

7. Forest Policy and Law Proposals

7.1 Method of Analysis. The matrix for Analysis of Forestry Policies / Laws / Programmes:

A policy should be based on a analysis of all relevant informations on the political and socio-economic basis. It should take into account future changes and be gradual and adaptive. Most important for its future acceptability and implementation is, that it is established in a participative manner, taking into account not only experiences and opinions of political leaders and executive managers, but especially the opinions of the people responsible for execution in the field and, last not least, people that will be subject to restrictions and might form an opposition! While the studies should be as profound as possible - the final policy proposal should be easy understandable and concise - but clear enough, that necessary laws can be deducted from it.

- 1 Beskoek 1972
- 2 Juneidi 1980
- 3 Mekowar (incl. 5 year plan) 1986
- 4 Policy 1989 (Saadallah)
- 5 Strategy World Bank 1989
- 6 Policy World Bank 1989
- 7 Forestry Law 1991 (Saadallah)

This is a formal approach, a "school-policy" - stil it is larger and more systematic than ad hoc approach of a development agency - but still misleading - especially in cases where probably no formal institution at all is appropriate.

The following table represents a complete list of topics relevant for the formulation of a forest policy. It has been compiled following the recommendations of Maaren and Husch (FAO). Weights are attached to each topic. The weights are established as follows. First each chapter is given an importance value, Method is only considered half as important as the other two categories: "*Political and socio-economic base*" and "*Objectives*". Then each topic is given a priority between 1 and 3. Both together form the "multiplier":

0 Method	Prio- rities
0.I descriptive - analytical	1
0.II planning: static - flexible	2
0.III participative (policy formation) - 3 top-down ("ivory tower")	
0.IV language: legal - common	2

8 points / 4 categories / aver. priority 2 / importance 0.5	
Priorities (3: high, 2: middle, 1: low)!	
I Political and Socio-Economic Basics	
I.I Political Environment	3

I.II national - regional - local settings	3
I.III public opinion	3
I.IV institutional situation / development	3
I.V public participation	3
I.VI communication channels	2
I.VII land-use planning	2
I.VIII inventories	2
I.IX priorities: water, health, roads ...	3
I.X role of forestry	
I.X.I national economy	2
I.X.II local income generation	3
I.XI socio-economic settings	3
I.XII objectives: long - short term	2
I.XIII expected development	2
I.XIV monitoring	2
I.XV local expertise	2

40 points / 15 categories / aver. priority 2.7 / importance 1

II Objectives:

A Production:

II.I agroforestry	2
II.II social forestry	2
II.III establishment, delimitation of state forests (size, management)	2
II.IV management of private forests	2
II.V protection by owners	2
II.VI harvest method control / regeneration	2
II.VII Forest Industries	1

B Protection:

II.VIII Soil	3
II.IX Water	3
II.X Energy Substitution	3
II.XI Protected Areas	1
II.XII Conservation of flora and fauna	
II.XII.I biotopes	2
II.XII.II species	2

C Institution:

II.XIII government activities: coordination, stimulation, control	3
II.XIV assistance to: privates / communities	3
II.XV incentives to stimulate forestry activities	2
II.XVI Education / Training / Research	3
II.XVII Extension & Training of Decision Makers	3
II.XVIII Nurseries	2

40 points / 18 categories / aver. priority 2.2 / importance 1

Here the multiplier values for each point are calculated for each of the above mentioned proposals and compared with the maximum potential value.

