

City Planning and Urban Agriculture in Dar es Salaam

Ch 1 From MasterPlan to Sustainable Cities Programme

1.1 Traditional Planning in Dar es Salaam

Traditionally planning in Tanzanian cities was done so called Master Plans, which were drawn for Dar es Salaam in 1948 (residential area's were set according to needs of the three social groups Europeans, Asians and Africans), 1968 and the last one in 1979, developed by a Canadian consultancy. These plans gave projections on future growth of the urban area. They provide a well planned zoning of land use and include a detailed proposal for services and infrastructural development. These plans failed because they were very comprehensive in nature, but result in idealistic but unaffordable infrastructure and social services development proposals. Also they had insufficient participatory mechanism to involve the population in plan and establish a sense of ownership. The administration of Dar es Salaam had no money to execute the Masterplan, nor to update it. Between 1980 and 2000 Dar experienced an almost total lack of infrastructure investment, and the concurrent collapse of city planning and management practices. The rapid urbanisation of the city overstretched the existing urban infrastructure. In 2002 more than 70 % of the cities population live in about 42 unplanned settlements, lacking essential environmental services. Only 5 % of residents of Dar es Salaam are connected to a sewage system

1.2 The Sustainable Cities Programme (SCP), an historic overview

In the eighties development practitioners all over the world faced the challenge to keep cities both economically and environmentally sustainable. The UN Habitat, UNDP and the WorldBank started an urban management programme, which in 1990 resulted in the Sustainable Cities Programme. Its goal was to provide municipal authorities and their partners in the public and private sectors with improved environmental planning and management capacity. The Sustainable Dar es Salaam Project was the first under this global programme and started in 1992.

1.2.1 A start outside the Dar city Council (DCC)

SCP was aimed at the central administration of Dar (DCC), which consisted of 9 departments among which a planning department. Typically SCP started on the initiative of the Ministry of Lands, Housing and Urban Development. This MinLHUD was responsible planning in Tanzania, but executed also vital functions for Dar es Salaam itself, eg surveying and compensating of land (the exact relation between the DCC and MinLHUD is outside this research).

SCP first established a general work group, who came up with an Environmental Profile in which the main planning issues of Dar were defined. This work group was headed until 1995 by a technical man from Habitat. In the work group representatives of the MinLHUD were strongly represented. The selection of the people of this work group had caused "some debate" within DCC. Typical was that the work group initially convened in the Twiga hotel (room 301) and only in 1993 was housed in the Old Boma building (corner Sokoine and Morogoro street), which was part of the housing of the Dar central administration. Also than it remained independent of the central administrative organisation of Dar. This general work group initiated work

groups on nine planning issues, among which UA. The work group on UA was co-ordinated by some one from the MinLUDH.

Habitat financed SCP intill 1997. In that year she demanded that the programme would be embedded in both DCC but also in the wider Tanzanian society. SCP was replicated to eight other Tanzanian cities by roughly the same work group who also had carried SCP in Dar. They were baptised Urban Authority Support Unit (AUSU) and held office in the central administrative building of Dar untill the end of the programme in 2003.

After 1997 much attention was given to institutionalising the experience of SCP on a national level. This resulted in a National Human Settlement Development Policy document (2000), which gave ample attention to UA. This document gave a broad policy framework for planning in Tanzania and was under the responsibility of the MinLHUD.

1.2.2 EPM within the Dar City Council

In 1997 a start was made with the incorporation of the EPM method in the DCC. A so called EPM office was created within the urban planning department, which was responsible for co-ordinating pilots initiated by the nine work groups. The urban planning department was responsible for designing the Strategic Urban Development Plan, that was to replace the Masterplan of 1979. In this SUDP a strategy for al nine planning issues was formulated.

This process was stopped by the replacement in 1996 of the DCC by a so called “commission” by the central government of Tanzania. It was composed of representatives of the ministeries and of retired officers, with the aim to execute emergency measures. This commission had to come up with quick results and had no priority for the democratic and time consuming EPM process. However several important planning measures were taken, like setting up of one way traffic, parking fees, a central bus terminal to stop anarchic parking of busses and collection of urban waste. Part of these measures already resulted from the earlier EPM proces.

Only during 1998 the urban planning department succeeding in informing the commission on the EPM proces. It was put on the agenda again which resulted in strengthening of the above measures and in new measures, like planting of trees in the city center and some measures in the field of urban agriculture. Eg the Mbutu pilot received new impetus by establishing a city based ngo in the village, aimed to assist farmers in the diversification of their economy.

In 1998 the Urban Planning department also restarted the establishment of a SUDP. In 2000 this project received support from the democratically chosen city council. Because since the start of SUDP in 1996 circumstances had changed an inventory had to be made of what was accomplished since than on the nine issues. A work group was set up composed of representatives of DCC, the ministeries and the AUSU. They convened for ten days. One of the conclusions wast that urban agriculture had received insufficient attention and the question was posed who would inform the committee on UA; in other words who was responsible for UA. It was observed that the Minagrc was responsible for the general policies, while they also employed the extension service. They even bypassed the DCC when executing projects in Dar es Salaam. A letter was written to the director of the civil service of DCC about this problem. Eventually the chapter on UA was written for SUDP, but it contained little

news. Some suggestions were made to strengthen UA (eg reserving land for UA), but the general conclusion was not promising.

The work group urban agriculture convened until dec 1995 and stopped functioning or was ad hoc. The SCP programme still existed and was in theory the main responsible for the UA programme of GTZ. SCP was represented by some one from the DCC, but in practice the coordinator of the GTZ programme was some one from the Min of Agriculture. In meetings with GTZ the question was asked who is the driver in respect to Urban Agriculture in Dar es Salaam. A conclusion was that the organisation for improving UA (extension, research stations, etc.) is present but that despite this responsibility for UA is not clear.

1.2.3 Decentralisation

EPM and the municipalities

In 2000 the administration of Dar was decentralised by the establishment of municipalities. The DCC remained responsible for those interests, which went above municipality level. DCC existed of three departments, 1 Urban planning, Environment & Utilities (including EPM), 2 Planning & co-ordination and 3 administration and finance.

The implementation of the EPM proces got a hugh stimulis in the year 2000 by the establishment of three municipalities called Temeke, Ilala and Kinondoni. They became independant administrative units, with a major, a committee of chosen councillors, own sources of revenue and an independant administrative staff.

