

Shrubland Management in Tribal Islamic Yemen.

Social Forestry as Development of a Local and Sustainable (Sylvi-)Culture.

An Essay in Practical Philosophy

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"Finally we do not want to forgo to point out, that man has to study himself, his objectives and his values, as well as the world he intends to change. Both require never ending dedication and efforts.

After all man stands not only in front of the question if he will survive as biological species, but if he will be able to survive without sliding back into a form of existence, that looks not worth living for." ¹⁾

¹⁾ Meadows, D.: *Die Grenzen des Wachstums. Bericht des Club of Rome zur Lage der Menschheit.* dva informativ 1972. p 176:

Foreword

The base for this study is forestry development work, undertaken from 1988 to 1993 with FAO in Yemen financed by the *Swiss Development Cooperation*. This "technical assistance" started with inventories and institution building. The main results up to 1990 were, that the dominant ecological factor is the human being.

Development work with FAO continued until autumn 1993. Project development with GEF and UNESCO, targeting the protection of the natural environment through sustainable use, was continued until the civil war in spring 1994 stopped activities.

The aim for those years was active management of the overused and disappearing forests. The study of the human, social, political, economic and cultural factors has the purpose to show the potential for such activities.

The driving motive for this lengthy occupation was a) the wish to do something useful and b) the wish to understand more about the problem, how we can develop activities that are needed - but economically not interesting. Out of that perspective originates the focus on action. Ideas, papers, international treaties - all those are only of some use if they lead to action!

The (admittedly lengthy) title summarises the problems and the complexity of the approach. "*Shrubland*" indicates that there is no economical solution, be it private or governmental. "*Management*" says clearly that the aim is to direct people's action. "*Tribal*" negates "steering by force" and restricts it to conviction and motivation. "*Islamic*" names the dominant cultural and legal background.

What concerns the methodology an other title would have been more appropriate: "The search for *causa prima*, *causa secunda* and *causa finalis*". This title, in spite of being precise, was not chosen, as it would only be understandable for very few specialists. The objective of our Western science is the determination of causal relations. For "Islamic science" such causes are only secondary (*causa secunda*). The first and only cause of everything being God (*causa prima*). As the basic problem of forestry in Yemen is the lack of purpose, meaning and motives we would have to find or create those. After all it is those, the - *causa finalis* - that lead to action - not the scientific causalities. The search for such is not done in laboratories, but in the targeted society, in the real-life-world. The systematical search for arguments and views of the locals on their natural environment was undertaken for five years. The approach is not really new, it has been used by Aristotle, and is called TOPICS.

The book will be slightly difficult for the scientist to read, as it spans from technical inventories to the Saracen bowmen's education, from causality in natural and social sciences to finality in human action and religion ... but such is the world. Moreover it is not suitable for diagonal reading, due to the systemic approach.

The scientific standard of using "objectivised" forms of writing as *it, one, the author; passive voice* etc. has not been fully overtaken. I am convinced, that it does not make any research more objective. So if I say I that's me, the author; if I say we, that's no *pluralis majestatis* but that means the team consisting of counterpart, driver and myself.

Thanks: Thanks to all those from whose thinking I was able to learn and to profit. I hope I did not forget to quote anyone properly. Thanks to the institutions that financed and assisted my work in Yemen, especially the Swiss Technical Cooperation. "Thanks" (in brackets, but still) to all those individuals and institutions (Forestry Departments of FAO and the Federal Institute of Technology, Zurich) that have been disputing with me about development approaches.

Dedication:

THIS WORK IS DEDICATED TO ALL THOSE MARGINALISED BY "THE MARKET".

Summary

This research deals with the destructive overuse of the natural environment, the negative attitude towards trees and forests and possibilities to overcome it, so with the formation (explicitly not formulation!) of a policy on the management of natural resources. From activities undertaken up to 1990 it was known, that shrublands are not quite impressive. But that's arid land forestry, and that's where care has to be taken. And it is a problem of management to care for those limited resources.

Management needs a good knowledge of the situation and of the whole system. So first structures and especially functions (processes) have been determined by RRA and PRA. Then management trials have been undertaken in the form of **Participatory Action Research** (PAR).

For steering purposes especially the leadership is important. Given the negative startoff (s. para A), below), steering means here to change the underlying ideology. Among Yemen's tribes leadership is traditionally controlled by participation of all members of the community, and leadership is not done by authority but mainly as argumentative, consensus oriented conviction. So at the top there are the normative systems, the written one (*sharia*) and the verbal ones (tribal laws and "*common sense*").

