UNITED NATIONS CENTRE FOR HUMAN SETTLEMENTS (Habitat)
Settlements Rehabilitation Programme – Northern Iraq

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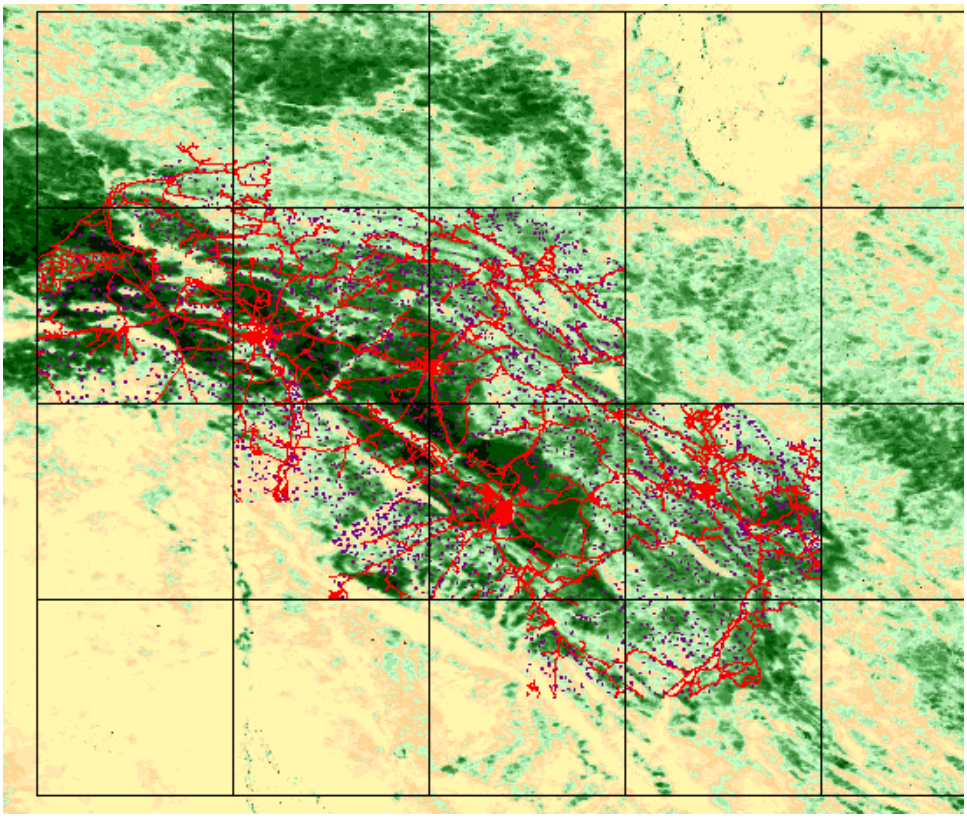
Duty Station: Erbil, Iraq

Back to Office Report

second mission (May 16th – June 9th, 2001)



Itinerary:

Venice\Wien\Amman	16.05.2001
Amman\Baghdad	16.05.2001
Baghdad\Erbil	18.05.2001
Erbil\ Suleimaniyah	20.05.2001
Suleimaniyah\Erbil	21.05.2001
Erbil\ Dohuk	22.05.2001
Dohuk\Erbil	24.05.2001
Erbil\Baghdad	07.06.2001
Baghdad\Amman	08.06.2001
Amman\Wien\Venice	09.06.2001

To: CTA and Planning and Programmes Manager, in Erbil
HHS Consultant, duty station
Habitat Head Office (Nairobi)

Erbil/Venice 09.06.2001

The remote sensing image on the cover - synthetically representing the area characterised by a biomass significant increase during the growing season - is extracted from the maps annexed to this BTO report

Index

Overall Objective of the Consultancy

65 working days

"To determine the socioeconomic structure, the vulnerability and the development potential of Northern Iraqi rural settlement.

The study is essential for developing socio-economic indicators related to Resettlement program and to support decisions in resources allocation in urban areas.

Particular emphasis shall be put on understanding the impact of WFP food provision program on rural settlement development patterns and on resettlement program"

Summary of Duties as in TOR

1. ***To produce a comprehensive study on all the significant factors affecting rural area life stiles and habits, self-sustainability levels, population vulnerability and social needs. This study will be based on the collected information (satellite images and other information collected in the first phase) and on the data yielded by the ongoing Settlement and Household Survey.***

2. ***To evaluate the current rural/urban exchange profiles and the way these are affected by the current food ration system.***

3. ***To coordinate the study activities with the surveys and studies that are carried on with other UN agencies (WFP, FAO, UNOHCI).***

4. ***To design a rural area monitoring system that will allow updating on the basis of annual and seasonable time scheduling the accounting system on resources/pressure balance.***

5. ***To evaluate the outcomes of the study with the aims and objectives of Habitat's mission in NI according to international agreements within the framework of the "Oil for Food" program.***

The consultancy was divided into two field periods (May and September 2001, for a total of 50 working days) and an additional period spent in Venice (15 working days) for analysing and interpreting data.
The present BTO Report makes reference to the activities/achievements related to the first field period.

Activities carried out and partial/provisional achievements

TOR's duty 1

To produce a comprehensive study on all the significant factors affecting rural area life stiles and habits, self-sustainability levels, population vulnerability and social needs. This study will be based on the collected information (satellite images and other information collected in the first phase) and on the data yielded by the ongoing Settlement and Household Survey

BACKGROUND

During his previous mission (February/March, 2001) the Consultant

- collected, collated, revised and reaggregated into a **comprehensive Northern Iraqi rural area database** the most significant available information at Nahia (sub-district) level,
- produced a **first assessment on major pattern of farming activities** at Nahia level.

The availability of significant, but rather disorganised and not easily comparable, village databases [collected by other UN Agencies e/o NGOs] suggested the possibility, if and when consistently reorganized, of compiling **village profiles** in order to assist any rural [re]settlement activity.

Consequently the feasibility of matching the available databases was informally discussed at the end of the Consultant's first mission.

A matching test was conducted by the Consultant before coming back to Erbil. Because the results appeared meaningful (~ 70% of villages contained in the two most relevant [at least at the time being] databases matched), it was decided to implement it.

In the mean time, since then, the availability of village datasets is significantly increased. In particular the recent access to IKRP Village Database makes this objective more significant but at the same time more challenging.

At the same time it was confirmed the need of complementing survey/field information with remote sensing inputs.

The activities carried out during the present mission for both components (database and remote sensing component) are described here below.

ACTIVITIES CURRIED OUT DURING THE PRESENT MISSION

A. MATCHING DIFFERENT DATABASES

It was decided to match, at village level, the following databases:

1. FAO Coordination Office for Northern Iraq, ***"Village Statistics Survey for the Year 2000",*** Erbil, 2000 (since now: **FAO99**)
2. UNICEF, ***"MoRaD Survey Database"*** (since now: **UNICEF97**)
3. Iraqi Kurdistan Research Programme, University of Durham, DFID***, "IKRP Multi-sectoral Village 2000 Survey"*** (since now: **IKRP2000**)

The major problems hampering the implementation of the matching activities are mainly due to (only the most crucial reasons are listed):

- Several English spelling criteria are used for translating village names, in many cases different criteria are used in the same database. As a consequence only ~10% of village names perfectly matches and can be identified through simple computer implemented procedures [i.e. querying approaches].
- Identical or similar village names are frequently found; sometimes it happens in the same administrative areas.
- Because the three databases make reference to different years not necessary the villages are the same: there are abandoned villages, new villages, villages that in the meanwhile changed their names.
- The above problems are in many case complicated by the shift of NI internal administrative boundaries; and this fact can be rather critical, as in case that in the databases the belonging to the same administrative unit offers the only criteria for decision/validation.

As a consequence the following strategy has been defined:

1. To define the FAO99 village name list as the primary-key (offering more and probably "more reliable" information related to some key-words as defined in the TORs). The FAO99 file contains **4972 villages**.
2. To execute a first match with UNICEF97 (as it is already available in a recompiled form). This last file contain **4760 villages**.
3. To define and implement procedures for matching the results of the previous point 1 and 2 with IKRP2000 database, once ended its overall translation from Arabic. This file contains **4860 villages.**
4. Finally the **final three sources village database (3S_V)** will be georeferenced matching its village names with Latitude/Longitude information available from two GIS database:
   - FAO Mapinfo georeferenced village name list (since now: **FAO_LAT_LON**)
   - UNOPS MINA Mapinfo georeferenced list of village names[1] (since now: **LADE_LAT_LON**)

   As, in spite of their better quality, the ONOPS layers are not available for the whole NI (and are not expected to be available is a short-middle term), georefencing procedure will by guided by FAO file and only in case of necessity by UNOPS file.