Policy: 1 Cat:	2	3	4	5	6	7	max.	pot.
0.I	1.1	0.8	0.8	0.4	1.1	1.1	1.1	1.9
0.II	0	1.5	2.3	0.8	2.3	2.3	2.3	3.8
0.III	1.2	0	0	0	1.2	1.2	1.2	5.6
0.IV	3.8	0.8	0.8	2.3	2.3	2.3	1.5	3.8
I.I	0	0.6	0	0	1.8	1.8	1.8	3
I.II	1.2	0.6	1.2	0	2.4	2.4	0.6	3
I.III	0.6	0	0	0	0	1.8	1.8	3
I.IV	1.2	0.6	1.2	0.6	3	3	2.4	3
I.V	1.8	0	0	0.6	3	3	0.6	3
I.VI	0	0	0	0	1.6	1.6	0.8	2
I.VII	0.4	1.2	1.2	0	0.8	0.8	0.4	2
I.VIII	0	1.6	1.6	0.4	1.6	1.6	0.8	2
I.IX	0	0	0	0	0.6	0.6	0	3
I.X.I	0.2	0	0.2	1	1	1	1	1
I.X.II	0	0	0	0	0.6	0	0	1.5
I.XI	0	0	0.6	0.3	0.9	0.9	0	1.5
I.XII	0.4	0	0	0	1.6	1.6	0	2
I.XIII	0.4	0	0	0	1.2	1.2	0	2
I.XIV	0	0	0	0	0.4	0.4	0	2
I.XV	0	0.4	0.4	0	0.4	0.4	0	2
II.I	0	1	1	1	0.3	0.3	0	1.7
II.II	0	0	0	0	0	0	0.3	1.7
II.III	1.7	1.3	1.3	0.3	1.3	1.3	1.7	1.7
II.IV	0.7	1	1	0	1.7	1.7	0.7	1.7
II.V	0	1	1	0	0	0	0	1.7
II.VI	0	0	0	0.3	0	0	1.7	1.7
II.VII	0	0	0	0	0	0	0	0.8
II.VIII	0	1.5	1.5	1.5	2.5	2.5	2	2.5
II.IX	0	0	0	0	0	0	0	2.5
II.X	0	0	0	0	2	2	0	2.5
II.XI	0	0.5	0	0	0	0	0	0.8
II.XII.I	0	0	0	0	0	0	0	0.8
II.XII.II	0	0	0	0	0	0	0	0.8
II.XIII	0	2.5	2.5	2	2	2	2	2.5
II.XIV	0	2	2	2	2	2	0	2.5
II.XV	0	1	1	0.7	1	1	1	1.7
II.XVI	0	1.5	1.5	1	2	2.5	2.5	2.5
II.XVII	1	1.5	2	2	2	2.5	0	2.5
II.XVIII		0.3	1	1	1.3	1	1	0
	15.9	23.8	26	18.4	45.5	47.7	28	85.2

7.2 Analysis of Policy proposals and activities of international and bilateral organisations

The first proposals, made by Beskoek, are valuable up to now. His description of the situation of forests and forestry in Yemen is very clear. It includes basics as soil, vegetation,

water and agricultural economy. He was aware of the fact that the skills of the yemeni farmers are limited to agricultural production and do not extend into the field of forestry, what causes a rapid degeneration of the vegetation cover. Not all of his proposals have been elaborated upon in his policy proposal - and the proposal has never been adopted.

Especially he fails to adress communication channels, the question of inventories and monitoring, the role of the state, its relation with NGOs and privates. This not by neglect, but because his project was the first forestry project in Yemen and there were just no government structures dealing with forestry nor any private organisations. His major recommendations were:

- I.IV stablishment of te Forest Department at the Ministry of Agriculture to implement the Government's forest policy.
- II.I Establishment of windbreaks in agricultural lands to prevent wind damage and to supply wood.
- II.II Grow trees for the amelioration of the physical and climatic conditions of the country and for the general well-being of the people; especially in towns.
- II.III Delimitate forests, to conserve, protect, restore and improve the existing woodlands, maintain their boundaries, and consolidate these for protection and management purposes. Create new forests.
- II.IV Establishment of farm-woodlands on about 5% of the large farm holdings.
- II.V Provide absolute protection for afforestation areas and planted trees and unless this is not ensured, not planting any trees in the field.
- II.VIII Soil: Precaution against re-activation of sand masses stabilized by natural vegetation in coastal plains of the Tihama through missuse of land.
- II.IX Water: Selection of non-saline marshy or high water-table plains with drainage difficulties, being not suitable for agriculture, for economical block plantations. Establishment of protective afforestations in those catchment areas which cause flood damage to the inhabited areas, cultivated lands, water storage dams or irrigation schemes.
- II.XII Protect and conserve all forms of wildlife, improve their habitat and enable them to multiply. Regulation of hunting and fishing in forst and range lands. Do for communities and private persons.
- II.XIII The adoption of forestry, range, watershed management and soil conservation policy and law. Infractions of the forest law, police powers of forest service officers, judicial procedure and penalties. *"It is recommended that the forest law be enacted and put into force as soon as possible and in any case not later than the end of 1972."*
- II.XVI To provide adequate facilities for research and experimentation in forestry and for education and training of

necessary forest officials.