The analysis resulted in a systemic description, beginning with the natural environmental factors and forests, proceeding to socio-economic relations and to legal and spiritual guidance:

- The disperse population and the scattered woodlands make it necessary to do management directly with the locals, as **social forestry**. Only minimal institutions would be needed, as the whole staff has to be out in the field and extremely mobile. Due to the same reasons (dispersity, low density) inventories and management plans should mainly be done in qualitative ways.
- Ownership of forests is in most cases common. Privatisation does not work as solution, as private forests are quickly converted into more productive farmland. > **Common use of common lands needs common care.** <
- Luckily the normative, legal base is not as bad as the first impression let one to think. The religious institutions are quite helpful in interpretation and dissemination of *shari'a* based guidance on the protection of the natural environment. They should be much better used as guides, convincers and "sense-makers".

Epistemological Problems and Methodological Development:

Mainly two problems led to the (for normal, western scientists) slightly queer approach:

- A) The most important ecological factor in Yemen is the human being That's the result of forest and phytosociological inventories! Unluckily his attitude towards trees and forests is rather negative: "*el ghabat ma fish faide*" ("*forests don't make sense*"). From that point of view it is clear, that forest management has to deal more with people and their use

of the forests (the destructive processes) - than with trees themselves.

- B) From the start there were many problems with the local research. Opposite to standard practice, those have been mentioned in the results (s. chapter 4: *climate, herbary, botanical garden, inventories, phytosociology, range overuse, collection of indigenous knowledge, population data ...*). In general many of the scientifically trained staff and technicians do not see much purpose in the collection of data. During the fieldwork it got more and more clear, that the differences can't be eliminated by more and better training, that they root much deeper. The Arabic world is quite different, even if neighbouring Europe. The scientific-technical problem solution does not have the same attractiveness for Yemenis, even for most Yemeni scientists, that it has for us.

One of the major problems is not, how science is done, but what science is. Causal science can answer most of the topical questions: **what, why, where, who, when**. But it is the final, purposeful **WHY** that is decisive for action. In the process from cognition to action losses occur due to reductions. As an effect the scientific WELTBILD gets very partial. The cognitive system decides first what is worth while recognising! The social system, filters out what is to be considered as meaningful action, what is worth while being done. Development (-science) needs to take care of both aspects. Moreover - development is future oriented - and the "shall" is not a matter of science, but of "orientational knowledge", of ethics (= *practical philosophy*), or, in Islamic countries, of *sharia*.

The methodological development (chapter 1 to 3) proceeds with increasing complexity from simple description, heuristics and models - to the main steering instrument of society >MEANING< and of action >PURPOSE & FINALITY<. This type of systems analysis, including the past, structures and functions of the present, and the *causa finalis* from common sense, ethics and religion, does not allow to determine the future. That is anyhow not the business of any science as humans are free to decide which path of "development" they want to follow. But, as Popper's science and as economics, it allows to determine, quite precisely, what kind of development is excluded due to the specific local culture. Culture contains the whole human system of cognition and action inside its "environment". That is the reason for the third subtitle: *Social Forestry as development of a local and sustainable (sylvi-)culture*.

So the summary of methodological recommendations would be, that systems have first to be studied heuristically, as wholes, with their environment, to understand how they work. That development projects have to fit better into the local socio-economic-political-cultural environment to get really functional and sustainable. Moreover, if we want to make economics a helpful tool of development, it has to change. Instead of prescribing what economical system to use, it would have to be able to determine a system adapted to the local conditions. Instead of describing battles out

of the perspective of the winners, it would have to change the perspective, as historical science did, and to be reformulated out of the perspective of the majority of normal people that are living on a subsistence base!

Introduction

Yemen, situated at the south-western corner of the Arabian Peninsula, boasted tropical vegetation some 8000 years ago. The oldest cultural centers have been created some 5000 years ago at Wadi Marha, just about the time, when the climate turned drier. Agri-Culture adapted to the increasing drought. Throughout the centuries it developed the harmonious system of terraces, runoff- and other types of irrigation. During the oil boom, up to the Gulf war, many Yemenis emigrated to the petrol-rich states. The steeper and remoter parts of the terraces were neglected and decayed. Combined with uncontrolled woodcutting that lead to increasing erosion. Due to the scarcity of land, especially of relatively flat and productive land, and the lacking care for tree regeneration, most forests have nowadays been cleared for agriculture. Moreover, the attitude of many Yemenis towards forests and trees can be summarised by the topic: "*Al ghabat ma fish faidhe*", what means: "Forests don't make sense". This attitude is grounded in the lack of water. To change it is equivalent to the creation of a new culture.