[1] A new "point LADA layer" has been compiled by the Consultant starting from the original "polygon LADA layer", as it was rather inconsistent.

The remaining (not matching) village records are saved in a “bin” database that will be “refished” in order to find “lost” villages.

ADOPTED MATCHING CRITERIA

Considering the difficulties deriving from phonetic criteria, data collection time-lag and boundary-change, and in order to assure a rather large number of matching villages, the following criteria have been adopted;

1. Automatic matching by Governorates (through query or sorting procedures guided by administrative criteria when District and sub-district links are available).
2. Phonetic criteria (when names translated from Sorani, Badini and Arabic), guided - when possible - by administrative criteria.
3. When similar names are found in the same administrative area, some dimensional comparison of the village population at the three dates (1997, 1999 and 2000) can be helpful.
4. Last but not least, local knowledge (particular in cases of villages partially or totally changing their names)

IMPLEMENTATION AND PARTIAL ACHIEVEMENTS

As it was decided to implement the matching procedure through local personal, the Consultant interviewed many surveyors already in the Habitat FO rosters in Suleimaniyah (May, 20-21st) and Dohuk (May 22-23rd)

Two suitable candidates were identified in Suleimaniyah and immediately they started the job. Only one suitable candidates was identified in Dohuk but his recruitment got an administrative stuck.

In the case of Erbil Governorate database the first two steps of the matching procedure (FAO99+UNICEF97) was carried by the Consultant assisted by the local Habitat Erbil Office personal.

As far as the achievements, the updated results are as follows:

Governorate	FAO99-UNICEF97 matched villages	% of FAO99 villages
ERBIL	**937**	**79.4**
SULEIMANIYAH	**1191***	**70.6***
DARBANIKHAN	**502***	**59.0***
DOHUK	**still pending**	**still pending**
updated 06.06.2001		

The lower rate for Darbanikhan seems to be due to significant shifts of the administrative boundaries. We can expect that a “refishing” from the so called “bin database” [not matching villages at Governorate level] will significantly increase its percentage.

Consequently we can foreseen that, at the end of the day, the final three sources village database (3S_V) will include at least 3300 villages.

RECOMMENDED ACTIONS

A.
In order

- to complete the FAO99-UNICEF97 matching (particularly for the Dohuk Governorate),
- to match the resulting database with the recently received IKRP2000 database

a local skilled person must be recruited and receive appropriate instructions from the Consultant. It is expected that, in principle, he could complete the above assignment in about one month[2].
The final results will be sent by e-mail to the Consultant in Venice (Italy) for counterchecking and verification.

B.
The consistency of the **3V_S database** will be verified through logical test and GIS techniques by the Consultant, still in Venice. He will identify the major bias to be investigated, if existing, when again in Erbil (beginning September).

C.
It is evident, from the described procedure, that the **3V_S database** will not include the totality of the NI villages, but –nevertheless- will provide a powerful basement for the **design of any rural area monitoring system** as requested by **TOR's point 4**.

EXPECTED OUTOCOMES

- The 3V_S database will be processed using multifactorial techniques in order to identify the **most relevant village typologies**[3]. During the current mission a part of the on-building database has been tested and processed in order to facilite a smoother approach at the occasion of the overall data analysis (September 2001).
- A significant contribution to the definition of village typologies will be provided by the outcomes of the ongoing NDVI (Normalised Difference Vegetation Index) images analysis. → see next paragraphs.
- It is expected that, as soon as the SHS (Settlement and Household Survey) will be processed, the information extractable from the farmer questionnaires will improve the definition/identification of village typologies.
- The overall outcomes of the previous three bullets will make up the backbone of the overall ***"study on the significant factors affecting rural areas"*** as requested by TOR.
- Nevertheless it seems evident, since now, that few peculiar questions will not find adequate answers from the 3V_S database and the SHS (i.e. partime agricultural activities, nomadic system, livestock smuggling system, land tenure regimes).
- Consequently **it is recommended since now to foreseen the possibility of using RRA techniques** for a better understanding few relevant questions related to Habitat intervention in the expected resettlement operations:
    - **the identification of existing hidden income generation activities, that could be strengthened in the future,**
    - **the land ownership structure that seems not always encouraging farmers to invest, a phenomena that could seriously hamper any sustainable resettlement in rural areas.**

[2] A margin of risk is still represented by the final step of the matching procedure (LAT_LON) as the procedure has not yet been fully tested.

[3] at least according to the domains covered by the three original databases

B. NDVI (Normalised Difference Vegetation Index) ANALYSIS

As already indicated in the first mission BTOreport, and as requested by TOR's point 1, it is expected, through a rather sophisticated data processing of NDVI[4] remote sensing images, to get significant indicators assisting in the identification of the

- **agroecologically at risk areas**
- and the **most suitable ones**.

The advantage of the remote sensing information, when compared with survey information, consists mainly in the fact of being clearly geographically identified. Nevertheless these information, if not matched with information collectables by surveys, can lose more of their potentiality[5]

Processing a consistent dekadal[6] NDVI images time-series, the Consultant has computed a set of NDVI images including :

- NDVI interannual overall average
- NDVI interannual overall minimum
- NDVI interannual overall maximum
- NDVI average annual standard deviation.

Through a further data processing a **synthesis image** has been produced according to the following definition:

NDVI Delta = NDVI maximum – NDVI average

In other words **the final NDVI Delta image shows**, through a locally calibrated palette, **the potential blossoming of greenness**.

It is enough a rapid glance to the maps printed in the following pages for identifying the areas mostly used for cropping activities.

Greener areas correspond to a stronger explosion of biomass in terms of difference between

- the maximum that can be reached and
- the overall interannual average

Map1 and 2 show the northern part of NI, while 2 and 4 the southern. Settlement are indicated in purple, while main roads are in red. Rocks and lakes are in less or more light brown (due to a similar behaviour when using the NDVI algorithm.

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[4] The Normalised Difference Vegetation Index is a measure of the amount and vigor of vegetation as observed by NOAA satellites; and processed by NASA.
The NDVI from (NOAA) AVHRR sensor is calculated according to the formula:
NDVI = (NIR - VIS) / (NIR + VIS)
where: NIR = near-infrared (channel 2); VIS = visible (channel 1)
The NDVI magnitude is related to the level of photosynthetic activity of the observed vegetation.

[5] Let make an example particularly significant for any Resettlement Planning Activity: in the peculiar case of NI (that probably it is not so peculiar if you think about other territories/countries affected by man-made disasters) the identification of land potentiality in term of length and level of the growing period (detectable through NDVI images) can be meaningless if not interfaced with a precise identification of the still mined areas.

[6] that means in technical terms: 10 days

MAJOR OUTCOMES FROM NDVI IMAGES PROCESSING

As already explained in the previous paragraph, the statistics extracted from NDVI images will remarkably contribute to the definition of **village typologies**.

It is evident that the use of:

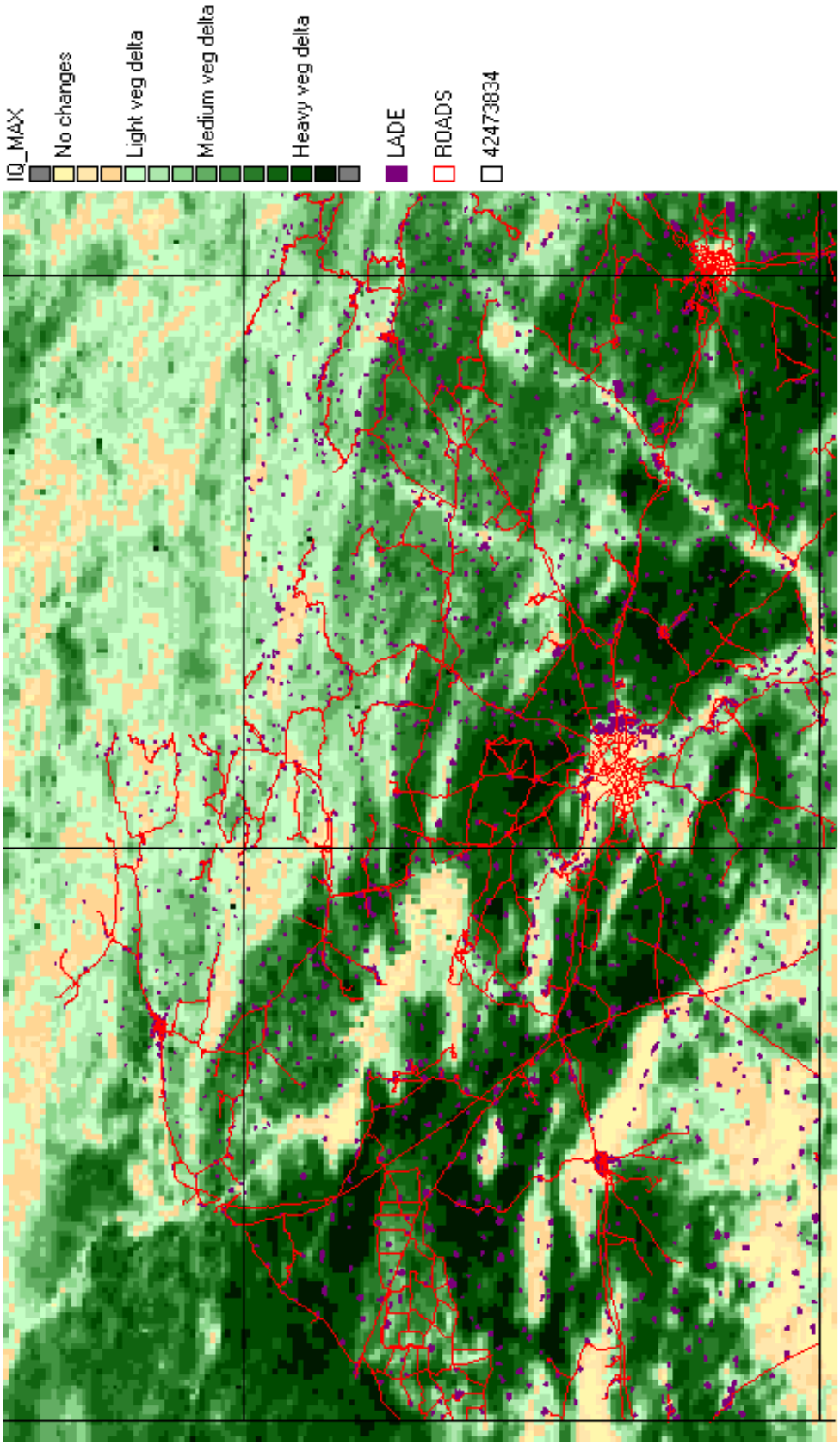
- the NDVI interannual variability as an indicator of vulnerability due to weather risks,
- the measurement of the NDVI levels reached during the latest two years characterised by drought,
- a precise definition of the most probable local length of the growing season

will powerfully complement and improve the quality of the 3V_S database.

In term of time-scheduling the NDVI statistics will be extracted from the whole remote sensing time series set **as soon as** the exhaustive list of matching villages will be definitively compiled.

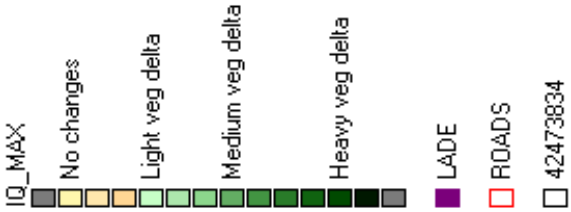
MAP1

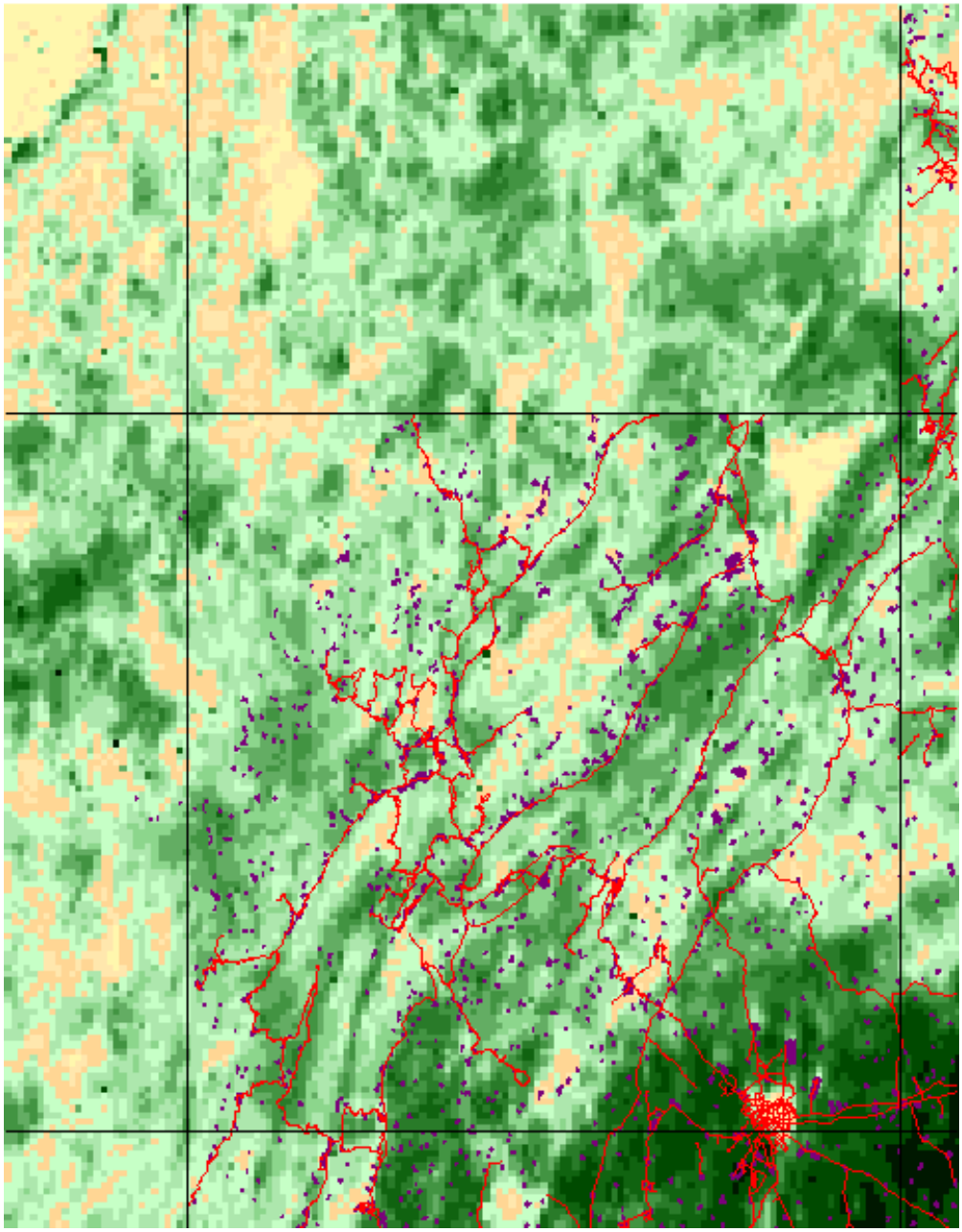
The map shows the NI north-western area (Syrian-Turkey borders) The left-upper city is Zakho, while the big conurbation in the central lower part of the images shows Mosul. On the bottom right corner the Erbil roads system is evident. Note that the roads and villages in Amadia area are not draft into the map as layer from UNOCHI are, at the time being, not available.