A department of agriculture as set up, which employed the extension service and which took over the management of the city gardens. Yearly plans were made for the expenses of the different departments, plans which were prepared by the planning department and eventually approved by the chosen councillors of Temeke.

An environmental profile was made, an EPM office was set up as well as thematic work group, responsible for pilots and their replication. The planning department had the possibility to come up with land use plans for local pilots. Despite this EPM was not alive in 2003. Pilots existed in UA but these were managed by the department of agriculture and were of bureaucratic nature. Planning of land use was probably done on eg roads, but the no clear initiatives were set up on UA (eg open spaces). The weak organisatin of UA and their weak political power was the determining factor.

1.2.4 Strategic Urban Development Plan (SUDP)

as last phase of EPM

EPM consists of the following phases:

- a) preparation of an Environmental Profile of Dar and prioritization of environmental issues.

A city consultation of specialists and city representatives agreed on nine issues which needed immediate attention: 1 solid waste management; 2 upgrading unserviced settlements; 3 servicing city expansion; 4 managing liquid waste and surface water; 5 managing air quality and urban transportation; **6 managing open spaces, recreational area's, green belts and urban agriculture**; 7 integrating petty trade; 8 coordinating city centre renewal and 9 managing coastal resources.

- b) Definition of action plans by mini consultations of stakeholders. Pilots were to be initiated to test the formulated strategies.
- c) Implementation of Action Plans.
- d) Preparation of Strategic Urban Development Plan (SUDP), which is the final output of the SCP. The first one was published in 2001. The SUDP provides the framework that is to be used by the three municipalities of Dar to further elaborate local planning.

The SUDP contains two essential elements. Firstly it creates a information system that can be accessed by central and municipal governments for policy making. It contains maps showing different land uses and potential area's for city expansion. (see below ch ?) Secondly the SUDP shows the pilots and strategies formulated on each of the nine issues, amongst which UA.

1.2.5 Urban Agriculture in SUDP

In SUDP Chapter 6 titled Open Spaces & Urban Agriculture is written that UA is not being adequately supported by the local authorities and the Ministry of Agriculture. A proper institutional setting among actors is lacking. It is unclear which institution is vested with responsibility of ensuring proper development of UA. UA is under the Municipalities and receives support from other interested stakeholders. However UA is not allocated adequate budget:

- No credit facilities to stimulate its development
- No marketing strategies
- No area's permanently designated for UA

SUDP proposes a change in policy. A so called "mixed" land use strategy for Urban Agriculture should be followed. This means that in planning the future growth of Dar es Salaam Urban Agriculture should be "kept in mind". Proposed general strategies for Urban Agriculture are:

- *Open spaces in high density area's should also be maintained
 - *In peri urban area's (especially where new plots are to be surveyed) bigger plots of 3 to 4 acres should be allocated for UA (crop growing and livestock keeping)
- But the chapter continues: "Open Spaces have continued to disappear from our neighbourhoods at an alarming rate, through invasion, legal and illegal subdivision, change of use and allocation. Open Spaces are not being surveyed (numbered and named) and are thus left without any identity. The Action Plan of SUDP states: there is need for an immediate action to stop the disappearance of open spaces. At ward level an inventory should be made of open spaces and then handled to the ward and mtaa leaders. They must develop a policy as was done in the wards of Mwananyamala and Makurumula.

On support of the market chain SUDP states:

- *Open spaces should be used to grow vegetables and fruits, according to strategies implemented in high density localities of Buguruni, Vingunguti, and the peri urban area of Mbutu. Intercropping, terracing and composting should be practiced.
- *retain livestock with improved food supply in Manzese, buguruni, Vingungutti, Temeke, etc.
- *review the development of the city gardens, who should supply seeds of vegetables and trees and conduct training for farmers. STOAS as model.

*regulate livestock keeping to reduce negative effects of manure, conflicts with city travel and establish a clean system of slaughtering and meat supply of the city. Plans should be discussed with ward development cie, farmer groups and developed with the aid of department of agriculture of the municipality; min of agriculture and donors.

2 Decentralisation in Dar es Salaam Temeke municipality

2.1 General

Temeke is situated in the South of Dar es Salaam and is its poorest municipality; Ilala is the centre of Dar, where all major services are established; Kinondoni in the North consists of a rich region where the elite lives (near the beach) and a poor region. Up till 2000 these were so called “zones” with limited bureaucratic capacity. In 2000 Temeke got an administrative center, where the departments of agriculture, health, education, coöperatives are situated, as well as a planning department, which is responsible for finances, preparing yearly plans and also for the EPM process. The municipal administration is headed by a director.

Temeke is divided in 24 wards, while every ward consist of mtaa's, villages and sub villages. The ward is headed by a ward executive officer (WEO), who is assisted by departmental officers, like an extension officer. Villages are headed by a headman, which is a traditional position.

The municipality is also a political unit. All 24 wards elect a councillor in the Temeke council which consists of 28 seats, together with 4 representatives from civil society groups (eg coöperatives). The council is headed by a major, who is the political representative of Temeke. Temeke nominates 3 MP's for the national parliament of Tanzania.

Temeke has its own sources of income, based upon taxation of inhabitants (property tax, abattoirs, parking fees, etc.). Temeke also receives money from the national treasury, either directly or via different ministries. Temeke also receives money from foreign donors. In 2002 they got money from Unicef for a children's programme; from Wateraid for the digging of wells to combat drought and from the South Korean embassy for a mushroom project (market study and demonstration house at Glezaulole city garden).

2.2. Planning in Temeke municipality

Since 2000 Temeke municipality draws yearly plans, which are mainly yearly budgets for the different departments and wards, but may also contain land use plans (unfortunately I did not go into this). Planning starts at the level of the ward, where information is assembled on the condition of schools, hospitals, coöperatives and roads. This results in a proposed budgets for the coming year by a committee of ward extension officers, villages leaders and civil society groups, under responsibility of the WEO.

These 24 plans are combined by the Planning Department of Temeke in a proposition, and discussed in the Cie of Economy, Health and Education, where all heads of departments are represented. They come up with a proposition which is discussed by the financial Cie, in which the major of Temeke, several councillors and the heads of all departments (agriculture, education, cooperatives) are represented. They make a

final proposal, which is presented to the full Cie of 28 councillors. They usually only make minor amendments.

The budget for the department of agriculture is presented and defended by its head of department. It is however of limited scale (less than education and hospitals), despite the professed importance of urban agriculture, because of the high unemployment rate of youths.

