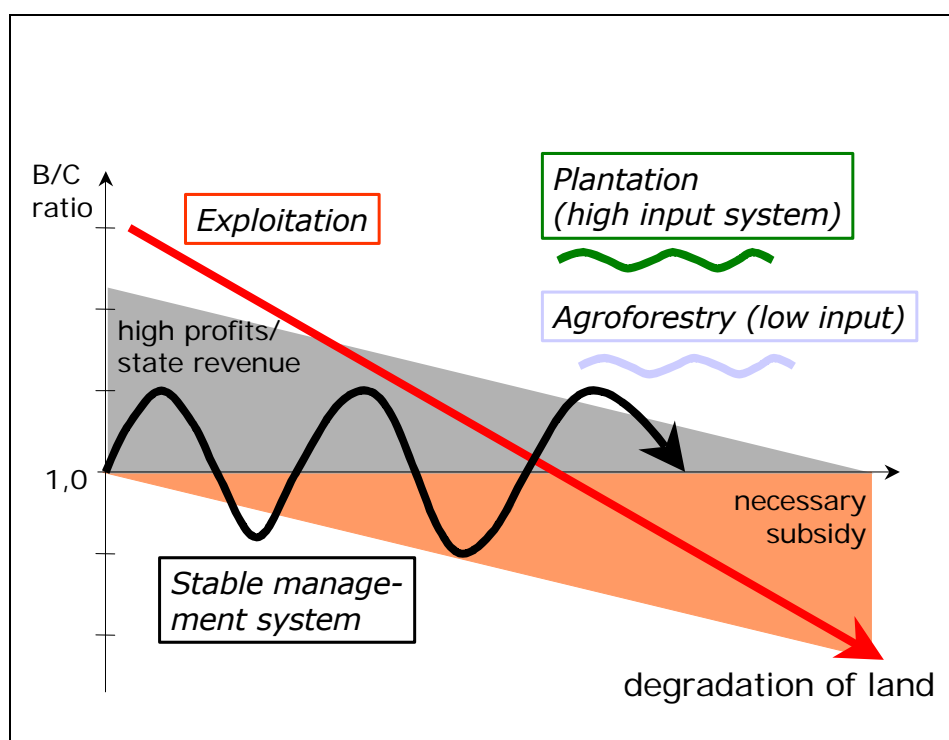
the profound discussion about the basic needs approach (ILO 1977), traditional economic thinking was complemented by attention to social aspects. Some arguments in favour of the basic need approach were – beside ethical reasons – the integration of the poor into formal or informal economic sectors, which leads to a rising demand for consumer goods, basic needs satisfaction results in a reduction of population growth and better care of the environment. Contrasting opinions focused on specific characteristics of the basic needs approach. Because of the lack of capital and technology labour productivity is low, which leads to a perpetuation of a live in misery (HUNT 1989). The basic needs model lays the ground for community and social forestry, which appear as a new paradigm in forest policy. As a third influence factor environmental issues acquire rising influence on forest policy. Beside the broadening divergence of opinions and conceptions, a second characteristics of the polarisation is the increase in the number of stakeholders involved in the forest policy cycle.

From the mid-1970s to the mid-1990s forestry development models with environmental overtones are launched in rapid succession: plantations against the firewood crisis and desertification, “rehabilitation” of deforested watersheds, agro-forestry against soil erosion and nutrient loss. The Tropical Forestry Action Plan, launched in the mid-1980s and quietly abandoned in the early 1990s, still followed the conventional technocratic forestry approach.¹⁶ Fundamental criticism of the conventional development models led to a rapid appearance of new social forces like communities, interest groups and different types of NGOs. Grass-root organisations and Non Governmental Organisations were often more active and efficient than State Forest Services and governmental projects.

The current era is characterized by globalisation and the privatisation of forests on the one hand and decentralisation and devolution of forest management rights to local communities on the other (stage 6). The dissolution of the communist block might be interpreted as one of the roots of the profound scepticism towards public forestry. Also, many community forestry programs had failed and the privatisation of forestland is seen as viable alternative. Farm forestry, often together with agricultural land and integrated into the organisation of the community, becomes a major trend. The advantages of the devolution of forest use right to local communities is relative, because of the often degraded status of the land. Before communities or individual farmers can expect livelihood support from the land, very often investment of labour and/or capital is necessary (see Figure 2).

¹⁶ The TFAP which was initiated by the World Bank and the World Resources Institute together with FAO and UNDP, failed because of its mono-sector- approach, relying on a top-down planning mechanism and relatively simple technocratic responses to complex problems, resulting in a lack of participation and support of relevant groups of society.

Figure 2. Declining benefit-cost ratio in degrades natural forests and forest management alternatives



The macro-level: Lessons learnt from changing policy targets

The diagnosis demonstrates, that rich experiences are available about the co-evolution between development policy and tropical forest policy, including many aspects on livelihood support and poverty alleviation. Forest policy adapts to a large degree to the rapidly changing super-ordinate paradigms of development policy (LJUNGMAN & NAIR 2000). This subordination and the resulting adoption of current development topics and models leads on one hand to a high level of integration of forest policy into the guiding discourse on development. A positive consequence might be the strengthening of inter-sectoral linkages. Thus opening up towards a broad inter-sectoral oriented livelihood approach might contribute significantly to a reintegration of forestry in development policy.