MAP2

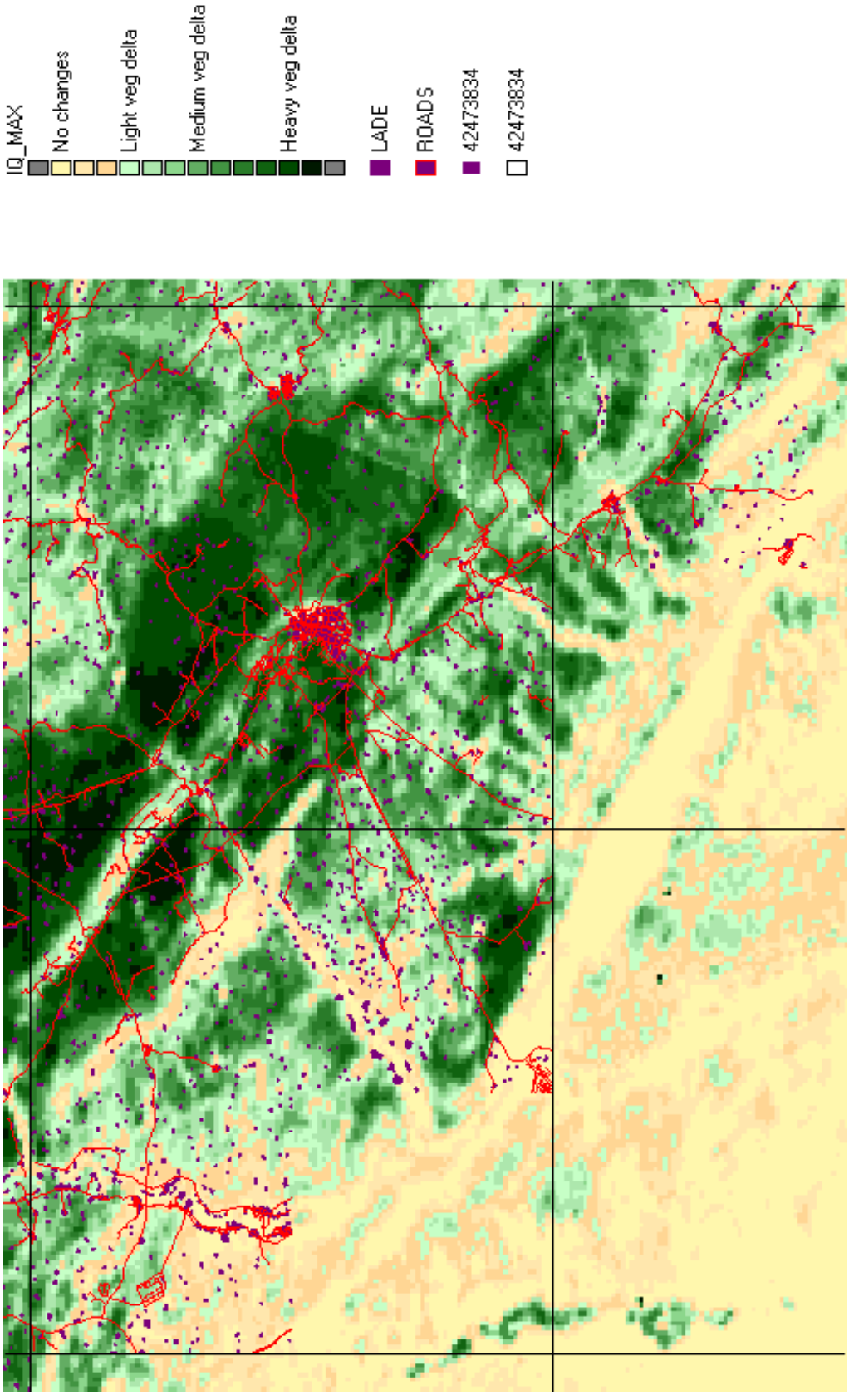
NI north-eastern area are shown in this map (Turkey-Iran border). In this case Erbil roads system is evident in the bottom left corner. The dry rocks of Salahadin are evident too. Note that the Dokan artificial lake is marked with beige colours (in the final maps the lake will be masked and painted with more understandable colour).





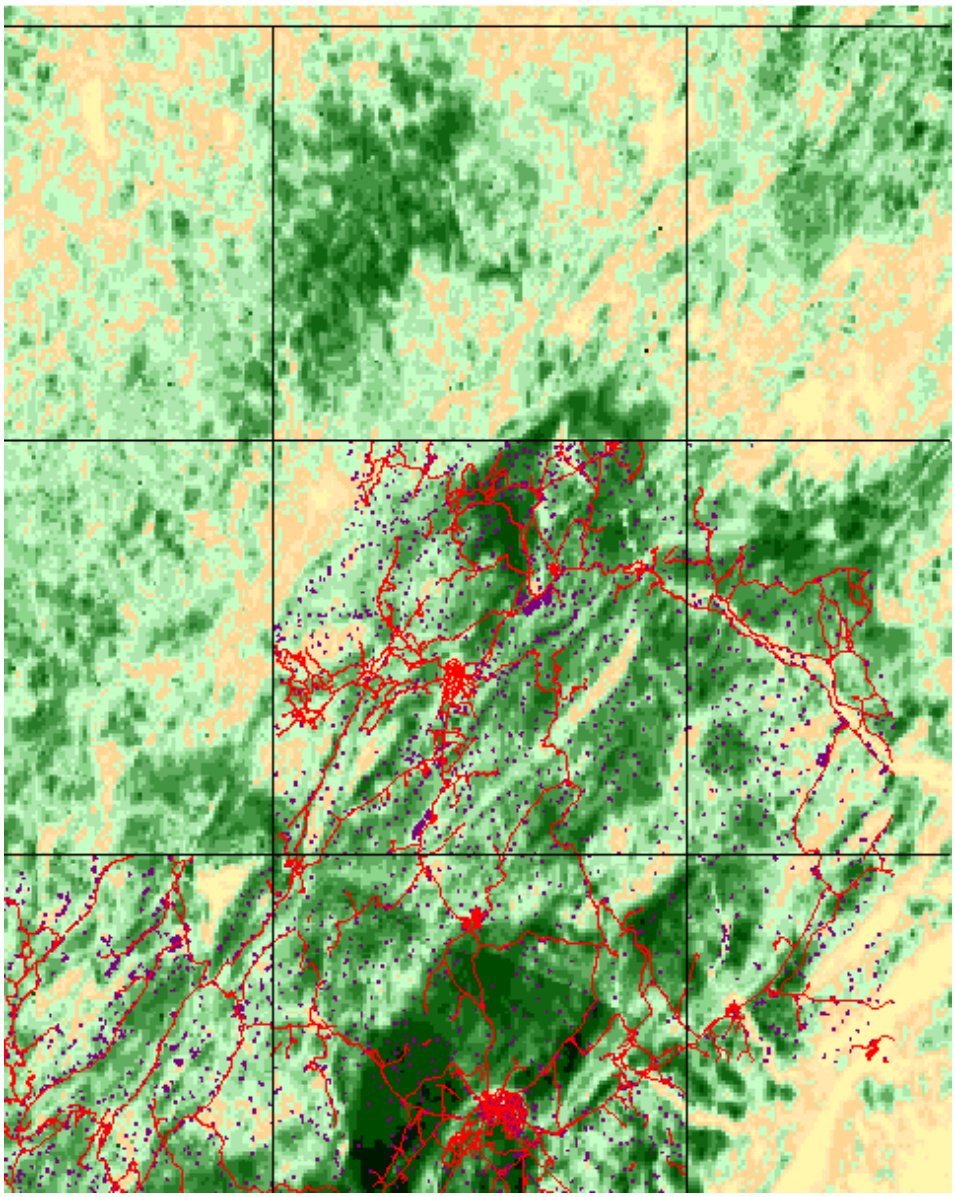
MAP3

The image show the GOI border area south of Erbil. The big conurbation is Kirkuk, while the town in the top right corner is Dokan.



MAP4

Sulymania is show in the center of the image, while Kirkuk is still on the left. The lower area arrives up to Kifri, while the Penjween border area is not marked by villages and roads because the related layer are not yet available from UNOCHI.



TOR's duty 2

.

To evaluate the current rural/urban exchange profiles and the way these are affected by the current food ration system

Due to a lack of significant analysis on rural/urban exchanges, few specific questions have been included in the SHS questionnaires.

Since now it is evident that the traditional patterns of the rural/urban exchange have been heavily modified by the current ration system.

It seems that:

- Farmers are abandoning their traditional cropping system that was mostly motivated by a self-sufficiency food security strategy.
- The fact that the cereal component of the monthly ration lasts, at least apparently, for approximately three weeks and that the cereal prices on the free market are substantially steady provokes an abnormal situation in the countryside.
- In the remote rural areas the farmers are limiting their agricultural production strictly to satisfy their household needs, complementing the quantities provided by the ration.
- Only in the most accessible areas (within an easier communication network) and not always here too, farmers are partially changing their cropping strategies. This is the case of the introduction of the so called "economic crops". Nevertheless this kind of reconversion is heavily limited by a low increase of the urban/internal demand, for not speaking about the international one.

These preliminary assumptions will be verified, revised –as far as possible – through the answers provided at the occasion of the SHS.