In 2002 the department proposed five plans for 2003 while finally only two projects (for mushroom cultivation and improving cashew nut processing) were accepted. Projects for processing weed, livestock development and introduction of animal traction in rice cultivation (river valleys) were turned down. It must be noted that the department wanted to propose a project on horticulture (urban agriculture), but eventually did not submit one because it could not find sufficient local groups to execute the project. Funding for the two projects comes from the ministry of agriculture, which was guided by the National Agricultural Sector Plan, and is strongly influenced by foreign donors like the WorldBank. Prominent are support for commercial and export oriented agriculture.

The head of department tried to influence councillors to increase the budget for agriculture, but his lobbying is limited by the fact that Temeke is mostly an urban region. Only 8 out of 24 wards are peri urban and have an agricultural majority. Another reason of importance is the fact that UA is poorly organised. Producers hardly form groups and do not approach the councillor of the ward. Producers at most have a relation with the extension service, but this is not a strong one.

In 2002 in Temeke seven agricultural projects were funded, by the municipality or in cooperation with donors. They are: cashew nut processing; an agricultural training center (with KOICA); paddy production; agriculture development fund; artificial insemination; livestock development fund and Heifer Project International.

2.2.1 EPM in Temeke

In 2000 the EPM process was initiated at the level of Temeke municipality. An Environmental Profile was set up, as well as an EPM office. The EPM coordinator was not present during my stay (he followed a course on the university UCLA) and civil servants did not properly understand the principle of EPM. Some thought that work groups would harm or take over their position. Resistance is not deep rooted. The municipality also has a land surveyor and a land valuer who can initiate planning of land. This can be followed by convening stakeholders, which has to be done by the EPM office.

A work group on Urban Agriculture was set up but did not function anymore in 2003. The department of agriculture has difficulty to keep up the legacy of the GTZ programme in respect to group support. In 2001 the UVPP groups were officially handed over to the department, but it lacks the money to keep up the relation. In fact the relation with the GTZ groups is weakening and many groups fell apart. Telling is that the department was unable to find sufficient groups for its horticulture programme. In the peri urban area the primary societies for cashew nuts also fall apart. Pilots like on mushroom rooms are promising. In practice the planning process in Temeke is controlled by civil servants and politicians.

Ch 3 Workgroep Open Spaces, Hazardous Lands & Urban Agriculture

3.1 Land Use and Market Chain: separate developments

EPM resulted in defining Urban Agriculture as one of the nine planning issues in Dar es Salaam. In 1994 a work group started under the name: Open Spaces, Hazardous Lands and Urban Agriculture. A study of the agricultural sector in Dar revealed the potential of peri urban and inner urban area's. Specific crops and regions (irrigation valleys and open spaces), were identified in cooperation with extension officers, university specialists and civil groups like Coop Farms. This information was compared with the MasterPlan of 1979, that earmarked land for agriculture and city expansion. It was noted that while UA made important contributions to the socio economic development of Dar it needs extensive area's of quality land. There was a stiff competition on land between UA and city expansion. It was suggested to document conflicts regarding the use of land.

After a short period two sub work groups developed. One simply titled Urban Agriculture supported the market chain with the help of foreign organisations like NRI from England (1994 to 1995), STOAS from the Netherlands (1996 to 1997) and GTZ from Germany (1996 tot 2001). The second group titled Open spaces and Hazardous Lands dealt with land use, and the competition between agriculture and other land uses (mainly City Expansion).

Already on 22-2-1995 the sub work group Urban Agriculture observed the need to co-ordinate with the work group Open Spaces and it was decided that representatives were exchanged. It was seen as necessary to hold a mini consultation with stakeholders on the two land use issues, to come to consensus on land use for either UA or City Expansion. In 1995 a work shop was held for this purpose. Eventually maps with competing land uses were developed. Later these maps were used for the preparation of the SUDP. There maps were overlaid, together with inputs from pilots and strategies and relevant inputs from the utilities.