In post materialistic societies the increasing isolation of foresters has been explained with a conservative and internally focused *forestry ethos*, which is interpreted as one reason for the loss of credibility of the discipline (PRETZSCH 2001). Following the institutional economics approach of SCHMIDT (1999), the organizational culture of forest administrations is based on acting with preference as principal and - not as it should be – as an agent. It is aiming at achieving set targets and a fixed vision about necessary future tasks. Representatives of the civil society are hardly involved in

decision making and often feel excluded.¹⁷ It can be argued that recent experiences from tropical countries like the devolution of forest management rights to local communities, increasing participation of local stakeholders in forest management decisions and especially the increasing importance given to forest related rural livelihood strategies are steps out of the conventional paradigm towards the creation of a new *forestry ethos* (VAN GELDER & O'KEEFE 1995).

On the other hand a too rapid integration of forestry development targets in the waves of general development policy may result in a rather restricted view of existing forest based development potentials. The look back shows, that the concentration on only one dominant development model mostly resulted in a too narrow view of forest related development. In applied development policy the main shift happened from capital-oriented growth strategies to more pluralistic development strategies that integrate social and environmental aspects. This finds its equivalent in the change in official development assistance and national forest policy from capital-intensive industrial forestry towards social forestry and later on to a livelihood orientation. It is evident that at each stage, one approach represents the mainstream, dominates the discourse and attracts a high percentage of the available financial resources. Once the model has fallen into disrepute because it failed to deliver on the often inflated promises and expectations generated at the launch, it is superseded by a new one and the old model becomes “snow of yesteryear” to be buried and forgotten as quickly as possible.

The above presented appraisal shows that the sequences of development models can not be interpreted as “evolution” in the narrow sense. Often new uprising models are not embedded in experiences from predecessor models, even if approaches are similar and experiences are available from practical implementation. Predecessor models of the livelihood concept exist: traditional forest use concepts and their institutional setting, basic needs approaches, Farming Systems Analysis/Research models (FSA/FSR) and the social forestry model.¹⁸ A wealth of experience has been gained with these models but integrative methodological appraisals of the genesis of model development are so far lacking. It should also be borne in mind that the “large-scale project” continues to be alive and well as a forestry development model. While it has been mostly abandoned by public forestry investment, it is the main model for private projects which today mobilize several times the volume of public investment in forestry. The lessons from the early industrialization period would be invaluable to understand and mitigate the very significant livelihood impacts of today’s industrial projects in developing countries.

Some critical experiences with predecessor models, which are also relevant for the livelihood approaches, concern the high labour intensity of grass-root action and lack of financial capital for investments in modern product transformation units, which permit a high value-added. This bears the risk that the subsistence-poverty perpetuates or even worsens under the impact of increasing international debts, IMF imposed

¹⁷ The running discourses in India and Thailand are analysed by SHRIVASTAVA (1999) and PYE (2003)

¹⁸ Actually a basic revision on the applicability of FSA/FSR for forestry issues is being elaborated. In this study forestry specific characteristics are integrated in the FSA/FSR approach. Further information can be obtained by the Institute of International Forestry and Forest Products, Tharandt.

austerity policy and the lack of funds for environmental services from forests. The fruitful discussion about industrialization and unbalanced growth around development poles (HIRSCHMANN 1958) so far was not taken in account in the livelihood approach or in other recent forestry development theories.

THE MICRO LEVEL: RESULTS FROM SOME CASE STUDIES

Potential and limits of case study research

A rapidly increasing number of case studies and positive examples are available on forest related rural livelihood strategies. Unfortunately, they are often not integrated in an overarching methodological framework that permits to link experiences to development theories.¹⁹ Beside the clear evidence that forests are of importance for livelihood support, only few quantitative studies are available. The case studies presented below will be used to shape hypotheses on some aspects from a micro level perspective.

Results from case studies²⁰

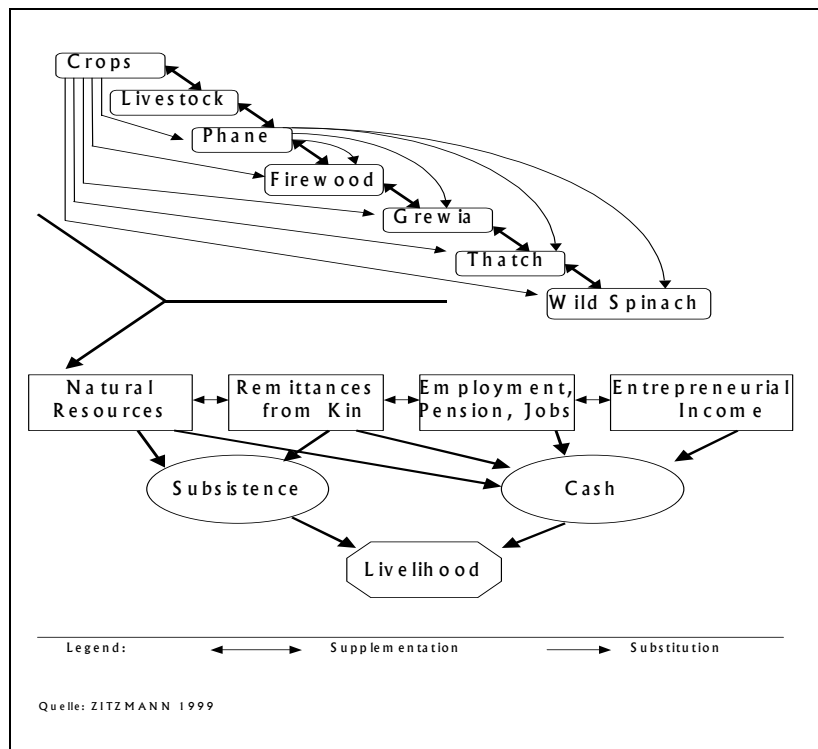
In his study on the multiple forest and tree use in the Mopane woodland in Botswana, ZITZMANN (1999) shows that the main contribution of trees and forests to the livelihood of local farmers is to supplement or substitute for crop production. In their livelihood strategies farmers rank Phane²¹ collection below agriculture and livestock production (see Figure 3). In the presented case a differentiation between absolute and relative importance of forest and trees for the livelihoods of the local people is essential. Also it becomes obvious, that this type of analysis not necessarily has to be based on the livelihood concept. Similar results are achieved based on the use of FSA/FSR Methodology.