TOR's duty 3

To coordinate the study activities with the surveys and studies that are carried on with [other UN agencies (WFP, FAO, UNOHCI)]

The Consultant, while in Italy and before the period of the present mission, informally contacted in Rome many colleagues both in FAO and in WFP HQs, between them:

- Mrs Anne Callanan, ODT, WFP
- Mrs Florence Egal, ESNP, FAO
- Mr Rodrigue Vinet, TCOR, FAO
- Mr Stephan Baas, RDD, FAO
- Mr J. van Amerongen, AGP Consultant, FAO

The exchange of opinions was focused mainly on the following point:

√ The outcomes of the last **"assessment of the food and nutrition situation"** mission (FAO, WFP, WHO assisted by UNOCHI, May 2000)

√ The outcomes of the FAO **"Multidisciplinary Reconnaissance Mission Fielded in Iraq in November/December 2001"**

√ The main outcomes of the WFP **"Adequacy of SCR 969 Ration Survey"** [provisional title, document not yet released]

The following points, deserving attention, emerged. They are summarized here below:

1. There is a real interest inside the concerned technical Division both of WFP and FAO to carry out join activities with Habitat in order to evaluate the long term negative impacts/effects of the **SCR 969 on rural life**. What Habitat is investigating through the SHS is view as a very important attempt to a better understanding this basic topic. Probably the expectation are too high: this is the risk ! But this is also the challenging aspect of our work!

2. As far as Habitat is expected to deal with the problem of rural resettlement, it seem advisable to find the way of promoting a workshop on this crucial theme (on September 2001?) But who, as first, will take the initiative to call for it?

3. Any UN Agency in now expressing the willingness of "**reorienting**" or "**rethinking**" the previous programmes, and to stop with the practices of accepting the priorities indicated by the LAs's "shopping list". It is lamented that "no methodology for .. targeting and participatory needs assessment has been established yet"[7]

4. As a consequence more emphasis is given to the need of building comprehensive databases at local level[8]. In this common perspective Habitat could play an important role.

TOR's duty 4

.

To design a rural area monitoring system that will allow updating on the basis of annual and seasonable time scheduling the accounting system on resources/pressure balance

The design of a rural area monitoring system seems to be premature due to the still rather fuzzy panorama of proposals both in Habitat and also in other UN Agencies.

Nevertheless it is expected that at the beginning of the Consultant's next mission (September 2001):

- √ when the task of rebuilding a **georeferenced, rather comprehensive and homogenous rural database (3V_S Database) complemented by NDVI** indicators will be fully achieved, and
- √ when the expected **Database and GIS Consultant** will join the Planning Unit, and
- √ when the **FAO Socio-economic Unit** will be established and consequently it will be possible to define precise modalities of collaboration/integration,

the informational environment will be better defined. At that stage will be probably possible to **"design"** a first draft of the expected ***"rural area monitoring system"***.

TOR's duty 5

To evaluate the outcomes of the study with the aims and objectives of Habitat's mission in NI according to international agreements within the framework of the "Oil for Food" program.

[7] see for instance "FAO, Towards a strategic framework for sustainable agricultural rehabilitation programme in the three Northern Governorates of Iraq", vol.1, page 107

[8] see for instance the TOR of the **new "Socio-economic Unit",** in "FAO, Towards a strategic framework for …..", vol.1, page 119. For a better information **annex 4** contains a short description of the expected Unit and the TOsR of the staff expected to assist in the implementation phase.

It is evident that this duty will be accomplished only when the outcomes of the study will be drafted.

ANNEXES

Annex 1

ONGOING MATCHING DATABASE CONTENTS

DESCRIPTION OF RECORDS

FAO - Village Survey 1999 number of villages: 4972	UNICEF 97 - Village database number of villages: 4760
1 Counter	1 No. of entry
2 Gov-Code	2 Governorate
3 District-Code	3 District
4 Location	4 Nahia
5 Sub-Code	5 Village name
6 Village	6 Sector No.
7 Village Location	7 Main source of income
8 Farmer	8 Main problem related to source of income
9 Mahjur	9 Electricity y/n
10 No of V house	10 Population No.
11 Total V	11 Male %
12 No farmers	12 Female %
13 Total area	13 Population under 5 years %
14 Arable area	14 Prior to des.Period
15 Non-arable area	15 Currently
16 Orchard area	16 Permanently %
17 Forestry area	17 Temporarily %
18 Bulding Area	18 Deserted %
19 Natural pasture area	19 Reasons for temporarily
20 Guaranteed rainfall	20 Reasons for deserted
21 Semi-Guaranteed rainfall	21 Mosque y/n
22 Non-Guaranteed rainfall	22 Church y/n
23 Irrigation area	23 Irrigation channel y/n
24 Wheat	24 Comments
25 Barley	25 Water project y/n
26 Chickpea	26 Gravity (no.)
27 Lentil	27 Pump (no.)
28 Winter Vegetables	28 Deep well (no.)
29 Summer C & V	29 Other (type)
30 Bur area	30 Distance from village km.
31 Cow	31 No. of water points
32 Buffalo	32 Comments
33 Sheep	33 Public latrine y/n
34 Goat	34 Sewage disposal
35 Horses and mules	35 House latrines No.
36 Donkey	36 Single pit
37 Chicken	37 Double pit
38 Duck	38 Open field
39 Goose	39 Comments
40 Turkey	40 Is there a primary school building y/n
41 Beehives	41 Classes No.
42 H-Jonder	42 Classrooms No.
43 H-Laverda	43 Full-time teacher No.
44 H-Fargason	44 Part-time teacher No.
45 H-Others	45 Pupils enrolled No.
46 H-Kharmanko	46 Age range
47 T-Antar	47 Pupils not enrolled No.
48 T-Fargason	48 Nearest school if none present

49 T-Fiat
50 T-Jonder
51 T-Valvo
52 T-Other
53 P-Less 6
54 P-(6-12)
55 P-(12-18)
56 P-(18-24)
57 Irtwazia
58 Poultry farms
59 Cow breeding
60 Sheep breeding
61 Goat breeding
62 Beekeeping
63 Fish breeding
64 Orchard
65 Nursery
66 Man-made forest
67 Complementry irrigation
68 Feed stuff factories
69 Mill
70 Water Source1
71 Water Source2
72 Water Source3
73 Water Source4
74 Water Source5
75 Electricity
76 Primary school
77 Intermediate school
78 Health clinic
79 Road

filename: All.xls

49 How far ? Km.
50 Comments
51 Health centre y/n
52 Doctors No.
53 Medical assistant No.
54 Other
55 Maternity facil. y/n
56 Nearest H.C if none present
57 How far ? Km.
58 Comments
59 Distance between village & Nahia km.
60 Dist . between village and main road km.
61 Track %
62 Sub-base %
63 Paved %
64 Other
65 Culvert
66 Gravel lining
67 Other
68 Needs an access road ? y/n
69 Comments
70 Collated comments