Experimentation to introduce quick growing tree species into productive and protective plantations, especially into irrigated or non irrigated windbreak plantings.

II.XVII Awareness raising and extension:

Initiation of forest extension work, integrating it within the framework of the agricultural extension service through a forest subject matter officer employed in this service.

Train the public in the great importance of forest, range, watershed and soil conservation, and to ensure their cooperation;

II.XVIII Nurseries: Establishment of small local forest nurseries for production of planting stock for tree planting programmes and starting the nucleus of such nurseries in the experimental farms immediately, to grow trial plants

The next approach happened only in 1979-82. The main activities were the plantations at *Ibb*, *Gumeisha* and *Assir* (Sana'a) and the production of technical handbooks. The forestry law proposed was an enormous document, 11 parts with 81 paragraphs - but a true "ivory-tower" approach, neglecting regional settings, public opinion, participation and communication channels. The bulk of the recommendations were in relation with forest delimitation, inventories (annual inventories recommended!), forest management, soil and environmental protection, education. In spite of reaching formally more points in the above classification, it was not applicable, as largely unadapted to the Yemeni situation. This was obviously clear to the forestry project as well, so Mr. Mekhwar was hired to adapt the policy. The changes in his policy were nevertheless minor. He mentioned the fact that the policy should be adapted to the local situation and socio-economic settings - but has overtaken the same structure and content of Junied.

The policy of 1989 (Saadallah) was a big step forward in conciseness and clarity, restricting itself to minor, but feasible objectives. The law of 1989 is a translation of this policy into legal terms.

The major critique towards this proposal is the total lack of participation of the target population. It concentrates fully on the central government and neglects national and regional settings. It does not even mention local execution (LAs), does not care for the public opinion and so for local acceptability. Afforestation) should be done by the government. For the management and protection of private forests (98% of Yemen!) it is useless! The delimitation of government forests has been requested since 1972! Obviously it is either not possible - or only up to a very limited extent!

The major pluspoints are, that it is understandable, takes into consideration the role of forestry for the nation (!), harvest methods, and the importance of a nursery and extension network - what has unluckily been dropped in the forestry law.

Rappenhöhner did not establish a formal forest policy, but made some valuable recommendations [Rappenhöhner (ed.): *Measures for monitoring and for combatting desertification in the Yemen A.R.* p 34]:

- I. - Utilization of the results of feasibility studies (technical, econ. and sociol. studies).
- I.VII Arable land should not be included in planning as land for the construction of buildings.
- I.XIV Establish database and monitoring authority at MoA. Survey areas affected by sand dunes and terrace destruction. Establish an international center for monitoring and combating desertification in the ESCWA region. Preliminary surveys (short term) to assess soil, land use, vegetation, and the human and livestock population. Continuous measuring (long term) of changes.

- II.VIII Governments should give priority to anti-desertification measures and establish a national desertification organisation. Maintain and rehabilitate terraces. Funds to stop desertification are needed and an encroachment policy for farmers to increase their income. Sand dune stabilisation and erosion control, e.g. by constructing gabions in wadis.
- II.IX Monitor water resources, improve water management. Construct dams to recharge aquifers.
- II.XII Legislation to protect resources (forestry, range, soil, water, wildlife) and existing vegetation is needed.
- II.XIII Establish strong environmental unit at MoA.
- II.XVI Establish environmental education unit. Train staff. Applied research in adapted land use (agroforestry, sylvo-pastoral systems, agrosylvopastoral systems.)
- II.XVII Extension by means of radio programs, films, seminars for farmers and demonstration farms. Introduction of environmental education in schools. What concerns extension and education GTZ clearly saw the problem posed by "immobile extensionists" (not being a problem of cars) and the need of more direct cooperation with the farmers: *"Many national and local technicians and administrators live and work in large towns and hate going out into the field. They should work together with the foreign experts under the same difficult field conditions."* *"Foreign and national experts should by all means cooperate with the farmers."*
- II.XVIII Construction of new nurseries

The World Bank strategy and policy reach the highest level of coverage, but under the subsumption, that World Bank is going to finance the necessary development of regional forestry structures! It's so far only paper work. The World Bank's programme:

- II.I Developing effective community and household agroforestry progress."
- II.IV A national aerial survey and development of simple plans for management of the indigenous forest; and promotion of tree planting by private landowners and LCD's.