The aim of the research was, focussed on trees and forests, to understand how the natural environment is used. The objective was a qualitative description and understanding of structures and processes - not quantification. As development means improvement and reorientation, we have to deal with the problem of steering. This is especially the case with SOCIAL FORESTRY: "*Cernea argues that the profound behavioural changes to be elicited on a gigantic scale among farmers through social forestry are a shift from wood gathering to tree cultivative behaviour.*"²⁾

If our objective is the development of an adapted policy for forest development, the most important question is, what possibilities do we have to really change behaviour and manage those woodlands? And - what "science" will deliver the results needed for that purpose?

The "background", the knowledge available at the start of the study, is described in chapters (1), (4.1) and (4.2). The collection of information on natural factors, distribution and shape of a few forests and some secondary data on agriculture started 1988-1990 (4.3). The phase from 1990 to 1994 was dedicated to social forestry with the aim to detect or create social structures able to care for woodlands. For that purpose first the integral agro-sylvo-pastoral system has been described (4.4), then the social (4.5) and political (4.7) structures that might be used for controlling and steering purposes. The historical background (4.6) describes the roots of those and of the dominating agri-culture. (4.7) is a formal policy analysis, (5) summarises the potential for practical- and methodological improvement.

The Results are best summarised by Qadi Zabara's FETWAs: *The users have to take care, the government has to guide and assist in protection. There is a right and duty to limit excessive use! The scientists have to deliver the necessary information and the*

²⁾ Cernea p 302:

preachers have to inform the people (to improve the local "Weltanschauung") and to keep a watchful eye on God's creation.

With the given historical and cultural background, it is clear that religious guidelines and religious leaders as "sense-makers" (creators of meaning) would be the arrowheads of development. The technical staff would have to assume the role of "translators" in between the differing cultures - unluckily the orientation of science is as intolerant towards other ways of thinking as is religion. Still there are functions they might overtake. The transfer of knowledge should in any democracy be handled dialogically, in a two-way approach. In Yemen there is anyhow no other way, as information has to convince, to obtain acceptance and to establish consensus, if the aim is action. To plan, to act and to learn has to be done as cooperative effort of government, district administrations, extension, nurseries, local administration, LDC, awqaf and villagers.

So, this book is by no means a "self-praise", but contains substantial self-critique. While the author was quite "progressive" in what concerns participatory development, focussing his work on individuals and communities, working with traditional organisations as tribes and the Awqaf - even he himself avoided to work with the "Local Development Councils", just because they have a bad reputation. But the aim to manage the local subsistence economy does not allow to leave the "Local Administration" out of the picture.

Privatisation is no solution for the common lands. This is due to the lacking profitability of such woodlands. Privatisation is already a problem because private lands are turned into more productive farmlands. On the institutional level, large and formal governmental institutions have only very limited potential functions. The diffuse local use demands local responsibility and control, based on the principle: > COMMON USE - COMMON CARE <. What is needed is detection and reinforcement of local structures that have the right and potential to motivate local action and assuming local responsibility. Inventories and monitoring needed for steering and control will be mainly qualitative, due to the enormous costs of classical inventories. The government can only assist those processes by a very mobile extension service, regional and local nurseries - and a law that puts rights and responsibilities into the hands of the actors.

The most important theoretical insight gained by this study refers to the economically very unique local subsistence system. It was from the start a problem that promised a lot of work - but little success. Well. But as the majority of the world population, including already about a third of the people in the developed countries! - are living on subsistence base - this problem will make us busy for the major part of the coming century: How to live within a given environment, that means without growth, without overuse and destruction and, last not least, without solving distributional problems by wars.

Methodology

During and after the research process the method, based on RRA, had to be developed as well. Social forestry needs a concept of "Development Science" that goes a big step further than analysis and description. The objective to motivate action asks for a science that is not restricted to causalities, but is able to detect, analyse and interpret knowledge.

The first step of any science, before setting limits to the studied system, is to describe and understand the whole system as it is, with its connections to the environment, holistically. A proper and professional heuristic procedure is needed. It is not easy to ask the right question - especially if one guesses already that the answers won't be to ones liking. The same is true for the delimitation of systems. All decisive factors have to be included, even if they look problematic (as e.g. corruption, the lack of commitment etc.). If development projects pick out people or institutions that fit their purpose and leave out those that don't, that might work for the project - but development has to solve problems, not to bypass them. That is partly due to the scientific approach that only deals with problems it is able to solve with its very restrictive methods!