filename: Surveyn.xls

UNICEF - Village population

used for current surveys
number of villages: 2869

1 Village name
2 Village code
3 Variable (pop)
4 Value
5 Sub-district
6 District

filename: rural_population_UNICEF.xls

UNOPS - NIMA - Lade layer

all localities: 5542

1 ID
2 X, longitude (100')
3 Y, latitude (100')
4 NEW_ID
5 LOCALITY NAME

filename: ladename.xls

FAO - MAPINFO Database -

number of localities: 4060

1 SETTLEMENT name
2 SUBDISTRIC
3 DISTRICT
4 GOVERNORATE
5 X, longitude (100')
6 Y, latitude (100')

filename: AllvillagesClean2_lat_lon.xls

IKRP 2000 - Village Multi_sectoral database

number of villages: 4860

1	Serial Number	104	Number of dwellings which have the exclusive toilet
2	Number of the Team	105	The percentage of toilet with two wells
3	The Districts and Subdistricts Name	106	The percentage of Toilet with Open system
4	The Name of the Villages	107	Name
5	The Villages Name in English	108	1-Notes
6	The Number of the site	109	Is there a primary school in the village?
7	The substitute name of the village	110	If no, Was there aschool in the village in the past time?
8	The date of the interview	111	The condition of the primary school
9	The time of starting the interview	112	Number of classes primary school
10	The time of finishing the interview	113	Number of stages primary school
11	Notes	114	Number of enrolled teachers
12	Was the village destroyed in the past?	115	Number of absent teachers
13	How many times did the village destroy?	116	Number of enrolled pupils
14	When did the reconstruction of the village start?	117	Number of pupils who left the school
15	Is anew village build in the same site?	118	Why do they leave the school?
16	How far is it between the new village and the old village?	119	Number of Male in first stage - 6 years
17	The Notes	120	Number of Male in first stage - 7 years
18	The total number of the population	121	Number of Male in first stage - 8 years
19	Number of Male	122	Number of Male in first stage - more than 9 years
20	Number of Female	123	Number of Female in first stage - 6 years
21	Number of children less than 6 years old	124	Number of Female in first stage - 7 years
22	Number of advanced in years over 65 years	125	Number of Female in first stage - 8 years
23	Number of advanced in years(65) and they are responsible for the	126	Number of Female in first stage - more than 9 years
24	Number of families	127	Number of unrecorded pupils in first stage
25	Number of houses before the last destroy	128	The reason for not recording them
26	Number of present houses	129	Is there an intermediate school in the village?
27	Number of permanent resedence houses	130	Was there an intermediate school in the village?
28	Number of resedence houses during the summer	131	Number of classes in the intermediate school
29	Number of resedence houses during the winter	132	Number of stages in the intermediate school
30	Number of deserted houses	133	2- Number of enrolled teachers
31	Number of houses which can be settled	134	Number of lecturing teachers
32	Number of houses which can not be settled	135	Number of enrolled pupils in the intermediate school
33	Indicate the reason If the house is residence during the summer	136	Number of pupils who left in the intermediate school
34	Indicate the reason If it is not residence during the summer	137	Why do the pupils leave the intermediate school?
35	What will be ahelpful for returning or	138	6- Notes
36	What are the reasons for leaving their village and not returning	139	Is there a health center in the village?

37	1-Indicate the reason If it is not residence
38	2-Indicate the reason If it is not residence
39	What will be ahelpful for returning
40	What are the reasons for leaving their village and not returning
41	Is there a mosque in the village?
42	Who built it?
43	Is there a church in the village?
44	Who built the church
45	1- Notes
46	Kurdish(Sorani Dialect)
47	Kurdish(Badini Dialect)
48	Kurdish(Hawrami Dialect)
49	Kurdish(Other Dialects)
50	Syriani
51	Turkumani
52	Name
53	Arabic
54	Indicate others
55	Muslem(Suni)
56	Muslem(Shea)
57	Christian(Arthadox)
58	Christian(Catholic)
59	Yazedi
60	Kakayi
61	Others(specify)
62	3- Notes
63	The kind of water drinking exist in the village
64	Is there water project in the village?
65	1-The kind of water drinking exist in the village
66	2-The kind of water drinking exist in the village
67	Is there water project in the village
68	If yes, Which kind of project is it?-1
69	If yes, Which kind of project is it?-2
70	If yes, Which kind of project is it?-3
71	Number of water projects which work
72	Number of water projects which do not work
73	Howfar is the source of water in(km)-1
74	Howfar is the source of water in(km)-2
75	Number of public taps and hand pumps
76	How is the condition of the water project?
77	Did you use water tanks last year?
78	Number of liters used daily
140	If no, was there in the past time?
141	The name of the health center
142	The condition of the health center
143	Number of Doctors
144	Number of medical staff
145	Other
146	What are the medical services which exist?
147	The condition of the building
148	Are there mid wives in the village?
149	Number of mid wives
150	If there are not mid wives in the village, where is the nearest
151	The distance of the nearest health center when it is not
152	The main health problems in the village-1
153	The main health problems in the village-2
154	The main health problems in the village-3
155	Are there Handicaps in the village?
156	Number of Handicaps in the village
157	Number of Handicaps by the time of birth
158	Number of Handicaps by the Mines
159	Number of Handicaps by other reasons
160	7- Notes
161	Where is the nearest Urban Settlement?
162	The distance between the village and the Urban Center(km)
163	The distance between the village and the Urban Center(Minutes)
164	Name
165	The name of the nearest main Road
166	The distance between the village and the nearest main Road
167	The Length of unconstructed
168	The Length of constructed
169	The Length of paved
170	The Length of other sections of the road
171	Number of arch needs
172	The length of constructed way which needs improving(km)
173	The length of paving needs(km)
174	Number and the length of building bridge
175	Other needs for improving the Roads
176	Do the village need to build new roads
177	The length of the roads (km)
178	Notes on the roads
179	Is the village supplied with the main net work of water?
180	Are there any Generators inside the village?
181	Is there power plant(Hydraulic) in the

			village?
79	The quantity of water used for animals Liter/ Day	182	How many times does it supply the electricity?
80	The quantity of water used for Human beings Liter/ Day	183	Kind of power plant(Hydraulic)
81	The quantity of water used for Agriculture Liter/ Day	184	The height of the source of water from the poor plant(m)
82	The quantity of water used for other purposes Liter/ Day	185	The distance of the power plant(Hydraulic) from the village(km)
83	What is the solution for decreasing water problem	186	The quantity of water in Liters
84	4- Notes	187	9- Notes
85	Are there irrigation channels in the village?	188	Is there mine field in the village?
86	Number of working irrigation channels	189	Number of mine fields in the village?
87	Number of irrigation channels which are not working but can be	190	Number of persons which died by the Mines
88	Number of irrigation channels which are not working but cannot	191	Number of mine fields which they have not Warning Marks
89	Are there other channels which their water is more than the vill	192	Number of mine fields which they have Warning Marks
90	Are there any increasing water sources which can be used in	193	Are the people of the village enter the Mine fields?
91	If yes indicate the number	194	Are they enter to the fields intentionally?
92	Are the irrigation channels effected by droughty?	195	Why they enter to the fields intentionally?-1
93	If yes how much is the water source effected in decreasing the	196	Why they enter to the fields intentionally?-2
94	5- Notes	197	Why they enter to the fields intentionally?-3
95	Is there a toilet in the village?	198	Are the people of the village raised the Warning Marks?
96	Number of Toilets in work	199	Are the Mine fields eliminated previously?
97	Number of Toilets are not in work	200	1- Are the people of the village edificated from the Mines?
98	Number of benefit toilets	201	1- The means which got from the Mines
99	Number of non benefit toilets	202	Are the people of the village edificated from the Mines?
100	The percentage of Toilet with one well	203	The means which got from the Mines
101	The percentage of Toilet with two well toilet	204	The main factors of Mine fields on the village population
102	The percentage of open galley toilet	205	10- Notes
103	Number of dwellings which have the exclusive toilets		

filename: VMS2_B_Translated.mbd

translation of variables names still under revision

filename: List_of_variables_6DB.xls

Annex 2

ADMINISTRATIVE AREAS according to different databases
original names

Original FAO 99 Village Database

DOHUK		
Dohuk	Akra	Akra Center
Dohuk	Akra	Bardarash
Dohuk	Akra	Bjel
Dohuk	Akra	Dinarta
Dohuk	Akra	Grdasin
Dohuk	Amadia	Amadia
Dohuk	Amadia	Deralok
Dohuk	Amadia	Kani Mase
Dohuk	Amadia	Sarsang
Dohuk	Doh. Center	Doh. Center
Dohuk	Doh. Center	Doski
Dohuk	Doh. Center	Zawita
Dohuk	Shekhan	Atrush
Dohuk	Shekhan	Badri
Dohuk	Shekhan	Qasrok
Dohuk	Sumel	Batel
Dohuk	Sumel	Sumel
Dohuk	Zakho	Batufa
Dohuk	Zakho	Darkar
Dohuk	Zakho	Kani Mase
Dohuk	Zakho	Rzgari
ERBIL		
Erbil	Choman	Choman
Erbil	Choman	Galala
Erbil	Choman	Haji Omaran
Erbil	Erbil Center	Ainkawa
Erbil	Erbil Center	Khabat
Erbil	Erbil Center	Qushtapa
Erbil	Mergasor	Barzan
Erbil	Mergasor	Mergasor
Erbil	Mergasor	Sheruan Mazn
Erbil	Quaisinjak	Quaisinjak
Erbil	Quaisinjak	Shorsh
Erbil	Quaisinjak	Taqtaq
Erbil	Shaqlawa	Harir
Erbil	Shaqlawa	Khoshnaw
Erbil	Shaqlawa	Salahadin
Erbil	Soran	Diana
Erbil	Soran	Khalifan
Erbil	Soran	Rawanduz
Erbil	Soran	Sidakan
SULEIMANYHA		
Suleimanyha	Chmchmal	Aghjalar
Suleimanyha	Chmchmal	Chmchmal
Suleimanyha	Chmchmal	Qadr Karam
Suleimanyha	Chmchmal	Sangaw
Suleimanyha	Chmchmal	Shwan-Qrnaw
Suleimanyha	Darbandikhan	Darbandikhan
Suleimanyha	Darbandikhan	Zrain
Suleimanyha	Dokan	Bngrd
Suleimanyha	Dokan	Khalakan
Suleimanyha	Dokan	Surdash
Suleimanyha	Halabja	Biara