- II.IV Supporting appropriate indigenous management methods, where possible.
- II.VIII Sand dune stabilisation in Tihama and Mareb.
- II.X Assessing, and if necessary improving the efficiency and sustainability of carbonization methods.
- II.XIII Development of the central and regional forestry organizations and its staff.
 - " In addition the Government is being urged to adopt a forestry policy which recognizes the functions of the forest and the constraints to forest development, develop legislation or reinforce tribal laws in support of the policy, and promote an active implementation program.
- II.XIV Developing an improved woody biomass database on resources and management practices.
- II.XVI Research.

General Objectives of the Third Five-Year-Plan's Forestry Development Project.

- II.III/IV To manage natural forests in a scientific and sound way and develop forests in accordance with scientific plans for exploitation of natural forests.
- II.VIII To establish projects against desertification.
- II.X To conduct studies on forest trees and actual needs for fuelwood and timber and possibilities of funding new substitute sources of energy.
- II.XIII To establish and adopt policy and legislation for forest protection and development.
 - To establish a forestry department and properly staffing it to enable exercise technical and administrative supervision over forest development activities
 - To provide the required financial appropriation.
- II.XVI To provide qualified technical and administrative forest management personal and train Yemeni staff abroad and locally.
- II.XVII To train extension staff and to develop extension and public relations and communication material.
- II.XVIII To expand and improve existing nurseries and establish new ones.

The draft environment law (1992) can't be analysed within the forestry framework. But as it contains some totally useless recommendations concerning forestry, here some comments on it as well: The language is very tortuous, in english as well as in arabic. The text has obviously been written in a foreign language (probably dutch), translated (by a bad translator) into arabic, and re-translated into english (again by a bad translator). It is again a typical "ivory tower" proposal, far from being adapted to the local conditions. Some examples concerning forestry:

XIV.III: *"Any activity participate directly or indirectly in removing of trees, palm trees & plants shall be forbidden for the purpose to prevent the same to become desert."*

XVI.I: *"Upon the Cabinet resolution or Council proposal or any other concerned party, it is allowed construction of natural protected Area in places of remarkable Environment nature, for the purpose to protect the Enviroment, Maintenance o its sources or protection of land creations."*

IXX.II: *"It is forbidden to remove or damage any tree, plant, bush, Grass from the Public forest. Save that with permission of concerned authorities."*

7.3 Critical Evaluation of Subject Matters:

In the following the major topics of a forest policy will e discussed item by item:

0.I descriptive - analytical: The first step (Beskoek) was purely descriptive. With increasing knowldege the analytical part increased and reached a maximum with the World Bank proposal. But all analysis and proposals remained on a makro-level. Information on the local situation (village, micro-level) is only available since the first management trials at Bura' and Lawz.

0.II planning: static - flexible: Since up to now no policy has been used as a work base, it was allways a kind of "first shot". A gradual aproach was imminent for most authors. The World Bank proposal mentiones explicitly a revision period of five to seven years.

0.III participative (policy formation) - top-down ("ivory tower"): All proposals have been made by foreign experts, considering more or less the political environment (1.1) and the national and regional settings (1.2). Often (2,3) the recognition of the importance of traditional methods and local regulations was purely verbal.

For a real participative approach the opponents to any policy and regulations will have to be included in the policy formation work - and that has so far never been done, while opinions and statements of opponents and the rural execution (*aqils*) are now available from the Bura' experience!

0.IV Legal versus common language: Beskoek is an excellent example of a policy written in an easily understandable fashion. Junied/Mekwar are just the opposite. The advantage of the World Bank proposals and Saadallas policy and law are their concise statements, adapted to the actual state of the policy and law development.

7.3.1 Introduction: Problems in relation to wood, forests and vegetation.

In the past, when the population was small and the "wastelands" (forest and range) large, the care-less use of those did not have much destructive potential. With the strong increase of population during the last generations, the human impact on wastelands degraded it heavily and there is an urgent need to include the former wastelands into cultural practices, as forestry and range management.

While the protection of private forests doesn't pose some larger problems, as the owners care for their trees, there is still the problem of regeneration. Due to the grazing pressure all spineless species as *Dobera* and *Grewia* are disappearing. "Survival of the fittest" lets *Ziziphus* and *Balanites* replace them. Some 'negative selection' happened with species that produce good wood, straight stems / and-or need good soils and water. Due to overuse the first, due to competition with agriculture the second have disappeared.