¹⁹ see the contribution of the author to the XII World Forestry Congress on “Methodological aspects of tropical forest management research” which is a plea for more theory orientation in case study research.

²⁰ The case studies are derived from PhD and MSc studies which were elaborated at the Institute of International Forestry, University of Technology Dresden, Tharandt

²¹ Phane is a caterpillar which lives from the leaves of the Mopane trees (*Colophospermum mopane*) and has nutritional value as well as a high market value.

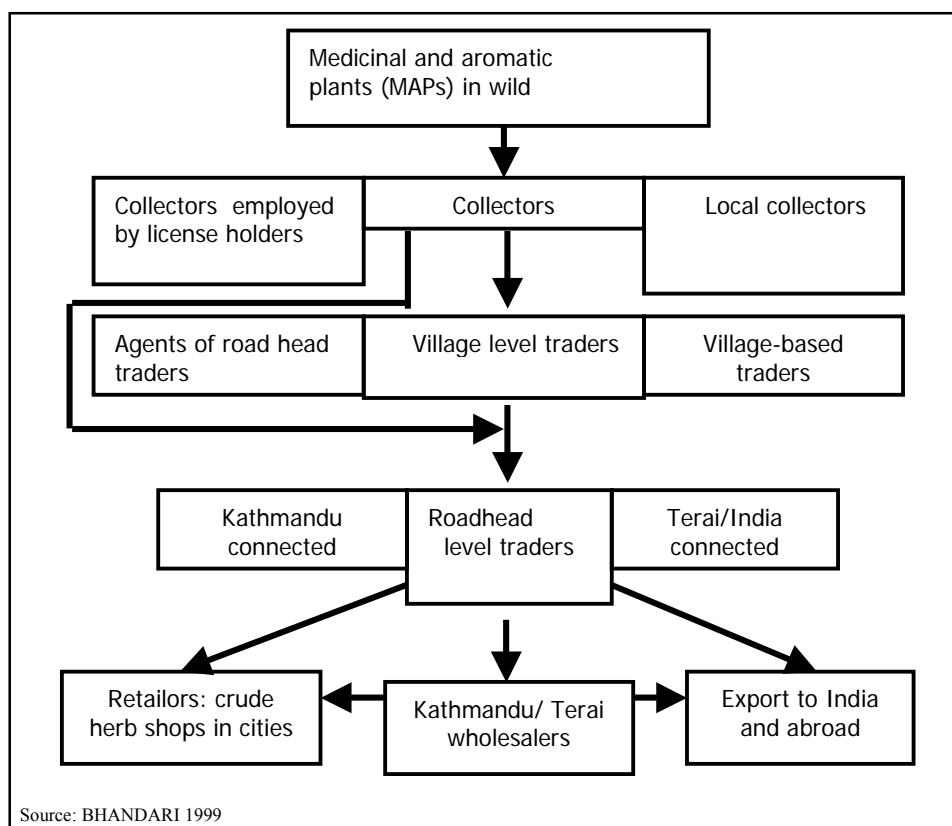
Figure 3. Sources of livelihood and their possible supplementation and substitution



TAGHO NGU (2000) has investigated the use of *Prunus africana* bark for livelihood support in Cameroon. To assure a sustainable production a management system and better marketing facilities have to be introduced. The livelihood concept has an analytical value, because the problem situation can be structured in a systematic way. Also in this case FSA/FSR would have arrived at a similar conclusion.

In his study on the use of aromatic and medicinal herbs BHANDARI (1999) combines the situation of the collection sites with their respective communities and the market chain.

Figure 4. The marketing chain for medicinal and aromatic plants harvested in the study area

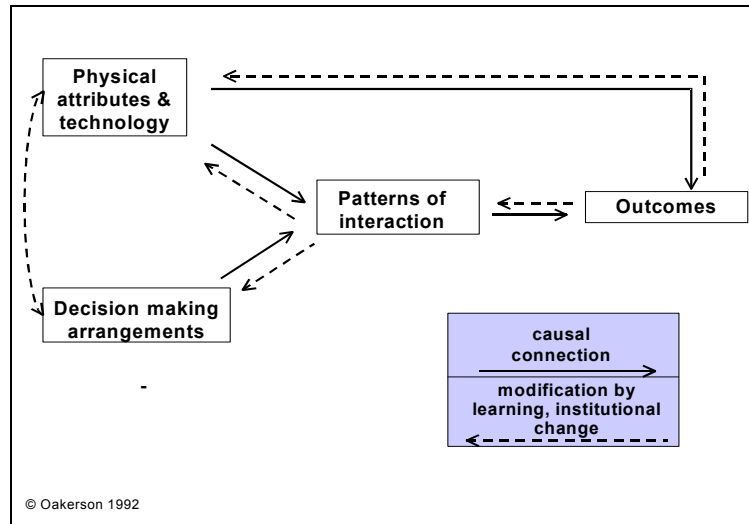


Local collectors are increasingly impoverished and some herbs have become extinct without increased value added in the locality and a clear delimitation and devolution of use right in the collecting ground (see Figure 4). Both initiatives require intervention from outside and require a more extensive theoretical framework than the livelihood approach. A combination between the micro level and an overarching development policy approach, including regional and global market conditions is necessary.