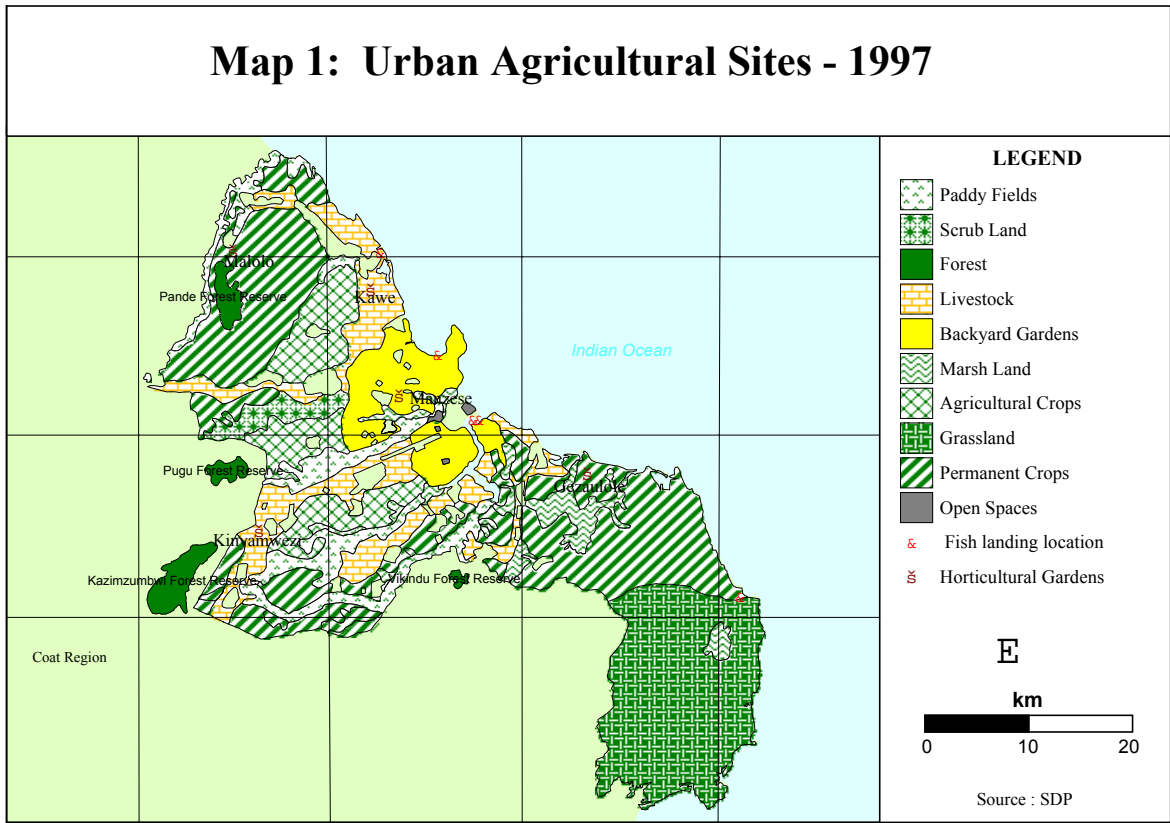
3.2 City Expansion

and the struggle for land in Dar es Salaam

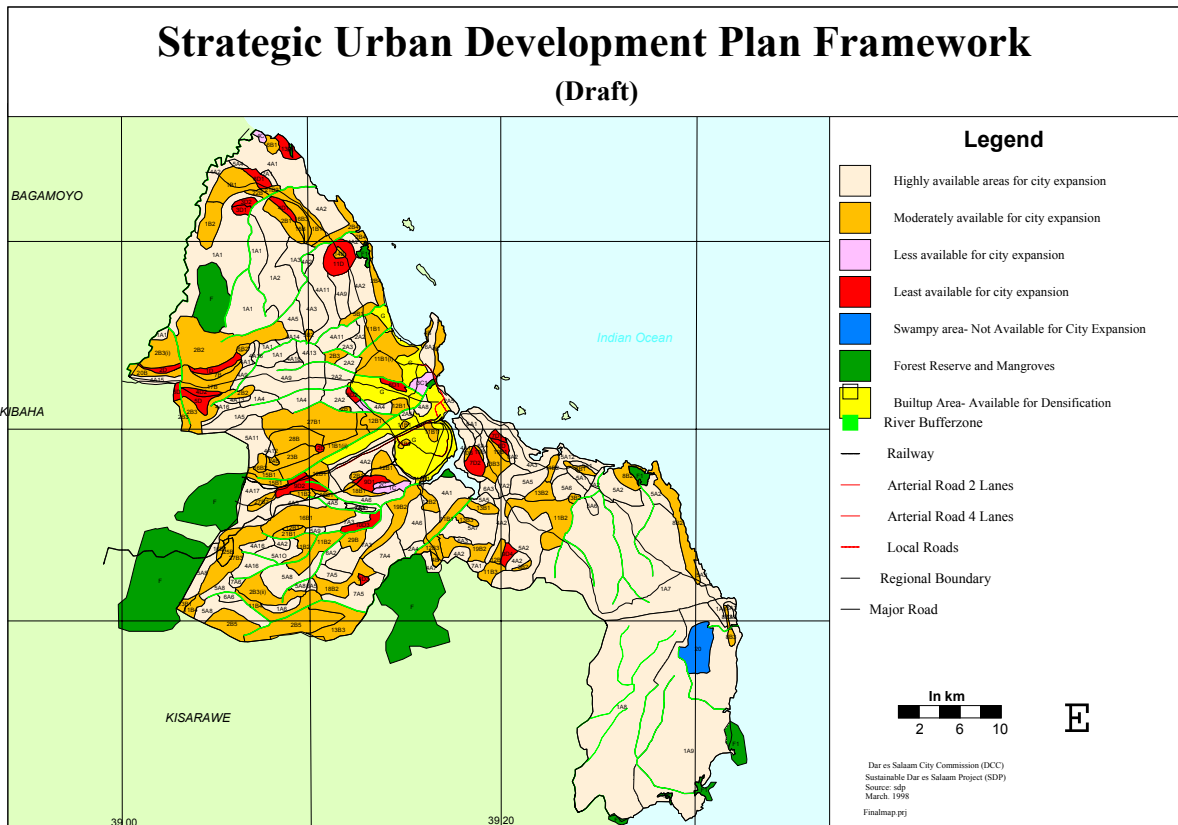
Dar es Salaam is one of the fastest growing cities in Sub Sahara Africa, population increasing at 7 – 10% per annum. Population in 2002 is between 2.5 and 3 million people which is 29 % of Tanzanias population. The development of the city follows the (five) arterial (main) roads, resulting in radial land development pattern. It created a finger like land development pattern emerging from the better serviced old planned residential area's. This pattern has created least developed and poorly serviced area's between the arterial roads. Development activities have concentrated in better infrastructure serviced area's.

In the SUDP 2002 determination of land suitable for City Expansion depends upon: conflicting land use like agriculture, minerals and industry; the availability of infrastructure and services. To determine the suitability of land for city expansion, overlays of different competing land uses is done together with natural suitability (hazards) . This resulted in categorisation in 7 zones: from highly to least available for city expansion. An attempt was also made to prepare a land use map for the city. Efforts were made to designate some area's of the city for special land uses, such as industries, transport and communication. *Untill now the system has been unable to supply adequate building land, and has not been able to plan land use.*

Map 1: Urban Agricultural Sites - 1997



Strategic Urban Development Plan Framework (Draft)



MAP 2: DAR ES SALAAM STRATEGIC URBAN DEVELOPMENT FRAMEWORK

3.3 Surveying of Land

In the past the MinLHUD was responsible for planning of land use, including surveying and compensation measures. After 2000 this task was taken over by the municipalities, although the MinLHUD remained a controlling function. Despite the decentralisation the capacity in planning land use remained low. An article in the Tanzanian newspaper the Guardian of 23 may 2003 states: "Corruption is rampant in the land sector in Tanzania because land allocation does not cope with the high demand. The situation has been exacerbated by delays in land surveying, bureaucracy and lack of transparency in land transactions. Getting planned land was a major problem in Dar es Salaam because of the high demand. For instance while between 1990 and 2001 the city authorities received 243.473 applications for planned plots, only 8209 were surveyed and allocated. The annual demand over the period was over 20.000 plots, while the annual supply has been under 700, leaving nearly 97 percent of the recorded demand unallocated. In coming years annually about 40.000 plots are required for construction while only 684 plots a year are planned and supplied, meeting only 2 % of the land demand. The shortage of planned land has led households to get lands from the informal sector, which is estimated to account for at least 19.000 plots a year. This has led to an excessive growth of unplanned area's, where over 70 % of Dar's population is living.