The two major problems of projects in this field are a) the lack of land and water, b) the lack of traditional care, of an established culture in those fields. Forestry, as care for trees is (with few exceptions in agroforestry - an innovative idea and this is the origin of the main problem: the difficulty to raise interest and to motivate participation.

7.3.1.1 Water (II.IX)

Water is the dominant (natural) factor, influencing strongly the present socio-cultural structures and their potential development!

In spite of the fact that drought is shaping culture since over 5000 years, the lack of water has been neglected in all policy proposals and projects (-except as natural factor in the species trials). Foresters like to squabble around the problem of water needs for afforestations, while it is the major problem of forestry in Yemen, and here happened the major failures. The author himself got almost crucified and excommunicated as during a training course in Switzerland he brought up the problem of forests needing water instead of producing it. While the procedure is common to all dry countries (as Australia/ & California e.g.): vegetation is carefully removed to increase runoff! Yemen is dry, rain is scarce and unreliable, a drought can happen any 3 (one season) to 10 (two seasons) years. A forestry policy should take care of that and trees should not be planted in areas where they compete with human and agricultural water use. They should be planted where water is spoiled, as at roadsides, wastewater pools, borders of irrigation channels and ditches. Species selection is often neglecting that and species get selected that are too water demanding (amenity, parks) or too competitive (*Prosopis!*). Dryland shrubs and trees are more often than not thorny - but trees planted for recreation should invoke the picture of paradise, "the spineless lotus". To avoid failures

as with the Eucalypts at Ibb, producing some 0.04m³/ha/y, irrigation will be needed. That again leads to a double problem:

a) Irrigated land is double valuable, as valuable land and scarce water is joined. That was probably the main problem of the Harraz project. The condition of the locals for participation was, that water is provided for the village and irrigation for the abandoned terraces. Irrigated terraces can produce highly estimated and highly productive fruits (or qat). No wonder that tree production was no success.

b) Irrigation systems are expensive and are often abandoned when the finances from the project are no longer available.

That happened at Gumeisha, Dar Hymiar and other places. The actual approach of the forestry project, using the improvement of the village water supply as incentive (Khokha, Al Makhraf) without installing expensive irrigation systems looks more promising.

7.3.1.2 Erosion (II.VIII Soil)

In the mountainous areas of Yemen, erosion is part of the traditional runoff irrigation system. The major remedy is the maintenance of terraces. Those are not easily replaced by tree plantations for two reasons. The first one is the socio-economic one: valuable land, as experience by the Harraz project (s. up). The second one is natural. With less than 200 mm of rainfall per year in most parts of Yemen, east and north of Ibb-Taiz, trees can only be grown in wet ecological niches (wadis, ditches) and/or with a very low density. Those 150 (roughly) trees per ha, with a height of 3m won't be sufficient to stop erosion.

The arid areas (as Tihama and the Eastern Regions) are very sensitive to wind erosion. Any clearing of vegetation should be substituted by plantations of shelterbelts, windshelters of diffuse plantations of preferably local species. (Especially *Prosopis juliflora* & *P. chilensis* should not be used close to agricultural areas, while *Prosopis cineraria* (coastal area of Shabwa province!) is a very recommendable agroforestry species. The removal of trees for conversion into agriculture or for commercial purposes should be principally forbidden in those areas. Traditional use by intercropping was much less destructive. Where natural woodlands are cleared for agricultural purposes, trees and shrubs have to be restituted in the form of agroforestry.

7.3.1.3 Wood use - wood production

Yemen's population has already reached a critical size in relation to productive areas and especially in relation to the available water. The vegetation is strongly degrading due to human influence. Especially the forests are disappearing. The most important forest remnants are at Jebel Bura, Mahra, Socotra and different small juniper stands in the Highlands. Many tree species, especially those that produce high quality wood, have disappeared already or are very close to that. Woodcutters work

for a very low income (YR 20 per bunch), barely sufficient to buy food. Afforestation activities in Yemen, on the other hand, are expensive. This is due to the fact that a large part of the male population works abroad (before the Gulf crisis, increasingly again since 1993) for comparatively high salaries. Food-for-Work actions would have been possible 1991 and 1992, now (1993) the costs for a labor day are again at YR 250-300 (UN exchange rate actually at YR25/US\$). With the increasingly difficult economic situation after the civil war in 1994 this type of activities might again be possible and the destructive effect of woodcutting on the environment could be changed to a positive one with limited costs.