In his study on the organisation of community forestry in the Ejidos of Quintana Roo HESS (1996) uses the model of OAKERSEN (1992) to link local development to the ecological and social environment (see Figure 5). The study area is the state of Quintana Roo in the south of Mexico, where considerable areas of tropical rainforest still exist. In the agrarian reform, the local Indian population and migrants from the north received homestead and some agricultural land for private use as well as for their common use. *Ejidos* were established as organisational units for the communities. For a long time, the local population did not receive benefits from the forest, as a company owned by the Federal State Government exploited it in a very predatory way and the revenue was partly siphoned off by corruption. The local community resisted this practice and formed its own communal forest service. The peasant association took over all the production factors including chainsaws, transport facilities and sawmills. The forest people carried out inventories and the benefits from

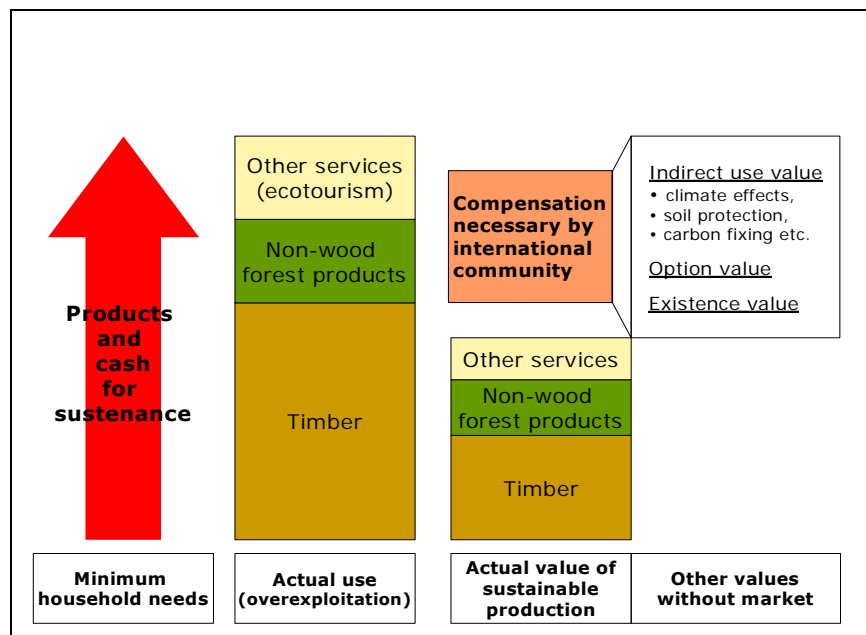
forest extraction were distributed through salaries and sharing of profits among all members of the association (PRETZSCH & JANKA 1991).

Figure 5. Framework for community forestry development



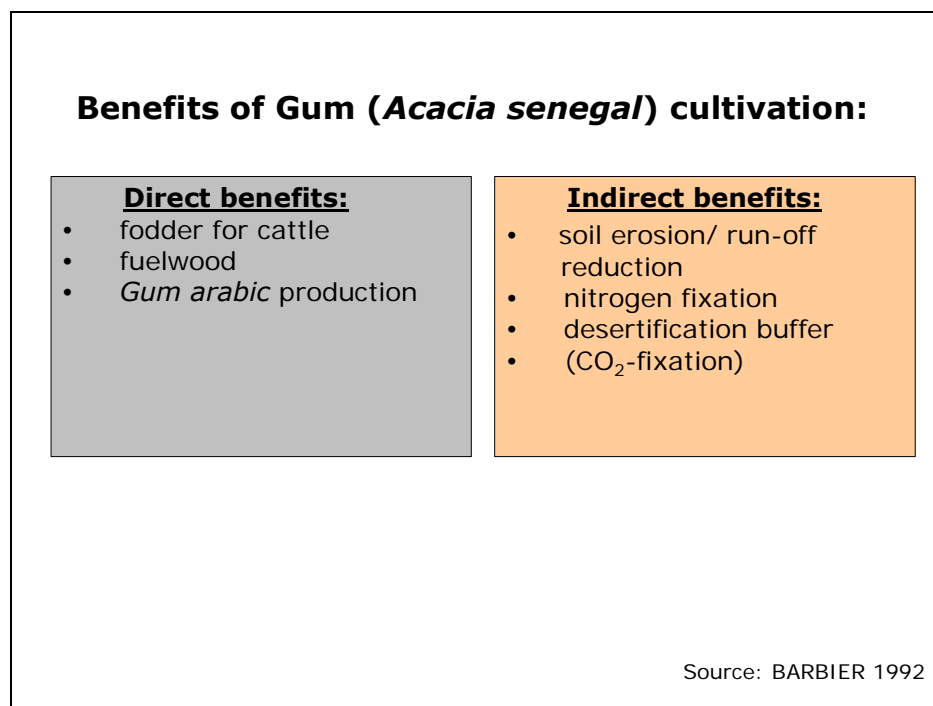
It can be learned, that community stability depends mainly on economic benefits that are at the disposal of community members. Current forest production cannot cover the needs of the communities. Thus, as shown in Figure 6, either additional income sources from the forest are made available to the community, or overuse of forest resources continues. Although these forests are FSC-certified no solution for this problem is in sight. The option of eco-tourism for additional income generation did not bring the expected results. For the achievement of this type of stability, development options are necessary together with the co-operation on an overarching level. The only chance for a stabilisation of the relation between rural population and forest consists in international compensation payments for non-market services like biodiversity conservation, local and global climatic regulation etc.

Figure 6. Stability model for the use of tropical forests (PRETZSCH 1998)



A study on Non Timber Forest Products in Sudan demonstrates their importance for livelihood support and poverty alleviation (MUTWAKIL 1998). But the products, which are mainly used for subsistence or for local marketing, do not permit an upgrading of the household situation. While upgrading of the household situation is difficult with these products, gum Arabic, which tapped from *Acacia senegal*, has a high value on the world market and may significantly contribute to household cash income (see Figure 7).