Some strata were succesfull in securing rights on land. In the past mostly civil servants and businessman registered leased or bought land to speculate on a future rise in the value of land. This land was registerd at the municipal office. When land users have titles (lease or buying), compensation is paid in case of expropriation. Compensation is under the responsibility of the municipal land valor, an official of the municipality. Formal compensation rates exist for trees (different species, young and old) and value of land (including improvements in land). All levels of the administration (village chiefs, ward executive officers) are involved in judging the amount of compensation. Eventually their advice is presented to the Ministry of Lands, Housing & Urban Development, who has to endorse the advice. This compensation is fair and does in practice not lead to conflicts. Nowadays registration of bought or leased land does not happen anymore, because the government refuses to pay compensation for land that is formally her property. Formally all land belongs to the government. It is also not profitable anymore to buy land because the land prices are higher than the compensation amounts. In theory land for Urban Agriculture is qualified as area in transition, but this means that it is used for Urban Agriculture, untill a final destination comes up. Also specialists from the universities in theory underline the importance of Urban Agriculture, but in practice treat it as a transitional activity.

3.4 Open Spaces in Dar es Salaam

Dar es Salaam counts round 236 *open spaces* covering 650 ha produce vegetables. About 4000 farmers are engaged in full time vegetable production. In total there are 7700 farmers in Temeke municipality, 12.000 in Ilala and 15.000 in Kinondoni. Full time employment in the urban area's is found mostly in open spaces. This open space gardening is mostly a male activity, which is also commercial. In Temeke Open spaces count 191 hectares and are located along rivers, railway lines and roads. Products are the so called leavy products like amaranthe.

My research shows that urban producers have weak rights on Open Spaces. With an extension officer of Temeke municipality I visited the Avia group, who was active in the GTZ programme (in fact it was pilot of GTZ in Mtoni or miborani ward). Avia hired an open space from a school. Upon our arrival it turned out that the school had already taken back the land, while Avia had not yet found new land. So Avia did not practice urban agriculture. The extension service was not informed of this, nor did they play a role in this process. Because of a funeral we could not meet the group.

About hundred vegetable growers used an open space of several hectares of land belonging to an Islamic institution, situated in Miborani ward, Temeke municipality. About twenty farmers were organised in two groups.

The Mvega group (ten members) was set up around 1999 on the initiative of the GTZ programme and received support on technical matters, water use, marketing and land rights. The members of Mvega relied on cultivation of fresh vegetables and had not made long term investments in land. Production was individual. After the ending of the GTZ programme in 2001 the contacts with the extension service were weak; in fact they were not visited once in 2003. The main function of the group in 2003 was to contact Temeke municipality in order to obtain help to find new land. The Islamic institution had made it clear that the hire of it land was temporary and that no temporary arrangements were allowed. Recently signs were clearer that the land will be used for other purposes. Already GTZ indicated that the growers should start looking for other land. Recently the Mvega group had written a letter to the Municipal director of Temeke to ask assistance in acquiring land. Also the extension service was informed to assist. No results were available until now.

The second group was formed recently but several members had participated in the GTZ programme. The group was formed to get assistance from Temeke municipality to acquire new land. Neither of the two groups had any contact with the councillors of their ward. In fact they did not know his name.

A fourth group was situated in Ilala municipality, on an open space along Ali Mwinyi road. They were a group of eight vegetable growers and about 20 sellers. The growers hired land from an individual already since the eighties, cultivating the usual fresh vegetables with a short growing cycle; no long term investments are made in the land. They were not formally registered and had no name, nor any contact with the extension service, nor the administration. They did not know the councillor of their ward. However they were on the cover of a book funded by the Worldbank (on transport & bicycles). Recently they were told to move by the owner who wanted to use the land for houses. They had no idea at all what to do in future.

A fifth group called Mnungne Szasa had its plot in Kinondone municipality along Old Bagamoyo Road. They consisted of ten individual nursery owners, who sold fruit, wood and ornamental trees. The chairman used to work for a state nursery and developed his own nursery knowledge. Contacts with the extension service were absent. The group was formed on demand of the municipality to formalise a claim on assistance in transport and access to new land, in case they had to move from the present plot. There was no contact with the councillor who was unknown. Many other nursery owners were organised in groups of ten, but there was no relation between these groups. It was “every one for himself” according to the nursery owner.

Most open spaces belong to schools, institutions or privates. Urban producers often only have a spoken agreement for use of the plot, provided they leave the plot if the owner wants to use it. Open spaces are not registered and producers have no rights in case of expropriation. Rents are small or even absent. Producers are stipulated not to make investments in the land (eg in trees), in order not to make their stay permanent. The administration (the extension service) does not regulate the Open Spaces and does not allocate land. The experience of the Mvega group shows that some contacts with the municipality exist on allocation of land. Lobby for land was not given a prominent place in the GTZ programme.

The eviction of urban agriculturalists is common practice in Dar es Salaam. Strangely enough this happens without visible protests. No organisation defends the rights of producers on land and producers leave without protest. No newspaper articles appear on removal of producers from their land. This is a visible sign of the weak organisation of UA and their short term orientation (monthly products, sold fresh and unprocessed).

Ch 4 The sub work Group on Urban Agriculture And the relation with NRI, STOAS and GTZ

The (sub)work group Urban Agriculture convened from 26 June 1994 to December 1995. It started with 12 people, chaired by someone from the Sustainable Cities Programme, but who initially came from the MinLHUD. Also the secretary was from SCP, but the interim secretary was from the MinLHUD. Others were from the University of Dar es Salaam; the regional agricultural & livestock development officer; city veterinary officer; Association of Farmers and pastoralists, etc.

4.1 Natural Resources Institute (NRI) & Mbutu

The work group started by drawing an Action Plan, consisting of the following activities:

On 11 July 1994 about ten areas were selected for agricultural pilots, among which Mbutu for peri urban area, to be supported by the National Resources Institute (NRI). On 30-11 a briefing was given on Mbutu by the extension officer. The project will assist small farmers to increase productivity and income through promotion of vegetables and fruits production. Most farmers cultivate vegetables (esp. tomatoes); fruit trees are not familiar due to the belief that it takes a longer period to enjoy the fruits. Income of farmers was low, due to a collision of produce from Mbutu and different parts of Tanzania (Iringa and Morogoro), during the market periods. The growing season depends entirely on rainy seasons and when the vegetables are ripe the collision floods the market. As a result the selling price is lower than the cost price. The project aims to promote fruit production and help the farmer dodge the market collision period.