Trees and range do not form part of culture. They are "given by Allah" for free use (s. up) Range is not managed, there is no protection, rotation or improvement. Livestock is often grazing unguarded. Forest and range management can't be based on historical (or administrative) concepts! Not in one of the studied fairy tales there is the slightest positive aspect or romanticism that might be helpful as a base for forest protection. Forests are wastelands, wilderness, and the clearing of forests is rewarded by ownership over the cleared ("revived") land. The "mahjour" system, historical nature reserves for Gods, after islamisation serving as fodder reserves for wartime, nowadays are rather "no-man's-land", often because of ownership troubles.

Quran and sharia do not however dismiss man from all responsibility. Trees, as a creation of God in favour of mankind and under man's submission, have been created in diversity, but balanced and in equality. Man has to take care for that established order and man, in contradiction to erroneous western prejudices even a Muslim!) is responsible for his actions.

Historically, since Gilgamesh, only fruit trees and trees for gardens and parks have been taken care of in the whole area from Turkey to Central Asia. The need for care for the natural environment has to be explained, given a value/motive and made meaningful - for what we can't rely on economy alone!

7.3.1.4 Items of a standard policy that are of no importance in Yemen due to specific circumstances

I.VII Land-Use Planning

Land use planning in Yemen has been recommended several times, but is just not feasible. The delimitation and planning for state owned land, only covering 2% of the country, has been recommended by Beskoek in 1972 already. Nothing could be done so far (s. 2.3)! There is no land register. To deal with ownership problems on the village level this is the duty of the *mamoon*. He has the land register in his memory ... [, what can cause troubles if his memory fails. This was exactly what happened to the project in the case of the Wadi Bussal afforestation at Bura'. Agreements of all the surrounding villages have been got, as well the agreement of Beni Baqi on which land the plot is. When the work started, several men claimed private property. The *aqil* (and so we as well) had to give in, and only then we learned that he suffers from arteriosclerosis.]

I.VIII: Inventories and I.XIV: Monitoring

The importance (and feasibility) of inventories has constantly been overestimated by Junied, Mekowar (who even recommended annual inventories!), World Bank and FAO. Due to the highly variable (and difficult) environmental conditions, the inventories are either of very low statistical precision - or need an enormous effort in time and money! Moreover is the main harvest process done by women who collect their daily needs in fuelwood in a quite unplanned and uncontrollable manner. The inventory can so only serve monitoring - not planning purposes! Moreover: If nobody cares to plant forest trees, there is no need for an inventory! Inventories and monitoring should so far only be done in zones where real management trials will be done, as they are of very high importance for protection (s. II.VI, II.VII, II.XIII), as Bura' (done), Sokotra, Mahra and Jebel Iraf.

II.VII Forest Industries

A real forest or wood industry does not exist in Yemen, only small scale carpentries. The Harraz studies showed that even if timber for construction and furniture is available locally, imported wood is still cheaper, due to lack of proper tools for harvest, transport and sawing. With the import of tropical wood, some YR 500 million/y! from Malaysia, Yemen does not only increase its deficit in foreign currency, but takes as well part in the destruction of tropical forests elsewhere.

7.3.2 The political and socio-economic base

I.I The Political Environment & I.II national - regional - local settings

Governmental Structures are often artificial, as they are based on foreign recommendations and models. They are overstaffed, bloated, and considered as rent-distributing organisations - but they do not fulfill much of a function. Two thirds of the staff does not have any clear idea about their duty. Moreover they are uncoordinated (s. water policy), each one striving for its proper survival - not for leadership in social, cultural and economic development. The maximum output that can be expected from them at present is reactive, that means if a request is forwarded to them they might produce a decree.

This inefficiency is enhanced by the constant 'provisionality' of the governmental institutions. It's in a constant flow, due to unification, elections, restructuring, war, lack of money ... Due to the geographically and socially splintered settlements, the rural villages and tribes are very "remote" from government services. As high as the self estimate of the central(istic) go-

vernment at Sana'a is, as low is its recognition in the rural areas. Dialogue with the rural areas is very limited and here is an other reason for the lack of participation from the part of villages and tribes.