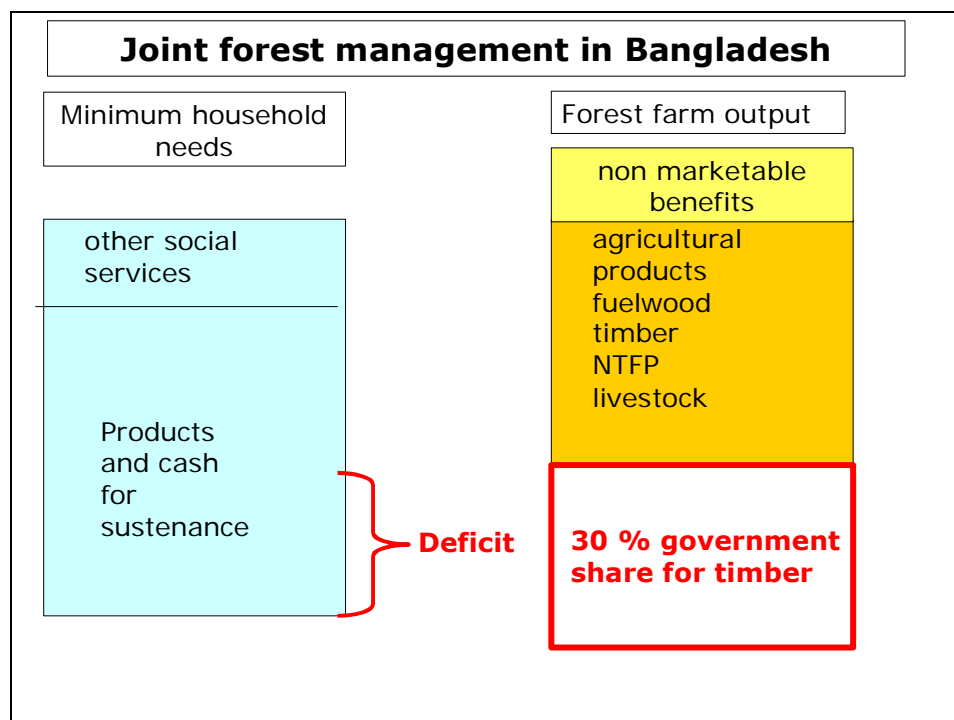
Figure 7. Benefits from gum Arabic cultivation



TAHA (1999) has analysed the situation of gum arabic tapping farmers. With a similar stability model he makes up a balance, comparing the needs of the farm-households with the income generation from the different farm and forest activities. The model permits to differentiate between financial aspects at the farm household level and economic aspects, which are related to the Sudanese development policy. In the specific situation the income of the farmers is reduced because of high taxation of gum arabic by the Sudanese state authority. Thus simulation of destructive and sustainable strategies is based mainly on the impact of government price policy on farm households. Taxation policy has also a negative impact on the provision of direct and indirect benefits from gum arabic production and may lead to increasing desertification.

A similar model is used to evaluate afforestation under joint forest management contracts in Bangladesh. The model demonstrates the threshold between sustainable and destructive policies, which depend on benefit sharing rules local people and forest administration (see Figure 8).

Figure 8. Benefit sharing from JFM in Bangladesh



The micro level: Lessons learnt from case studies

Results from the case studies show the relative importance of forests and trees to support livelihood of local people. Livelihood improvement requires in most cases a strong linkage to the national and international development policy level. In nearly all cases, improvement of the local situation depends on better market access, availability of financing instruments, good governance and global compensation payments. In the cases where forest products remain in households or on local markets, development potential is rather limited. They contribute to short-term poverty alleviation, but rarely to a lasting upgrading of the economic situation of local communities. Such reservations notwithstanding the livelihood concept is valuable to better structure the local potentials and restrictions and to bring a process of local empowerment on the way.

CONCLUSIONS

Response to the initial hypotheses

The diagnosis concentrated on a critical review of changing forest development models. The findings were complemented with experiences from case studies. The

explorative procedure permits the elaboration of a hypothetical argumentation framework.²²

- The comparative review of changing development policy models and forest related development paradigms shows the far reaching sub-ordination of forest policy. A more detailed diagnostics of the recent development stages may further illuminate this relation and prepare the grounds for a more proactive “construction” of integrated forest development strategies.²³
- The hypothesis, that the livelihood approach is “old wine in a new skin” could be verified partly. The methodological relationship to predecessor models as the traditional forest use concepts and their institutional setting, basic needs approaches, Farming Systems Analysis/Research models and the social forestry concept has hardly been investigated. So far the livelihood concept does not contribute with substantially new ideas to an innovative forestry development discussion.
- The concentration on this approach and the current disregard of other important models, like that one of forest industrialisation characterize really a “riding on waves”. This can also be proved for previous forest development models (industrial forestry, community forestry, social forestry etc.), which always dominated the scene during a period of few years.
- Like in the basic needs approach, the concentration on forest production for livelihood support may bear the risk of a perpetuation of subsistence production without realistic options for an upgrading. Other options, like unbalanced growth based industrialization should be included in an overarching forest development concept.
- Not much is known about the potential of forests to support livelihoods. It seems that the main livelihood support from forests has a supplementary or a substitutive character. There is some evidence that the real importance is overestimated.²⁴
- The “riding of the livelihood support and poverty alleviation wave” might deflect from other relevant problems that threaten the forest sector in many countries. Examples are the consequences of international debts and austerity policy, decentralisation and devolution of degraded land or the lack of forest related financing mechanisms on all levels.