Remember - the basic problem was, that forests do not make sense. So we need a science that is able to deal with the "final" why, with meaning- and purposeful action. Qualitative Sociology helps us to develop a systematic understanding of the local lifeworld. But understanding and describing the local lifeworld is not sufficient. We want to change it and to create new cultural values. So we have to be able to find locally reasonable and meaningful arguments. Topics helps us to understand the local system of meaning, of common sense, of motives and aims: > The natives point of view <. Economics is of very limited help in forestry, because so far there is no valuable theory on subsistence or "zero-growth" economy. Nevertheless, economy has to be studied, because it dominates social organisations and, with its steering instrument "money", it even overrules moral guidance and political steering. This might work on a small scale, on the individual level, as long as the competing forces are in a balance. As the power of money (like any other power) accumulates in a very uneven manner, the balance has to be reestablished by local, national or international politics.

As much as evolution needs (bio-)diversity, cultural (yea even economical!) development needs diversity. The singular orientation of economy (>profit<) is too limiting a condition for development. The more complex systems are, the more (degrees of) freedom they need to maintain and develop themselves. That asks for a diversity of cultures, values and aims!

While economy, especially the money-markets, drive developing countries into ruin, development assistance tries carefully to avoid interventions. This is an illusion! Any approach to development is an intervention, even pure technical advice. So there is no reason and excuse not to care for local values and aims - in an understanding, positive manner. The engineer is here anyhow in a special situation, as his science is not a pure and theoretical

science, but a dialectical game between knowledge and practice. Engineering, and much more development, is not to be based on technical feasibility alone (even less on the "*force of things*"), but development has to be a fully aware and free decision - what demands participation.

Development might profit a lot from management sciences, as it is the "science" of steering human behaviour *per se*. But it has to be reformulated, as the aims of development are much more complex than those of economy. The major tools of management are the following: Planning - because always done under insecurity, has to be cyclic, and because it limits freedom - what asks for acceptance by the concerned - it has to be done in participatory ways (2.2). Leadership in Yemen, be it on the personal (3.2) or political (3.3) level, has to be consensus-oriented. The leader has to convince, he has to know the locally valuable and acceptable arguments! Operationalisation is a major problem, as it is needed, especially for evaluation. What concerns development projects it would better focus on the functional aspects than on quantitative output. The decisive criteria for sustainability are not "how many people have been trained and how many trees planted", but **"how well does this project fit into the local socio-political culture & was it possible to create new finalities"**.

Development is a process of trial and error. If it is done well, that means by PAR & PAL, it is a process of experimental action and learning (3.5). But it should not be restricted to technical learning inside systems of very restricted orientational value (3.1). Development needs some freedom for (managed) tinkering. It needs the freedom to fail. Due to complexity failures do always happen - but, even failures can be a success, if they are used to learn from them. Unluckily in most cases this does not happen, as the failure is explained away by large sets of the internal and (preferably) external causes.

The presented study allows to differentiate into two major approaches of development. The Western, based on causal science, the eastern, based on orientational knowledge (3.6). Both are lacking in grassroots participation. In the West decisions are taken by experts, the base is excluded by the power of knowledge (not to speak about economic decisions that are taken out of the power of having the possibility to do so (= \$)). Power of knowledge does not only mean that less educated people are excluded, but that knowledge systems are very narrow and splintered

The recommendable Western approach to development would be "Participatory Action Research & Learning", the Eastern approach asks for a better integration of analytical and traditional orientational knowledge.

Table of Content

1	<u>Description of the case (pre-knowledge of the system, inventory) & research design</u>	1-37
2	<u>Science-s. The Western, Causal Approach</u>	38
	2.1 Heuristics	54
	2.2 Systems Analysis and Models Morphology	59
	2.3 Quantitative (statistics) versus qualitative (understanding) research. Specific Principles at the social level, Ethnography & Topics	71
	2.4 Political Level	82
	2.5 Specific Principles at the Economic Level	90
3	<u>Orientation and Steering</u>	
3.1	The Orientation of Economics and the Orientation of Development. The Critical Factors for steering purposes	129
3.2	Management: The Steering of Economic Development	133
3.3	Steering of Development - Politics	146
	3.4 Knowledge - Action	168
	3.5 Learning	183
3.6	Orientational knowledge - the need for a science that accepts transcendental questions and answers (ethics)	196
4	<u>Results</u>	
	4.1 Physiological Factors; Climate & Soils	216
	4.2 Natural Environmental Factors: Vegetation	225
	4.3 Forests	243
	4.4 Rural Economy and Indigenous knowledge	269
	4.5 Population and Social Structures	292
	4.6 Historical and Religious Traditions and Rules	316
	4.7 Governmental Structures and Forest Policy	344
5	<u>Discussions and Conclusions</u>	378
6	<u>Bibliography</u>	
7	<u>Appendix</u>	