Activities are:

- 1 provision of seeds and seedlings by establishing nurseries. The farmer will choose the type of fruit trees and the extension service will try to reduce the growing period from 5 – 6 to 2 – 3 years. Nurseries are established for ten farmers to facilitate communal care and later each farmer establishes lots of at least ¼ acre.
- 2 irrigation facilities are established by digging 5 shallow wells. The wells will facilitate raising the nurseries and provide water for irrigation, to produce fruits and vegetables throughout the year.
- 3 encourage the use of compost and manure, via demonstration plots
- 4 provide extension services to introduce modern techniques in horticulture
- 5 research will be carried out on different types of fruits to be introduced after consultation with Sokoine University of Agriculture and Morogoro Agricultural Development Office. New types are already introduced in other places, despite the response of farmers is not encouraging due to the fact that most of them hesitate to grow new crops due to uncertainty of market aspects. A persistent problem in Mbutu was how the farmers could get loans for inputs eg seeds, machinery.

The UVPP coordinator stated that the village Mbutu was selected, because it was famous in Dar es Salaam for its tomatoes; also fruit trees were grown. Tomatoes were rainfed, which caused a collision of the market after harvest and low prices. A second problem was lack of alternative crops outside the rainy season. NRI tried to diversify its economy by introduction of grafted seedlings (of mango's) and by introducing or improvement of fruity vegetables (ochra). It was decided to dig water holes to enable irrigation. Four deep wells were dug, with ten households managing one well.

According to the UVPP coordinator the project suffered from the reigning gift culture, the top down culture which existed at that time in Tanzania. The project was not successful. Eg in 2003 the wells were not in use anymore for irrigation.

Beside the peri urban region NRI was also active in the high density urban area's where they supported home gardening in pilots in the wards of Buguruni and Vingungutti. Support was given by distributing seeds of familiar vegetables and seedlings of fruit trees. New products were introduced, like swiss chard, tomatoes, chinese cabbage, but this proved difficult. Attention was given to composting and use of manure and cultivating in containers. Also wells were dug for irrigation. NRI concluded that Buguruni and Vingungutti wards were congested and houses are unplanned, so that land is scarce. Landlords were reluctant to consent use of their land. Water is scarce and often polluted. People are reluctant to use animal manure as advocated by the project and the majority are unaware of the use of compost.

On 13-12-95 it was noted that *NRI* was leaving, while the Dutch government (via STOAS) and GTZ were interested. The conclusion was that NRI had laid down the ground work to facilitate further actions.

4.2 STOAS and the city garden of Glezaulole

In 1996 the Dutch STOAS started supporting urban Agriculture in Dar. They fell under the responsibility of the SCP and their work group on Urban Agriculture. In the Steering Committee were represented in the following order: the national income generation programme (NIGP), STOAS, Ministry of Agriculture, SDP/ City Council, growers, etc. The work group appears to have had a strong influence on the programme of STOAS. On 2-10-94 a meeting was held on the rehabilitation of Dar City Horticultural Gardens. These gardens were established in the seventies with support from eg Sweden and Germany to distribute seedlings and act as demonstration farms. Surpluses were sold on the market. After some years these gardens were handed to the Minagric and Dar City Council. Funds were from the ministry, but channelled through the DCC. Due to difficulties in releasing funds from the DCC gardens began to deteriorate and were invaded by people. On 27-9-1995 the work group made a proposal to revive the city gardens. Vegetables and tree seedlings can still be produced; the garden should be fenced; a water system should be installed. An important proposal was that they should operate as autonomous financial units and open their own account.

STOAS started to revitalise the 5 city gardens of Dar, which were all in a state of decay. Glezaulole garden in Temeke zone was in a relatively good state. This garden than fell under the authority of the DCC and the Minagric. STOAS started by creating permanent housing for the extension officers and invested in irrigation to enable year round cultivation and provision of seedlings. The gardens became financially independent by the set up of a revolving fund, controlled by the extension officers.

In 2003 the garden falls under Temeke municipality and has to propose a budget for running costs and investments. Temeke first has to approve the budget and transfer money. This is very clear in the non allocation of money for the pump which broke down weeks ago but is not repaired yet. The city garden is costing money for Temeke municipality.

The garden is managed by two extension officers (EO), who hire between ten and 25 labourers. According to the EO the garden is functioning well in comparison with

other garden mainly because of investments made in irrigation. In fact the other gardens are in decay in 2003. Glezaulele already had a pump in 1996 but STOAS invested in water tanks to strengthen irrigation and so provide seedlings all year round (seed is bought from original growing area's). STOAS did not introduce new trees, but only increased the amount of trees offered to neighbouring farmers. Also demonstrations were organised eg on pruning trees and proper growing of vegetables (spacing, disease treatment, composting). No effort was made to introduce irrigation with farmers. According to the EO they are too poor to make investments. The garden is visited by farmers (3 a day) but strangely enough not by groups related to the ward extension officers.

However in 2002/3 the garden is introducing new products, in cooperation with the EO's of Temeke. Experiments are done on mushroom cultivation with the assistance of the South Korean embassy, who did a study on growing conditions and the market (esp. hotels). A stone house was built on the garden for the purpose of experiments. This project was taken over by the horticulture EO of Temeke (who appeared to work with four UA groups, as I was told later).

Also experiments are done with rosella and vanilla. The latter gives a pod, that can be processed into chocolate. Vanilla is a climber that lives on other trees and it is shadow tree. Because of the drought of 2003 the plants did not look flourishing (later I was told by an employee of the Dutch consultancy FACET that a Belgian ngo experimented with the crop around Lake Victoria. The prices are high, but the problem is that processing is a delicate matter: mistakes ruin the quality of the end product)

4.3 GTZ, Urban Vegetable Promotion Project (UVPP)

On 9-11-94 a representative of the German GTZ introduced their Urban Vegetable Promotion Project in the work group on Urban Agriculture. This UVPP started in 1993 in Arusha. In 1996 GTZ contacted the Minagric and Temeke zone to discuss possibilities for a start of the project in the urban area of Dar; the peri urban area was not considered. GTZ drew lessons from the NRI programme and initially refrained from introducing new products and irrigation by wells, but started with improving existing production. A clear focus was on supporting production of vegetables in home gardens and open spaces. UVPP started implementing pilots in Manzese & Mtoni wards in May 1997.