The present development stage is characterized by a retreat of national governments from their traditional tasks as managers of natural resources. Deregulation without constituting and regulating state intervention increases the pressure of market forces on natural resources. In this situation, decentralisation and devolution of forest management rights and responsibilities to local communities bears a strong risk of further undervaluing and resulting destruction of forests. The locally embedded

²² The development policy framework of forestry development strategies is seen as one priority field for further research on MSc and PhD-level.

²³ One of the methodological bases is constructivism (see BERGER & LUCKMAN 1967)

²⁴ see Poschen 1997, 2001, 2003 for further details on the quantification of work inputs and income from forests

livelihood concept may rapidly get an alibi function, because the basic structural problems of increasing debts, lack of financing mechanisms for global benefits from forests and the continuous widening of the gap between developing and developed countries are hardly tackled.

Outlook

After an era of rich experience with local knowledge, social forestry and the characteristics of forest use and management by local communities, more emphasis should be given to the superordinated institutional framework. While benefit sharing and power relations at the community level have been the object of many case studies, the linkages to international development models and the consequences of rising global inequalities on the forestry sector have hardly been analysed. The livelihoods concept might be a valuable tool for further development of traditional forest use models, including the basic needs approach, FSA/FSR and the community and social forestry concepts. Under the above mentioned conditions, however, and in the symbolic way in which the image of the livelihood approach is currently projected, it might have far more a function to reduce negative side effects of global development in the short term, rather than to initiate a long term process of a sustainable development.

A bigger and potentially more rewarding challenge would be to step out of the hierarchy of mainstream development. The conceptualisation of new forest strategies should not exclusively follow preconceived external models. A holistic intra-sectoral discourse is necessary in which – based on the huge amount of previous experiences – realistic models for future forestry development models are designed. It would be necessary to outline a specific strategy for natural resources like forests and trees, which is hardly feasible with the mainstream economic instruments. This challenge includes long-term visions about renewable wood energy, value-added mechanisms and forest-based industrialisation, also coming back to the idea of development poles which permits the absorption of a bigger work force than forest related livelihood approaches.

REFERENCES

- ANTWEILER, C.; MERSMANN, C. (1996) Local knowledge and cultural skills as resources for sustainable forest development. Unpublished Conference room paper for the Third Session of the Intergovernmental Panel on Forests (IPF), Eschborn
- ARNOLD, M. J. E. (2001). Forestry, poverty and aid. CIFOR Occasional Paper 33, 1-17, Jakarta
- BATEN, C. S. (1998): Rehabilitation of the denuded and encroached government sal forests of Bangladesh, involving encroached and local poor people: a socio-economic study in Vannara. MSc. Thesis, Institute of International Forestry and Forest Products, TU Dresden, Tharandt
- BINH, B. M. (2001): Impacts of Forest Land Policy Change on Household's Livelihoods: Case Study from Tu Ne Commune, Hoa Binh Province, Vietnam. MSc. Thesis, Institute of International Forestry and Forest Products, TU Dresden, Tharandt
- BHANDARI, B. P. (1999): Present contribution and future prospects of medicinal and aromatic plants (MAPs) to the socio-economic development of High Mountainous Belt of Nepal. A study in Lamjung district. MSc. Thesis, Institute of International Forestry and Forest Products, TU Dresden, Tharandt
- BASS, S.; THOMSON, K. (1997) Forest security: challenges to be met by a global forest convention. IIED London
- BECK, U. (1986) Risikogesellschaft. Auf dem Weg in eine andere Moderne, Frankfurt
- BENNETT, J. W. (1976) The Ecological Transition: Cultural Anthropology and Human Adaptation. New York et al., Pergamon Press
- BERGER, P.L. ; LUCKMAN, Th. (1967) The social construction of reality. A treatise in the sociology of knowledge. Doubleday and Middlessex
- BROCKLESBY, M. A.; HINSHELWOOD, E.(2002) Poverty and the environment: What the poor say. An assessment of poverty -environment linkages in participatory poverty assessments. DFID, London
- CARNEY, D. (2003) Sustainable livelihoods approaches: Progress and possibilities for change. Toronto
- CHOSSUDOVSKY, M. (1997). The globalisation of poverty: Impacts of IMF and World Bank reforms. Third World Network, Penang-Malaysia
- CYPHER, J. M.; DIETZ, J. .L. (1997) The process of economic development, London

- DOUGLAS, J. J. (1993). A re-appraisal of forestry development in developing countries. *Forestry Sciences* 8, Martinus Nijhoff/Dr. W. Junk Publishers, The Hague
- EUCKEN, W. (1990) *Grundsätze der Wirtschaftspolitik*. 6th ed., Tübingen
- FAO (1989). *Forestry and food security*. FAO Forestry Paper 90. FAO, Rome
- FAO/DFID (2001). *How forests can reduce poverty*. FAO, Rome
- FREUDENBURG, W. R.; GRAMLING, R. (1994). *Natural resources and rural poverty: A closer look*. *Society and Natural Resources* 7, 5-22
- GALTUNG, J.; O'BRIEN, P.; PREISWERK, R. Eds. (1980) *Self-reliance: A strategy for development*. Geneva: Institute of development Studies
- GELDER, B. v. & O'KEEFE, P. (1995) *The new forester*, London
- GIERSCH, H. (1961) *Allgemeine Wirtschaftspolitik, Grundlagen*, Wiesbaden
- HABERMAS, J. (1988) *Theorie des kommunikativen Handelns*. Bd. 1 und 2, Frankfurt
- HARDIN, G. (1968) *The tragedy of the commons*. *Science* 162 (3859), p. 1243-1248
- HESS, J. 1996 *Kommunale Bewirtschaftung feuchttropischer Naturwälder - eine leistungsfähige und stabile Landnutzungsform als Garant für den Walderhalt? Sozio-ökonomische Untersuchungen in Waldbauerngemeinden von Quintana Roo, Mexiko*. TU Dresden. Schriftenreihe des Instituts für Internationale Forst- und Holzwirtschaft. Heft 1. Tharandt
- HIRSCHMAN, A. O. (1958) *The strategy of economic development*. New Haven
- HUNT, D. (1989) *Economic theories of development. An analysis of competing paradigms*.
- ILO International Labour Organisation (1977) *The basic needs approach to development*. Geneva
- KLÜVER, J.; KRÜGER, H. (1972) *Aktionsforschung und soziologische Theorien. Wissenschaftstheoretische Überlegungen zum Erkenntnisinteresse in der Aktionsforschung*. S. 76-99 in: HAAG, F.; KRÜGER, H.; SCHWÄRZEL, W.; WILDT, J. Hrsg.: *Aktionsforschung. Forschungsstrategien, Forschungsfelder und Forschungspläne*.
- KUHN, T. S. (1962) *The structure of scientific revolutions*. Chicago
- KUZNETZ, S. (1960) *Notes on the take-off*; in: *The economics of take-off into sustained growth*, p. 22-43, New York

