

Sociogeographical Situation Analysis of Resource Management for Al-Mawasit district/Yemen

“Q'at-based farming system case”



Inaugural-Dissertation for the degree of Doctor in
Natural Sciences / Department of Earth Sciences
Freie Universitaet Berlin

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Berlin, July 2004

بِسْمِ اللّٰهِ الرَّحْمٰنِ الرَّحِیْمِ
{ وَجَعَلْنَا مِنْ الْمَآءِ كُلِّ
{ شَيْءٍ حَيٍّ }

صدق الله العظيم

**‘In the Name of Allah,
Most Gracious,
Most Merciful’**

**"We made from water every
living thing"**

Acknowledgement

Praise and thanks must be given first to Allah who has provided me with health, patience, courage, and knowledge to complete this study.

I would like to express sincere gratitude to Professor Dr. Fred Scholz, my major professor, for his guidance, his kind understanding, assistance, and advice during phases of my study and in the evaluation and finding thesis to the end.

I wish to express sincere appreciation to Prof. Dr. Horst Kopp, Universitaet Erlangen for his effort on reviewing and evaluation of my thesis. Also I wish to express sincere appreciation to the members of the thesis committee; Dr. Detlef Molermann for his help and advice in the preparation of this study in Germany and in Yemen during his the only visit, and Prof. Dr. Peter Ergenzinger, in Germany in his suggestion in the first preparation of this study. My best gratitude to Dr. Engel, the cartographer in the department for his time and effort to produce the finals maps for my study. I also give great thank to Emila Adam the secretary of my Supervisor for her time and effort to overcome of many administrative work. Also my great thank to my colleague G. Rappold for his help in translating during searching accommodation and health insurance and in accompanying me during our PhDs field works. Also my great thank to all of colleagues in the department who help me and not mentioned his name.

In Yemen I wish to express sincere appreciation to my local supervisor Professor Dr. A. M. Bamatraf for his support advice from the beginning of my study and review and correct all my manuscript to bring it into the light.

I would like to thank all the people in all of study villages for their help, patience and information. Also to all friends in IDAS project specially (former Team leader Dr. Martin Carnap, Dr. Abdulkrim Thabit, Dr. Abdulgabar Al-Kirshi) for their support and facilitate administrations related work; also my appreciation to Samir Habib in GTZ Sana'a.

My deepest gratitude goes to my entire family in Yemen for their support and patience.

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Zusammenfassung

Die Problemlage stellt sich wie folgt dar: begrenzte erneuerbare natürliche Ressourcen (Land und Wasser), zunehmendes Bevölkerungswachstum, Migration und schließlich fortdauernde nicht-nachhaltige Nutzung der natürlichen Ressourcen aufgrund der derzeit angewandten landwirtschaftlichen Nutzung (Ausdehnung des Q'at-Anbaus und seine Konsequenzen, nämlich unregelmäßiger Einsatz von Agrochemikalien und unregelmäßiges Brunnen graben). Um diese Probleme zu bewerten, wurde ein Untersuchungsgebiet ausgewählt, welches den südlichen Teil des Taiz Governorates einnimmt, eine Fläche von 1400 km² breitet sich südlich des Saber Berges bis nach A-Turbah aus und von Ar-Rahiha im Osten bis Najd an Nashamah im Westen. Das Untersuchungsgebiet wurde in 3 Ebenen unterteilt, die regionale Ebene (deckt das gesamte Untersuchungsgebiet ab), die subregionale Ebene (beinhaltet 25 Dörfer) und die sub-subregionale Ebene (drei detaillierte Dorfstudien).

Für die Datensammlung wurden die Methoden Kartierung, qualitative und quantitative Befragungen kombiniert und eine wirtschaftliche Analyse der Q'at-Produktion unter den verschiedenen existierenden Bedingungen durchgeführt. Für diese Studie wurden in der Zeit zwischen 1997 und 1998 in dem Dorf Addawm sechs Bauern zufällig ausgewählt. 1997 und 1998 wurde auch eine wirtschaftliche Studie der Sorghum-Produktion auf zwei Feldern in dem Dorf Al-Ma'amirah durchgeführt.

Die Ergebnisse zeigten, dass begrenzte Landressourcen und - als Resultat des Bevölkerungswachstums - ihr kontinuierlicher Rückgang pro Kopf die Abwanderung in die großen Städte und/oder benachbarte Ölstaaten begünstigte. Einerseits beeinträchtigt dies wiederum die landwirtschaftliche Produktion durch weniger Arbeitseinsatz auf den Feldern wegen Arbeitskräfteknappheit und durch das Vernachlässigen traditioneller landwirtschaftlicher Praktiken wie Fruchtwechsel und Anbauzeiten. Außerdem führte die Migration zu einer zunehmenden Arbeitsbelastung der Frauen innerhalb der Landwirtschaft, wobei die Frauen nicht vollständig in der Lage sind, alle Fannarbeiten auszuführen.