In spite of the fact that this was known to all the authors, all of them put the emphasis of their recommendations on the adoption of a policy and law, to be implemented by the government.

I.III Public opinion and acceptance

Forestry is not really of public concern, as its economic role is minor. While private forests are well guarded, the protective role of trees is important and known (agroforestry), on public land the regeneration is "*in the hands of Allah*". For this reason most policy and law proposals contain the need for awareness raising campaigns and strengthening the extension service (s. 2.17). Some local interest in the protection of village forests that recently developed (s. 2.5 / 2.6) is putting the question of potential assistance in the foreground (s. 2.4).

I.IV Institutional Situation and Development

When Beskoek started his work as advisor, there was no institution in forestry. Forestry was correlated with agricultural research and the SURDP (Southern Uplands Rural Development Project until 1980, when the Forest Directorate was created. But even in the mid eighties the Harraz Project claimed a lack of assistance from the forestry service (2 people that time). This problem has been taken up 1988 by the Forestry Development Project (FAO), concentrating on institution building (after 2 years of "Fuelwood" activities - 1986-1988 - without success) The General Directorate of Forest and Range exists so, but still as large problems with:

- staff: lack of continuity and efficiency.
- budget: lack of funds and sustainability!
- lacking strategy, operational working plans, office management
 - in general: Lacking analytical and planning capacities
 - a blame that might easily be returned to the development agencies!

The formulation of the 4th phase of the forestry project, having taken place in spring 1993, proofed in a way (surely without any intention), that the state doesn't have any potential to care for the enormous extent of forest land in the country. For the period of 1993 to 1996 only the continuation of management studies and implementation at Jebel Bura' have been put into the programme! Requests from the side of Milhan, Reima, Mahra and others have been put aside, due to financial reasons. What type of assistance can be expected from the state, on a "sustainable base", without foreign assistance?

The main executive agents on the spot (besides the *aqils*) might be the former "Local Cooperation Councils" ("Local Defence Councils in the South), now "Local Administration"! Unluckily it is not very active since the unification due to restructuring!

(s. 1.1). Its major activity was anyhow the tree planting day (a week actually)! It doesn't have much effect in rural areas.

I.V public participation

Comments on that matter would locally sound like: "*The government does not give us nothing, why should we care for their wishes (and orders).*" (Comp. I.III). So far most "participation" (village forests, village nurseries, policy formation) has been payed for, either directly or by incentives as pumps, pipes and the like. A more promising approach for the future might be through the involvement of the Local Administration. But even those have in most cases to pay for participation.

I.VI Communication Channels

As so far there where no real existing and active structures in forestry, the communication channels have not been taken into consideration (s. I.II & I.XV). There is an enormous and so far unbridged gap between communication topics and stiles of the internationally assisted governmental institutions on the one side - and the rural, tribal areas on the other. Thinking at the project level is formal, technical-administrative. Thinking at the executive, the field level is practical-political. It is based on a socio-psychological-cultural truth - shaped the local environment, by local historical experience. Unluckily this local truth substantiates the argument: "Forests and trees do not make sense" (*El ghabat ma fish faidhe*).

Foreign assistance tries to bring in new technologies, new methods, new ways of thinking, new awareness, new values. To be able to do that to some extent, it has first to understand and to respect the local culture with its different mind set. The development of such a new culture has to be based on dialogue, on consultation. It can't be done by formal institutionalisation of an alien administration issuing obligations. Arguments have to be found that are locally valuable and powerful - that can convince. The existing models of extension lack not only mobility, they lack contacts with the (poor) farmers, they lack arguments and messages that are acceptable for those strata. In the communication between the government and the village there is a bottleneck, because basically there is only the *aqil* available as local "orator", as "translator" and as "sense-maker". But his traditional role is rather that of a peace-maker and guide ('wise man' is the meaning or the arabic word!). If he has to play the role of the "policeman" for the government as well - then his authority suffers.