- LJUNGMAN, L.; NAIR, C.T.S. (2001) Changing perceptions on technical assistance in support of sustainable forest management. in: Workshop-Paper on Financing Sustainable Forest Management, 22-25 January, Oslo
- LONG, N.; v. d. PLOEG, J.D. (1989) Demythologizing Planned Intervention: An Actor Perspective, In: *Sociologia ruralis* 3/4
- LUDWIG, H. D. (1968) Permanent farming on the Ukara, in: RUTHENBERG (ed.), *Smallholder farming and smallholder development in Tanzania*, Weltforum Verlag, Munich
- MINSCH, J. (1992) Ethik der Ressourcennutzung - ökonomische Aspekte, In: *Schweizer Zeitung für das gesammelte Forstwesen*, 143, 11, S. 893-907
- MUTWAKIL, H. A. (1998): Contribution of Forest Products to the Livelihood of Farm Households within Sedentary Farming Subsystems of Sheikan Province – Western Sudan. MSc. Thesis, TU Dresden, Tharandt
- NEUGEBAUER, B. (1986) *Der Wandel kleinbäuerlicher Landnutzung in Oxkutzcab, Yucatán*. Todtmoos
- NURKSE, R. (1953) *Problems of capital formation in underdeveloped countries*. Oxford
- OAKERSON, J.R. (1992) Analysing the Commons. A Framework, p. 41-59, in: BROMLEY, D. W. (Ed.) *Making the Commons work. Theory, Practice and Policy*. San Francisco
- PALO, M. (1988) The forest-based development theory revisited with a case study of Finland and prospects for developing countries, p. 13-157, in: *Deforestation or development in the Third World ? Volume II*, Helsinki
- PEET, R.; WATTS, M. (1996) *Liberation Ecologies. Environment, development, social movements*, London and New York
- PONTING, C. (1991) *A green history of the world. The environment and the collapses of civilisations*. New York
- POSCHEN, P. (1997) 'Forests and employment – much more than meets the eye' invited paper XI World Forestry Congress, Antalya, Turkey 13-22 October 1997, Proceedings Vol. 4, p.61-79.
- POSCHEN, P. (2001) 'Globalisation and sustainability – the forestry and wood industries on the move'. with Mattias Lövgren, ILO, Geneva, 122p.
- POSCHEN, P. (2002) The forests, the poor and the foresters. Unpublished manuscript of a presentation in Edinburgh
- PRESTON, P. W. (1996) *Development theory, an introduction*. Oxford
- PRETZSCH (1986) *Traditionelle Bodenbewirtschaftung, weltmarktorientierte Plantagenproduktion und Tropenwaldzerstörung in der Republik*

Elfenbeinküste. Eine Untersuchung über die Folgewirkungen einseitig exportorientierter Landnutzung auf lokale Gesellschaftsstrukturen, Produktionsverhältnisse und Ökosysteme. Schriftenreihe des Instituts für Landespflege, Heft 8, Freiburg, 180 p.

PRETZSCH (1987a) Die Entwicklungsbeiträge von Holzexploitation und Holzindustrie in Ländern der feuchten Tropen. Dargestellt am Beispiel der Elfenbeinküste. Schriftenreihe des Instituts für Landespflege, Heft 11, Freiburg, 323 p.

PRETZSCH (1987b) Sichtweise und Nutzung des tropischen Feuchtwaldes in traditionellen Kulturen, unter Kolonialverwaltung und nach der Unabhängigkeit. Forschungsauftrag der FES, Heidelberg unpublished manuscript

PRETZSCH, J. (1990) Contributions to the Development of Timber Exploitation and the Wood-Processing Industry in Countries of the Humid Tropics. The Case of Ivory Coast. In: Natural Resources and Development, Vol. 31, edited by the Institute for Scientific Co-operation, Tübingen

PRETZSCH, J.; JANKA, H. (1991) Der Plan Piloto Forestal in Quintana Roo, Mexiko: Eine Aufarbeitung der Entwicklungen zwischen 1978 und 1990. Unveröffentl. Forschungsbericht, Freiburg

PRETZSCH, J (1993) zusammen mit R. FÖRSTER und J. HESS unter Mitarbeit von STOIAN, D.: Prozeßanalyse von drei Forstprojekten in Guatemala, Honduras und Mexiko, eine Erfahrungsaufbereitung. Im Auftrag der GTZ / Pilotvorhaben Ressourcenmanagement über Selbsthilfeansätze (RM/SH)

PRETZSCH, J. (1998) Chances and limits of tropical forest management from the socio-economic view: Status quo and perspectives. P. 88-97, in: Plant Research and Development, Vol. 47/48