UVPP was formally under the responsibility of the SCP, but after 1995 their work group Urban Agriculture did not function regularly any more. Typical is that the coordinator of UVPP was from the Minagric. In 2000 the daily staff consisted of a coordinator representing the Minagric, municipal extension officers and GTZ staff. The latter still played an advisory role, but had reduced their input. End of 2001 it was recommended in an evaluation to coordinate the extension services of the three municipalities, to continue collaboration with municipal coordinator for SCP and to request the MinAgriculture to include UA into an agricultural strategy document. It was stated that: *A problem is that there is no single administrative unit which automatically qualifies best for coordinating support to UA.* Promotion of UA requires an open platform where different stakeholders can join.

4.3.1 Strengthening the Extension Service

UVPP aimed to strengthen the extension service which in 1996 fell under the Minagric. According to an evaluation the Minagric and the extension service were top down and hierarchical. To improve this the WorldBank funded in the nineties the National Agricultural Extension Programme (NAEP), to introduce the Training & Visit system. According to the evaluation success was debatable because farmer interaction was not emphasized and the impact of the extension service remained limited. However the Temeke extension officers I talked to had a more positive view of NAEP. They were trained to organise farmers in groups, who could define their problems. Than specialists of Sokoine University had to come up with solutions. Groups were formed around products or sectors (cassave, maize, livestock) and problems were mostly technical (soil fertility, diseases, low yields of harvest or weight of cattle). The programme did not go into marketing, because the surplus was too small to be marketed. Farmers mentioned the need for credit, but the only cooperatives (around cashew nuts) were too weak to act as distribution centers. The ward EO started a demonstration garden for the proposed innovations. Important was that the EO's were supplied with means of transport, a motor cycle for every Ward EO and a bike for every village EO (every ward counts 3 to 4 villages with in total 3 to 4000 farmers).

In 2001 the three municipalities of Dar counted about 200 extension workers, about half of them in urban wards. UVPP trained 71 municipal extension workers who trained 116 producer groups (2000 persons) in 2000 and ultimately 135 groups in 2001. As explained these groups were formally handed over in 2001 to the departments of agriculture of the three municipalities.

UVPP explored the best way to develop from the traditional Training & Visit system to participatory extension. All extension officers were trained in technical and organisational skills. They started with profiles of wards to document availability of land, past extension activities and availability of public services. Farmers were organised in groups who received leadership courses, while these groups were facilitated to analyse their problems and look for possible alternatives. A plan of action was agreed upon and implementation of activities was undertaken jointly between extension officers and farmers. Groups received an intensive nine month training. Technical interventions centred on organic farming (supply of tree seedlings), importance of clean irrigation water, organic fertilisation and integrated pest management. It was observed that ngo's are weak and had limited impact. Further training to farmer groups was offered at two city gardens and at Manzese demonstrations farm on seed bed preparation and transplanting. Cooperation existed with AVRDC (Arusha) concerning seed trials on amaranthus and okra.

4.3.2 Supporting market chain

According to a Temeke extension officer who participated in UVPP a pilot was started in Mtoni ward. Farmers were organised in general groups who dealt with vegetables and fruits. Group capacity was strengthened by leadership courses, and eventually groups registered themselves. Sometimes basic principles of bookkeeping were taught. Farmer groups especially developed around open spaces and in river valleys, were also the prominent farmers lived who cultivated a maximum of 1 ha of land.

EO's started with an appraisal of the area, including a map of the area. Support was technical (tree growing, supply of seedlings, etc); importance of use of clean irrigation water; soil fertility (free distribution of chicken manure) and disease treatment. Excursions were organised to the demonstration farm in Manzese ward, where GTZ started the second pilot.

Both were high density area's, but Manzese had more water available, while more small business people were living there. Group formation went slower than in Mtoni ward, because people were more individualistic and had different occupations. Nevertheless innovations were more easily accepted. In both wards groups were established, their capacity strengthened, which ultimately ended in registration. In Mtoni the Avia group was active, which I tried to visit.

According to the coordinator GTZ learned from the NRI experience and did not start with product innovation but with improvement in cultivation of already existing products. Later new products were introduced in cooperation with the demonstration farm (AVRDC) from Arusha (the seed region of Tanzania) that experimented with vegetable growing. These were repeated on the demonstration farm in Manzese. New varieties of tomato, cow pea and cabbage were introduced, but this was hampered by market, climatic and product conditions. Dar has a tropic, warm climate, in contrast to higher regions which are more suitable for products like cabbage. The vegetable market of Dar is seasonally flooded with products from higher regions in Dar, which causes slump prices. Product innovation in peri urban area's concerned ochra and tomato.

Mostly products were ready in three weeks, which gave UA a very short term outlook. Cabbage could be introduced because outer leaves can be harvested on short term. In contrast ochra is ripe only after 3 months.

Disease treatment by organic methods went well for home plots, because it needs immediate presence of producers, but not so well for more distant commercial plots at open spaces and river valleys. There chemicals remain in use.

GTZ introduced irrigation techniques like watering cans and simple drip irrigation from a bottle. More complex systems (using plastic pipes modelled after Arusha) failed because parcels were too small and pipes were too expensive in Dar.

Efforts to introduce processing of products in cooperation with a small scale processing organisation failed because of the limited surplus of products available. Also fresh is the outstanding market advantage of vegetables in Dar.

Group selling of products failed because of limited available surplus. Efforts to supply a hotel by groups failed because of this.

Price information is difficult to provide because units of quantity and quality are absent. Eg amaranthe is sold per bundle, which vary in weight and quality.

5 Ch V Urban Agriculture Groups on Open Spaces

5.1 Mvega group

On a piece of land near a beer brewery about hundred farmers practice vegetable cultivation. The land is property of an Islamic institution, which demands no rent from the producers, but they are obliged to leave the land as soon as the institution demands so. No long term investments (eg in trees) are allowed. In fact the institution indicated that it wants to use its land somewhere in the near future. Water is taken from a canal which divides the parcel. Water is also taken from a beer brewery which borders the parcel. The open space is located at Miborani ward.

There are two groups, with each ten members. The Mvega group is the oldest one. The chairman already cultivated in the eighties, when production was individual. Around 1999 a team of Germans and local extension officers visited the parcel to introduce the UVPP programme. They started by establishing groups, like Mvega, who had to define their priorities. I did not ask whether other groups were formed, but the present two groups of in total twenty members in relation to the hundred growers indicates a low level of organisation.