Suleimanyha	Halabja	Khormal
Suleimanyha	Halabja	Said Sadq
Suleimanyha	Halabja	Siruan
Suleimanyha	Kalar	Bebaz
Suleimanyha	Kalar	Kalar
Suleimanyha	Kalar	Tilako (Gulajo)
Suleimanyha	Kfri	Nojul
Suleimanyha	Kfri	Sarqala
Suleimanyha	Khanaqin	Maidan
Suleimanyha	Khanaqin	Qoratow
Suleimanyha	Penjween	Garmak
Suleimanyha	Penjween	Penjween
Suleimanyha	Pshdar	Hero
Suleimanyha	Pshdar	Sangasar
Suleimanyha	Rania	Chuarqurna
Suleimanyha	Sharbazher	Barznja
Suleimanyha	Sharbazher	Mauat
Suleimanyha	Sharbazher	Sharbazher
Suleimanyha	Sharbazher	Siwail
Suleimanyha	Sul Center	Bazian
Suleimanyha	Sul Center	Qaradagh
Suleimanyha	Sul Center	Sarchnar
Suleimanyha	Sul Center	Tanjro

filename: FAO_99_admin_areas.xls

ADMINISTRATIVE AREAS according to different databases

original names

Original UNICE97 Village Database

DOHUK		
Dohuk	Akrea	Akrea
Dohuk	Akrea	Bardarash
Dohuk	Akrea	Gardaseen
Dohuk	Akrea	Nahla
Dohuk	Akrea	Sorchy
Dohuk	Amaedy	Amaedy
Dohuk	Amaedy	Barwary
Dohuk	Amaedy	Nerwa Rekan
Dohuk	Amaedy	Sarsenk
Dohuk	Dohuk	Dohuk
Dohuk	Dohuk	Dosky
Dohuk	Dohuk	Zawita
Dohuk	Shekhan	Atrosh
Dohuk	Shekhan	Qasrok
Dohuk	Sumail	Sulaivany
Dohuk	Sumail	Surmail-Faida
Dohuk	Zahko	Gully
Dohuk	Zahko	Rezgary
Dohuk	Zahko	Sendy
ERBIL		
Erbil	Choman	Galala
Erbil	Choman	HajiOmaran
Erbil	Erbil	Ainkawa
Erbil	Erbil	Khabat
Erbil	Erbil	Qushtapa
Erbil	Koisenjaq	Koisenjaq
Erbil	Koisenjaq	Shorish
Erbil	Koisenjaq	Taq-Taq
Erbil	Shaqlawa	Hareer
Erbil	Shaqlawa	Hiran
Erbil	Shaqlawa	Salahaddin
Erbil	Soran	Diana
Erbil	Soran	Khalifan
Erbil	Soran	Rawanduz
Erbil	Soran	Sidakan
Erbil	Zebar	Barzan
Erbil	Zebar	Mergasur
Erbil	Zebar	Sherwanmazin
SULEIMANIYAH		
SULEIMANIYAH	CHWARTA	CHWARTA
SULEIMANIYAH	CHWARTA	MAWAT
SULEIMANIYAH	CHWARTA	SEEWAIL
SULEIMANIYAH	CHWARTA	SRUCHIK
SULEIMANIYAH	DOKAN	BINGIRD
SULEIMANIYAH	DOKAN	CHINARAN
SULEIMANIYAH	DOKAN	SURDASH
SULEIMANIYAH	HALABJA	BIARA
SULEIMANIYAH	HALABJA	KHURMAL
SULEIMANIYAH	HALABJA	SAIDSADIQ
SULEIMANIYAH	HALABJA	SEERWAN
SULEIMANIYAH	PENJWEEN	GARMIK
SULEIMANIYAH	PENJWEEN	PENJWEEN
SULEIMANIYAH	QALADIZA	HERO
SULEIMANIYAH	QALADIZA	PISHDAR CENTRE
SULEIMANIYAH	RANYA	BETWATA

SULEIMANIYAH	RANYA	CHWARQURNA
SULEIMANIYAH	SULAIMANIYAH	ARBAT
SULEIMANIYAH	SULAIMANIYAH	BAZIAN
SULEIMANIYAH	SULAIMANIYAH	QARADAGH
SULEIMANIYAH	SULAIMANIYAH	SARCHINAR
DARBANDIKHAN		
DARBANDIKHAN	KIFRI	NAWJUL
DARBANDIKHAN	KIFRI	SARQALA
DARBANDIKHAN	KALAR	KALAR
DARBANDIKHAN	KALAR	MAIDAN
DARBANDIKHAN	KALAR	PEBAZ
DARBANDIKHAN	KALAR	QURATO
DARBANDIKHAN	KALAR	TILAKO
DARBANDIKHAN	DARBANDIKHAN	DARBANDIKHAN
DARBANDIKHAN	DARBANDIKHAN	ZARAEN
DARBANDIKHAN	CHAMCHAMAL	AGHALAR
DARBANDIKHAN	CHAMCHAMAL	CHAMCHAMAL
DARBANDIKHAN	CHAMCHAMAL	QADIR KARAM
DARBANDIKHAN	CHAMCHAMAL	SANGAW
DARBANDIKHAN	CHAMCHAMAL	SHOWAN

filename: UNICEF97_admin_areas.xls

ADMINISTRATIVE AREAS according to different databases

original names

Original IKRP 2000 Village Database

	blank = not specified in the original database	
DOHUK		
Akre Center	Duhok	Dohuk
Amedi Center	Duhok	Dohuk
Atrosh		Dohuk
Barda Rash		Dohuk
Batufa	Duhok	Dohuk
Bijil		Dohuk
Dera Lok		Dohuk
Dinarta		Dohuk
Dosky	Duhok	Dohuk
Duhok	Duhok	Dohuk
Fayde		Dohuk
Girde Sin		Dohuk
Gwer		Dohuk
Kalak	Duhok	Dohuk
Kani Masi	Duhok	Dohuk
Qasrok	Duhok	Dohuk
Rezgary		Dohuk
Sarsang		Dohuk
Sindi	Duhok	Dohuk
Slevani	Duhok	Dohuk
Summail Center	Duhok	Dohuk
Zawita		Dohuk
ERBIL		
Ainkawa	Erbil	Erbil
Ashti	Erbil	Erbil
Barzan	Erbil	Erbil
Benslawa	Erbil	Erbil
Diana		Erbil
Galala	Erbil	Erbil
Haji Omeran		Erbil
Hareer	Erbil	Erbil
Hiran		Erbil
Khabat	Erbil	Erbil
Khalefan		Erbil
Khoshnaw	Erbil	Erbil
Koysinjaq	Erbil	Erbil
Mergasur Center	Erbil	Erbil
Qushtapa		Erbil
Rowandoz		Erbil
Salahaddin	Erbil	Erbil
Shorsh		Erbil
Sidekan		Erbil
Taq Taq	Erbil	Erbil
SULAIMANYA		
Balisan		Sulaimanya
Bayara	Sulaimanya	Sulaimanya
Bazian	Sulaimanya	Sulaimanya

Betwata	**Sulaimanya**	**Sulaimanya**
Bingerd		**Sulaimanya**
Bingird	**Sulaimanya**	**Sulaimanya**
Chinaran	**Sulaimanya**	**Sulaimanya**
Chwarqurna	**Sulaimanya**	**Sulaimanya**
Chwarta	**Sulaimanya**	**Sulaimanya**
Hero	**Sulaimanya**	**Sulaimanya**
Khormal		**Sulaimanya**
Khurmal	**Sulaimanya**	**Sulaimanya**
Mawat	**Sulaimanya**	**Sulaimanya**
Nalparez	**Sulaimanya**	**Sulaimanya**
Peshawa	**Sulaimanya**	**Sulaimanya**
Qalladiza	**Sulaimanya**	**Sulaimanya**
Qaredagh		**Sulaimanya**
Saidsadiq		**Sulaimanya**
Sangasar	**Sulaimanya**	**Sulaimanya**
Sarchinar	**Sulaimanya**	**Sulaimanya**
Sarchnar		**Sulaimanya**
Sherwan Mezin		**Sulaimanya**
Sirwan	**Sulaimanya**	**Sulaimanya**
Surdash	**Sulaimanya**	**Sulaimanya**
KIRKUK		
Aghjalar	**Kirkuk**	**Darbandikhan**
Chamchamal	**Kirkuk**	**Darbandikhan**
Darbandikhan	**Kirkuk**	**Darbandikhan**
Kalar	**Kirkuk**	**Darbandikhan**
Meidan		**Darbandikhan**
Nujol		**Darbandikhan**
Pebaz	**Kirkuk**	**Darbandikhan**
Qadir Kerem		**Darbandikhan**
Qure Tu		**Darbandikhan**
Sangaw	**Kirkuk**	**Darbandikhan**
Sar Qala		**Darbandikhan**
Tilako		**Darbandikhan**
NOT SPECIFIED		
Hajiawa		
Kermek		
Khan		
Kirmik		
Semud		
Shuan		
Siwael		
Siweil		
Srojek		
Tanjarow		

filename: IKRP_2000_admin_areas.xls

Annex 3

INSTRUCTION PROVIDED FOR

MATCHING FAO 1999, UNICEF 1997 AND IKRP 2000 DATABASES
at village level

Preliminary note: **the relevant files (FAO99, UNICEF97 AND IKRP2000) are already provided at Governorate level**