PRETZSCH (1998) Research on tropical forests in Venezuela: Approaches, experiences and future research activities. Paper presented in the International Conference on forest use in the tropics and subtropics: challenges for interdisciplinary and intercultural social science research. Oct. 27 and 28, Freiburg

PRITTWITZ, V. v. 1990) Das Katastrophen-Paradox. Elemente einer Theorie der Umweltpolitik. Opladen

PYE, O.: Khor Jor Kor. Forest politics in Thailand. Manuscript of a PhD Thesis; Institute of International Forestry and Forest Products, TU Dresden, Tharandt

RADKAU, J. (1989) Technik in Deutschland. Vom 19. Jahrhundert bis zur Gegenwart. Frankfurt am Main

RADKAU, J. (2002) Natur und Macht, Eine Weltgeschichte der Umwelt. München

REDCLIFT, M. (1987) Sustainable development: Exploring the contradictions. Routledge, London and New York

- RÖLING, N. (1995) Towards an interactive agricultural science. Translation of inaugural address at the occasion of his appointment to the extra-ordinary chair in agricultural knowledge systems in developing nations, at the behest of ETC Foundation, Wageningen, 21 September 1995
- ROMM, J. (1986) Forest policy and development policy. in: Journal of World Forest Resource Management, Vol. 2, pp 85-103
- ROSENSTEIN-RODAN, P. .N. (1961) International aid for underdeveloped countries, in: Review of Economics and Statistics, Vol. XLIII, p. 107-138
- ROSTOW, W. W. (1960) The stages of economic growth: A non-communist manifesto, Cambridge University Press
- SCHARPF, F. W. (2000) Interaktionsformen Akteurszentrierter Institutionalismus in der Politikforschung. Opladen
- SCOTT, J. C. (1985) Weapons of the weak. Everyday forms of peasant resistance. New Haven and London.
- SEELAND, K. Hrsg. (1997) Nature is culture. Indigenous knowledge and socio-cultural aspects of trees and forests in non-European cultures. London
- SHRIVASTAVA, A. (1999) Strategic groups and conflict: A study of forestry sector of Tripura. MSc. Thesis, Institute of International Forestry and Forest Products, TU Dresden, Tharandt
- SILVA, D` (E. (1997) Why institutional reforms in forestry? Lessons from international experience. In: Natural Resources Forum, Vol. 21, No. 1, pp. 51-60
- STEINLIN, H.; PRETZSCH, J. (1984) Der tropische Feuchtwald in der internationalen Forstpolitik., in: Holz-Zentralblatt Nr. 138
- STREETEN, P.; BURKI, S. J. (1978). Basic needs: Some issues. World Bank Reprint Series 53 (World Development 6)
- SUDA, M.; MAYER-GAMPE, P. (2001) Unser Verhältnis zum Wald im ausgehenden 20. Jahrhundert. TU München, Freising, unpublished Manuscript
- TAGHO NGU V. M. (2000): Contribution of the *Prunus africana* Trade to the Livelihood of Prunus Harvesters in the Mount Cameroon Region. Case Study of Mapanja, South-West Province, Cameroon. MSc. Thesis, Institute of International Forestry and Forest Products, TU Dresden, Tharandt
- TAHA AHMED, M.: (1999) The Socio-economic Role of *Acacia senegal* in Sustainable Development of Rural Areas in the Gum Belt of the Sudan. PhD Thesis, Institute of International Forestry and Forest Products, TU Dresden, Tharandt

- THAKUR, G. (2001): The Impact of Commercialisation of Community Forestry on the Rural Community in Nepal. (A Case Study of Two Forest User Groups of Nepal). MSc. Thesis, Institute of International Forestry and Forest Products, TU Dresden, Tharandt
- THIRLWALL, A. P. (1994) Growth and development. 5th Ed., London et al.
- TODARO, M. P. (1995) Economics for a developing world. An introduction to principles, problems and policies for development. 3rd ed., London and New York
- TUCKER, R. P.; RICHARDS, J. F. Ed. (1983) Global deforestation and the nineteenth-century world economy. Durham
- VERNON, (1966) International investment and international trade in the production cycle. In: Quarterly Journal of Economics, Vol. LXXX, May, pp. 190-207
- VINCENT, JR; BINKLEY, CS (1992) Forest-based industrialisation: A dynamic perspective. p. 93-175, in: Sharma, NP (Hrs.) Managing the world's forests: looking for balance between conservation and development. Dubuque
- WARREN, D. M.; SLIKKERVEER, L.J.; BROKENSCHA, D. (1995) The cultural dimension of development. Indigenous knowledge systems. London
- WEBER, N.; MANN, S. (1977) Der postmaterialistische Wertewandel und seine Bedeutung für die Forstwirtschaft. in: Forstarchiv 68 (1977), 19-24
- WEBER, M. (1922) Wirtschaft und Gesellschaft. Tübingen
- WESTOBY, J. C. (1962) Forest industries in the attack on economic underdevelopment, in: UNASYLVA, p. 168-201
- WESTOBY (1987) The purpose of forests. Follies of development. Oxford
- WUNDER, S. (2001). Poverty alleviation and tropical forests - What scope for synergies? World Development 29 (II), Art. 1194, 1-17
- ZITZMANN, G. (1998): Multiple Use and Livelihood Strategies in Mopane Woodland. The Case of Ditladi, North-East District, Botswana, Schriftenreihe des Instituts für Internationale Forst- und Holzwirtschaft, Heft 2
- ZIVNUSKA, J.A. (1966): The integration of forest development plans and national development plans. How to make the forestry case at the national level. Proceedings of the 6th World Forest Congress, Madrid