Priorities were:

1 access to land. Already at that time use of land seems to have been uncertain. GTZ suggested to look for alternative land, but the city administration only offered land situated far away. Recently Mvega wrote a letter to the director of Temeke municipality asking assistance in acquiring land. This letter is also distributed to the department of agriculture and the individual extension officers. Although the municipality does not control land, they may have information on suitable land available. They welcomed my suggestion to get into contact with the councillor of the ward, but they did not know who he was and how to come into contact.

2 access to water. Small dams are constructed in the canal, but in the dry season the amount of water is not always sufficient. Water of the nearby beer brewery can be used, but its quality is sufficient although mediocre. GTZ advised to dig a shallow well, but this advice was not followed for reasons which are not clear. Obviously it contradicts with the agreement with the land owner, but may be also relations of cooperation between producers were not strong enough. One has thought about a hand pump and tubes (70.000 and 30.000 Tsh) but for unclear reasons this did not materialise.

3 Disease are a problem and a wider crop rotation is one of the solutions, but is unclear how far this solution is followed and what are effects.

4 Prices of the cultivated fresh leafy vegetables are under pressure, because they were supposed to be cultivated also in the peri urban border areas of Dar (which contradicts with the claim in literature that 90 % of leafy vegetables are produced within Dar center), while tomatoes and cabbage encounter heavy competition from Morogoro and Iringwa regions.

The group has ten members, is established in 2002 as a credit group, in which members pool money in order to buy seed (in cans) and manure on a larger scale. Recently the group registered at Temeke municipality, because they want support in finding new land, but nothing is concrete in this. They also formed a group in order to get credit from the municipality, but Temeke does not provide credit at all.

Some members of the group participated in the GTZ programme. The German team visited the land and undertook some actions. On request of the vegetable growers a meeting was held with the municipality to address the problem of cattle keepers who destroyed vegetables. This meeting was fruitful.

The chairman of the group followed a course on Agriculture & Environment in Kijema (outside of Dar) on technical aspects of vegetable growing (crop rotation, etc.). It was suggested that GTZ introduced new products, but on further request no hard evidence was given of this. It was difficult to mention differences between participants of the GTZ programme and the others. One claimed to have followed a course on marketing, but this was denied later in the conversation. The message was to increase the amount of buyers in order to get the best price. The marketing of products had changed since the beginning when neighbouring households were the main buyers. Now an important part of the harvest is sold to middlemen, who sell on small and big markets of Dar. The producers claimed to have contacted these traders themselves.

5.2 Nursery Old Bagamoyo Road

Established three years ago by a former employee of a state nursery. He works with two nephews. Situated along a busy road, with a canal (or drainage system) running along side the road, providing sufficient water all year round.

He started with selling fruit trees (oranges, etc.), raised from seedlings bought at a state nursery (buying price 300 Tsh, selling price 500 Tsh). Later he cultivated the trees himself, from seed bought on the market. Recently he sells wood trees, which he buys from a nursery at Lushoto (the growing area), 3000 seedlings a time. Buying price is 100 Tsh; transport costs 100 Tsh (so 300.000 Tsh a time), while selling price is 1500 Tsh. Lately the demand for these trees is very high, because of a government project which stimulates planting of trees also by households. The third type of trees are ornamental, which he grows himself in a year and sells for 3000 Tsh. On the day of visit (15.30 hours) he had sold 3 ornamental trees, 150 wood trees and 100 fruit trees.

His nursery is not specialised, like most of the many private nurseries in Dar. Important is the quality of the trees offered, which you can judge with the eye. Also quality of growing advice (where, etc.) is important. Some nurseries only sell ornamental trees, but their market power is unclear. State nurseries are competitors, although they are not flexible. They sell a limited amount of species, for a price which is relatively high.

The owner forms a group called Mnunge Szasa, with nine other neighbouring nursery owners. Because he has the most experience he assists the others with raising trees. They registered at Kinondone municipality (and min of home affairs ?) to ensure support when the government needs their place for other purposes (esp road improvement). They have a yearly contract that is prolonged. The administration guarantees a new plot, when they have to move, and supplies a truck for transport. The administration ordered them to register in groups of ten, to facilitate administration. Registration was not done by the owner, probably because he cannot read or write. Along Old Bagamoyo Road many groups are active, but there is no tendency to cooperate: 'it is everyone for himself' according to the owner. There is no contact with the councillor of the ward.

5.3 Vegetable growers along Ali Mwinyi Road

A group of about 30 people live off the revenues of one hectare of land, situated along a very busy road, where many cars stop to buy fresh vegetables. The land is used from an individual who lately claimed the land. So the group has to move and has no idea where to go to. The group is not registered and has no name

The group uses this land from the end of the eighties, although membership changed. Eight producers cultivate the land and are the stable element of the group (the longest member cultivates from 1990). Every producer has 3 or 4 sellers linked to him, who sell the vegetables along the road. The vegetables are received on credit and revenues are divided after the sale. The producer wants many sellers to guarantee sale of his products, but the amount of sellers is limited by the surplus of the producer. It is not clear if sellers have alternative activities.

The group uses a water tap, situated on the land. This enables an very intensive use of the land. Their monthly water bill amounts to 200.000 Tsh, which is collected and paid by one of the producers. This intensive land use guarantees the highest revenue per unit of land and eg trees are no alternative. Investments in a parcel of amaranthe of 80 m² (rough estimate) were 600 Tsh of seed and 1500 Tsh of manure (for 3 bags). Figures of revenues are not available. Book keeping is absent.

Seed is bought from a trader who visits the producers. He is a modest man, who buys at the market or from wholesalers.

The land is used for growing around ten types of so called leavy vegetables, with Amaranthe as the most familiar. These products are sold fresh, that is on the day of the harvest. This is the advantage in comparison with producers in peri urban area's. The disadvantage is that every urban cultivator produces the same leavy products. Some specialisation exists between the dry and the rainy season, when cabbage is cultivated. Specialisation is limited, which is a disadvantage.

Leavy vegetables have a growing cycle of three weeks and soon after harvest the land is sown again. To fertilise the land chicken manure is bought from the many chicken farmers in Dar. This intensive land use causes diseases in all products. Some crop rotation is practised to limit diseases, but this is insufficient. Chemicals are used to treat diseases, and are applied with simple hand sprays. Amounts of chemicals and also manure are developed by practical experience. No contacts with the extension service exist.