I.IX Priorities

Very few policy makers cared for the low priority of forestry in Yemen (compare 1.3). In most cases when some discussions on

afforestations are tackled, the request for 'fruit trees' is immediately at hands. Environmental degradation, biodiversity, erosion and the like are topics of foreign agencies, but they are not really important in the mind of the local farmers. The best example is the Harraz project, that studied local public opinion and priorities before the project started, that knew exactly that the chance for an "anti-erosion and forestry project" were minimal - but still started the project, because **they** knew the importance of erosion for the country. The project failed drastically - but the question is still not answered: Should an important project only be started when the local understanding & acceptance is there? Can (or has) this needed local acceptance be created by awareness raising and extension? Can foreign assistance create a new understanding, leading to the reformulation of priorities.

I.X role of forestry - I.X.I National Economy

Yemen annually imports wood, mainly from South-East Asia for about YR (millions) 230 (1980), 350 (1983, WB), 570 (1991). This puts an additional stress on the annual budget deficit (50% of the budget)! But the appreciation of those costs in foreign currency is very low, especially at the local level. The import reportedly led to a replacement of trees (*Cordia*) by agricultural crops (coffee), as the dozen of coffee bushes produce (money) much faster and regular than a tree!

I.X.II Local economy and Income Generation (seedlings s. II.XVIII)

The local woodlands are quite important for the supplies of fuelwood and as a kind of "unemployment insurance". The fact that their use is free, there is no control of harvest, so far not even of commercial harvest and wood trade, has a significantly negative impact on the vegetation cover.

While large scale afforestations, for productive forestry, do not have much chance in Yemen, in certain niches trees might still be produced economically, They have the advantage to produce without much maintenance, but, unluckily, they need a heavy input during the establishment, especially the protection against animals. The economic output comes close to that of (not irrigated) sorghum , but needs a much longer turnaround period, 8-20 years at least!

I.XI socio-economic settings

The main economic activity in Yemen is the subsistence oriented sorghum production with runoff irrigation. Cash crops are mainly qat, coffee, vegetables, fruits and honey. Livestock serves as a kind of "saving account" for special expences.

Tribesmen are - generally speaking - equal, but social strata do exist. Tribal leadership means guidance based on consent, not

on coercion. Tribal leaders are up to now often recruited, at least in the north, from the traditional religious leadership strata of the Seyids.

Accumulation of wealth (meaning power) is hindered by the obligation for generosity. Surplus income is destroyed or better: redistributed or bartered for prestige in the qat sessions (*potlach*). With emigration and salaried work surplus money was created - but the capitalistic, entrepreneurial spirit is lacking (besides the industrial potential). What concerns investment in trees, this is largely considered as a waste of land and water ("*el shegerat akul el erd*": Trees eat the land). Unproductive trees (as fuelwood and fodder), unlike qat and incense, are considered a "common good". At least inside the larger family it is almost impossible to demand money, if a family member needs wood for house construction e.g.

Assistance to tree plantation on farms suffers is heavily biased towards "assisting the rich": Rich people do have more land and it is easier for them to spare some for tree plantation [E. Hooper]. This bias is reinforced by extension that preferably works with pioneers and early adopters, that means again with the rich. So the technically most promising approaches might enhance the old development dilemma that "the rich get richer and the poor get poorer".

I.XII Objectives: Long - Short Term

Most policy proposals are partial and limited, as their objectives are equal to the (short term) project objectives: research, afforestation, institution building, inventories and monitoring.

World Bank has the strongest outlook to future development, but as said above: they can pay for the development they propose (s. 2.13). Forestry projects need long term perspectives, as they won't produce some quick profit. This makes them vulnerable to the success expectations. Instead of reporting project successes and project problems and failures, the expectations of the donors create an optimistic bias. That does not mean that one has to be pessimistic. But leaving problems out of the reports does not solve them and makes an objective evaluation of such projects difficult. Reports, to be useful, would have to be complete in what concerns both aspects, positive and negative. They would have to be honest!

I.XV local expertise (➤ see with education, training: II.XVI)

There is little expertise (tradition) in forestry so far. The bulk of people with some experience are now at the central GD, some at the forestry research station at Al Kod. The cooperation between those and the regional offices needs still a lot of improvement!

Existing regional models as at Houf and on Socotra might be useful. So far they worked, because the impact was not really destructive, due to a very low population density and the absence of towns in those areas. Unluckily this situation is changing rapidly, at Mahra due to camel herders, on Socotra due to new fishermen-settlements on the coast.

The policy recommendations won't be developed and repeated here in the proposed "academic form". As described above and in the following chapter, formalised thinking is too restrictive under conditions as those of Yemen. The recommendations make up the next chapter.