1.
The villages FAO99 are assumed as the primary-key of the matching

2.
Match the four FAO99 Governorates database with the corresponding UNICEF97 ones, creating three types of files (for each Governorate) containing:

- villages matching
- villages not matching ["bin" files]
- villages with double or more matching names (i.e. one name in FAO99 and two or more in UNICEF97, or vice versa)

(the total number of files will be 4 Gov x 3 type of files = 12 files)

3.
Match the four FAO99+UNICEF97 files (with matching villages) with the IKRP2000 files creating :

- four new village matching files.
- villages not matching ["bin" files]
- villages with double or more matching names

4.
Create an overall not matching village file (the "overall bin" file)

5.
As the matching has been applied at Governorate level, a "second round" matching should be carried out "fishing" from the "overall bin" (not matching villages) file.
The results should be appended to the four Governorate "matching villager" files already done.

6.
The 4 Governorate double matching files will be provided without any change to the Consultant, who will implement adequate procedures to reaggregate the data.

It is expected that the job will be accomplished in one month.

Erbil, 06.05.01

Annex 4

Excerpt from TORs included in

Socio-economic Unit

The unit will work under the overall supervision of the programme Coordinator for the North and in close partnership with the LAs. The unit will be supported and backstopped by FAO HQs technical divisions, in particular by AGS and SDA. The unit will basically focus on socio-economic and socio-cultural issues as well as on community level institution and capacity building. The unit will have specific responsibility for **(a) assessing and analysing farm economics of small farmer households and vulnerable groups and feed this information into all sub-sectoral activities,** (b) co-ordinating with other units, the specific programme thrust for integrated, sustainable rural rehabilitation, (c) **designing and advising on participatory approaches and processes within the programme and in selected pilot villages and resettlement areas,** (d) developing and directing the programme element for **vulnerable people and disadvantaged areas**, (e) guiding activities in the areas of rural financial and marketing services**, (f) integrating gender issues into the programme, as appropriate, and (g) land tenure issues.**

It is recommended that the unit will be staffed with a Production Economist and a Rural Sociologist as soon as possible, nominating the more experienced expert as Team Leader. At least one national expert/counterpart per discipline and governorate should be recruited immediately thereafter. Furthermore, a consultant is proposed to join the team asap to assist in methodology development for improved poverty targeting and needs assessments .

The unit, once operational, will fine-tune and further develop its own TOR on a demand driven basis, responding to the emerging needs of the programme and its counterparts in the field.

During the first months the unit will concentrate on the following urgent tasks:

- *Designing a work plan and establishing needs responsive working linkages with other programme units, and the UNOHCI socio-economic unit to ensure highest possible complementarity, interaction and to avoid duplication of activities;*

- ***Review existing data on socio-economic, production economic and socio cultural issues** available within the programme and from partner agencies, and design thereafter data collection methodology among target groups, and data systems for analysis and monitoring purposes;*

- *Formulate Terms of Reference for international and national consultants for the unit, including national consultants to implement field data collection;*

- In close collaboration with LAs, select pilot villages and develop a pilot model for information collection and implementation of the integrated rural rehabilitation sub-programme .

- Building staff capacities in participatory approaches and techniques and mainstreaming their application within the programme; This will include liaison with the extension unit to ensure smooth methodological and practical integration of the participatory extension system and the community based integrated rehabilitation activities.

Rural Sociologist in the Socio economic Unit (TOR)

Under the technical guidance of SDA and the overall operational supervision of TCOR, the FAOR Office in Baghdad, and the FAO programme coordinator for Northern Iraq, and in close collaboration with the Production Economist and other staff of the socio economic unit, the expert will guide the implementation of the sub-programme thrust on integrated rural rehabilitation and will be responsible for assessing and developing operational modalities for launching community based approaches for rural rehabilitation. More specifically he/she will pursue/launch the following tasks during the first 6 months of assignment :

Based on a comprehensive review of programme documentation and field activities and interviews with different programme stakeholders

- *Assist the overall programme with technical advice on socio-economic and sociocultural issues as required and requested buy other sub-units/teams,*

- *Develop in close collaboration with the Production Economist and other staff of the socio economic unit, the operational strategy for implementing the sub-programme thrust on integrated rural rehabilitation*

- ***Assist in the design of case specific intervention modalities for programme support to the following groups of vulnerable peoples (a) IDPs with access to land; (b) female headed***

Households/Widows (c) people living in disadvantaged dry and mountainous areas (d) support farmer IDPs and refugees without current access to land;

- Review participatory approaches currently applied within the various sub-sectors of the programme and
  (a) identify training needs in participatory approaches among project staff and LA counterparts ,
  (b) strengthen the knowledge base on participatory approaches within the programme, in a way appropriate to the Northern Iraq situation and programme requirements and
  (c) elaborate in consultation with LAs and programme staff the basic principles which should underscore a participatory approach/methodology in the overall programme and
  (d) organize thereafter (using specialized PA training consultant)a process of capacity building among project staff and LA counterparts in participatory approaches and PRA techniques (in collaboration with an short term consultant extension section);

- *Assess scope, potentials and constraints for farmers groups and/or other possible self-help approaches, and develop together with other programme units a strategy for strengthening existing/creation of new rural organizations such as marketing and/or savings-credit village unions and/or water users and/or women groups at village level, and/ or animal health workers and agro-processing and marketing interest groups at sub-district level; Propose the roles such organizations could play in a community based rural rehabilitation process; include an assessment of horizontal and vertical co-ordination mechanisms between different organizations required to sustain rural rehabilitation;*
-
- *Assist thereafter in establishing an organizational framework at community level which facilitates complementary interaction between local authorities and village communities in their joint efforts of rehabilitating the rural villages in Northern Iraq;*
-
- Guide the process of community mobilization in selected resettled and traditional villages and among groups of vulnerable people targeted by the programme and assist community organizations/groups in developing their own action plans which offer the basis for cross-sectoral sustainable community rehabilitation.

- *Take up duties as they will emerge*
-
- *Assist with advice in the above fields for fine tuning the medium term workplan of the socio economic unit*

Duration: either as team leader with a fixed term contract or as consultant for 11 months renewable;

Qualifications : Sociologist/Socio-economist/Social Anthropologist with extensive practical experience in rural settlement and rehabilitation programmes; strong conceptual and methodology development skills and sound experience in community based development and participatory approaches/methods; experienced in team working.

Rural Poverty Alleviation - Poverty Targeting Consultant (TOR)

Under the technical guidance of SDA and the overall operational supervision of TCOR, the FAOR Office in Baghdad, and the FAO programme coordinator for Northern Iraq, and in close collaboration within the socio-economic unit the consultant will be temporary member of the :

- *Analyze the nature and occurrence of poverty among and within the rural areas of Northern Iraq, including the* ***impacts of subsidies on small farmers and different categories of vulnerable groups****, elaborate an improved approach and methodologies for poverty targeting within the agricultural sector/the programme; develop a set of clear criteria which determine/limit the participation in specific poverty support by the programme.*

- *Assist the programme in developing an improved needs assessment methodology, which suits the demands of the different programme sub-sectors.*

- ***Establish, where appropriate, working relations with other UN agencies (particularly WFP, UNOHCI and HABITAT) and NGO's for coordinated activities targeted at vulnerable groups.***

Qualifications : Sociologist/Socio-economist with broad expertise in poverty alleviation and extensive practical experience in rural settlement and rehabilitation programmes; strong conceptual and methodology development skills; knowledge of participatory approaches/ methods.

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