Andererseits wurde der Q'at-Anbau seit Mitte der 1970er Jahre schrittweise ausgeweitet, wegen seines hohen Einkommens pro Flächeneinheit und er benötigt nicht den, gleichen Arbeitseinsatz wie der Anbau von Nahrungsmitteln. Der drastische Anstieg von Q'at-Konsumenten bestärkt die Q'at-Bauern, ihren Anbau auszuweiten, um den steigenden Bedarf der lokalen Märkte zu befriedigen. Weil die Gesetze nicht durchgesetzt werden, der Einsatz von Agrochemikalien auf Q'at-Kulturen nicht reguliert wird, werden die Q'at-Bauern ermutigt, Agrochemikalien intensiv und sorglos einzusetzen, und zwar nicht nur zum Pflanzenschutz sondern auch zur Verbesserung des Blattwachstums und zur Produktivitätssteigerung. Es wurde herausgefunden, dass es keinen Mindestzeitraum zwischen dem letzten Pestizideinsatz und der Ernte gab, noch dass der Toxizitätseffekt für die menschliche Gesundheit und andere Umweltschädigungen berücksichtigt wurden.

Es wurde außerdem herausgefunden, dass die Q'at-Bauern zufällig und intensiv Brunnen für die Bewässerung graben. Dieses unregelmäßige Brunnenbohren und die Mißachtung der Wassergesetze verursachten Schwächen im Wassermanagement und das Austrocknen natürlicher Brunnen, ein Resultat des Verlustes des traditionellen Wasserrechtssystems, welches alten Wasserrechtsdokumenten entnommen werden konnte. Die Ergebnisse zeigten, dass Einkommen aus dem Q'at-Anbau VIEL höher waren als die aus Sorghum-Anbau, bei dem die intensive Bewässerungspraxis rationalisiert wurde, um Q'at zu bewässern, sogar wenn der Wasserpreis hoch ist und das Wasser aus anderen Gebieten heran transportiert werden muss. Q'at braucht zusätzliches Bewässerungswasser zusätzlich zum tatsächlichen Niederschlag, weil es zumeist im Winter geerntet wird, wenn der Q'at-Anbau völlig von Bewässerung abhängig ist. Dementsprechend sind die Preise für Q'at zu dieser Jahreszeit dann auch am höchsten.

ABSTRACT

The problems are limiting renewable natural resources (land and water), increasing population growth, migration and finally persisting unsustainable use of natural resources due to current agricultural practices (Q'at expansion and its consequences of random use of agrochemicals and random digging wells). To assess these problems, a specific area was selected, comprising southern part of Taiz Governorate covering 1,400 square kilometers from south of Saber Mountain to At-Turbah and from Ar-Rahidah in the east to Najd an-Nashamah in the west. The study area was divided into three levels, regional level (covers all the study area), sub-regional level (covers 25 villages) and sub-sub-regional level (covers three detailed study villages).

The tools used for data collection combined mapping, qualitative and quantitative questionnaires, and economical analyses for Q'at production under different existing conditions. For this study 6 farmers were randomly selected in Addawm village during 1997 and 1998. An economical study on sorghum production was also carried out in two fields in Al-Ma'amirah village in 1997 as well as in 1998.

Result indicated that limited of land resources and its continuous decrease per capita as a result of population growth had encouraged migration to major cities and/or to neighbouring oil countries. Which in turn affect in one hand reduction of farm production resulting from short of effort on farmland due to shortage of labor and abandoned of traditional agricultural practices such as crop rotation and crop calendar. In addition migration has led to increase the duty of women on agriculture, in which women not completely able to perform the over all farming works. In other hand, Q'at has been expanded gradually since mid of 1970 due to its high income per unit area and it does not need labor like other food crops. Also Q'at expanded due to importing and subsidizing food stuffs and depending of most farmers on it. Drastic increase of Q'at consumers tends to encourage Q'at farmers to expand its cultivation to satisfy the over due increasing of local market demand. The lack of applying of legal frame works and regulation for uses of agro-chemical on Q'at; encouraged Q'at farmers to randomly and intensively use of agrochemicals aiming not only for pest control but also to enhance leaves growth to increase productivity. It was found that there was no limit between last spray of pesticide and harvest without taking to the account the effect of toxicity on human health and other environmental hazards. It was also found that Q'at farmers randomly and intensively digging wells for irrigation. Improper practicing of random digging wells and misuse of water right caused weakness in water management and dry up natural springs as a result of losses of traditional water right system as indicated from gathered old water right documents. The result showed

income from Q'at was much higher than that of sorghum crops, which rationalized intensive use of water to irrigate Q'at even if water price is high and often transported from other area. Q'at consumed supplementary irrigation water in addition to actual rainfall water because it mostly harvests in winter period when Q'at cultivation is absolutely depended on irrigation, accordingly the prices of Q'at then is the highest of the year.