ETHIOPIA:
SIMIEN NATIONAL PARK (1)

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PRESENT SITUATION OF THE SEMIEN NATIONAL PARK AND VIEWS ON ITS

FUTURE STATUS

Draft report on a mission to Semien (1 to 15 Feb. 1981) on Behalf of UNESCO in connection with World Heritage Fund

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PLEASE NOTE THAT THIS REPORT IS THE RESULT OF VERY SHORT
THINKING AND THAT IT IS WRITTEN BY A NON ENGLISH SPEAKING. FOR ANY
MISUSE OF THE ENGLISH BENEVOLENCE IS REQUESTED.

A. OBJECT OF THIS REPORT

THE PRESENT PAPER SHOULD BE CONSIDERED AS A PRELIMINARY ATTEMPT
TO CLARIFY MAIN FINDINGS REGARDING THE MISSION TO SEMIEN MOUNTAINS NATIONAL PARK WHICH TOOK PLACE BETWEEN FEB I AND EEB 15 WITH II EFFECTIVE
DAYS OF FIELDWORK COMPRISING SOME 75 HOURS OF FOOT TREK. IT IS QUITE OBVIOUS THAT HAVING RETURNED FORM SEMIEN ONLY TWO DAYS AGO, DETAILED COLLECTED DATA AND INFORMATION CANNOT BE HERE MADE AVAILABLE BY THE WRITER. YET IT
IS HIS BELIEF THAT THE CONCERNED ETHIOPIAN AUTHORITIES NEED TO HAVE THE
PENERAL VIEWS OF THE CONSULTANT WITH SOME URGENCY, PRIOR TO HIS DEPARTURE
FROM THE COUNTRY, SO THAT THEY CAN DEFINE THE KIND OF POLICY THEY WISH
TO IMPLEMENT WITH REGARD TO THE ASSISTANCE OF WORLD HERITAGE, AND POSSIBLY
OTHER UN AGENCIES, TAKING INTO ACCOUNT THE FINDINGS OF THE CONSULTANT'S
MISSION. THE AVAILABILITY OF THE DETAILED DATA AND INFORMATION WILL HAVE
A BEARING ON THE IMPLEMENTATION OF SUCH A POLICY, BUT NOT ON ITS COAL.

AND THIS IS WHAT SHOULD BE, AT THIS STAGE, DEFINED.

ON THE OTHER HAND IT SHOULD BE MADE QUITE CLEAR THAT THE VIEWS PRESENTED HERE ARE BUT MERE PERSONAL CONCLUSIONS OF THE WRITER AND THAT, PENDING UNESCO'S APPRAISAL, THEY IMPLY NO COMMITTING POSITION ON THE PART OF THE ORGANIZATION.

IT IS HOPED THAT TOGETHER WITH THE EXPRESSED VIEWS OF THE ETHIOPIAN COUNTERPART OF THE CONSULTANT. DR E.BEKELE THE COMPETENT AUTHORITIES TO - GETHER WITH THE UN AGENCIES INVOLVED WILL VISUALIZE IN A CLEARER WAY WHAT CAN BE AND SHOULD BE UNDERTAKEN TO PROMOTE CONSERVATION OF QUITE A UNIQUE SPOT OF THE EARTH, IN ACCORDANCE WITH THE LOCAL AND REGIONAL REQUIREMENTS FOR THE WELLFARE OF THE POPULATIONS CONCERNED.

As far as the consultant is concerned two reports concerning

Semien National Park should follow: One integrating all views expressed

and formulating proposals as to suggested UNESCO future involvement.

ONE DETAILED TECHNICAL REPORT ON SUGGESTED LANDUSE TRENDS. PARTICULARLY

WITH REGARD TO SOIL MANAGEMENT AND NATURAL VEGETATION CONSERVATION, ISSUES
ON WHICH THE WRITER INVESTED DETAILED ATTENTION.

B. TERMS OF REFERENCE OF THE MISSION

THE GENERAL TERMS OF REFERENCE OF THE CONSULTANT CONSISTED IN ASSISTING THE GOVERNMENT OF ETHIOPIA IN IMPLEMENTING UNESCO'S WORLD HERITAGE CONVENTION AND PERTAINANT MAB PROGRAMME. WITH REGARD TO SEMIEN MOUNTAINS NATIONAL PARK, ALREADY INCLUDED IN THE WORLD HERITAGE CONVENTION, THE CONSULTANT, IN CO-OPERATION WITH THE ETHIOPIAN COUNTERPART, WHOSE SERVICES WERE HIRED FOR THE CAUSE BY UNESCO, WAS TO ELABORATE A TECHNICAL CO-OPERATION REQUEST BASED ON UP-TO-DATE APPRAISAL OF THE CONSERVATION STATUS OF HABITATS AND SPECIES IN THE PARK AND OF THE SOCIO-ECONOMICAL CONTEXT IN AND AROUND THE PARK.

C. APPROACH BY THE CONSULTANT

HAVING MAINLY AN AGRO-ECOLOGICAL BACKGROUND AND NOT BEING A CONSERVATION SPECIALIST OF FOR THAT MATTER A WILDLIFE SPECIALIST.

THE CONSULTANT CONCENTRATED ON SPECIFIC PRESENT ISSUES OF LANDUSE PRACTICES IN AND AROUND THE PARK. HE LEFT TO HIS COUNTERPART, WHO ON THE COUNTRARY HAS SPECIFIC TRAINING IN THE FIELD OF WILDLIFE AND CONSERVATION, TO DEAL WITH THESE SPECIFIC MATTERS. THE INTERELATION BETWEEN THESE FOCAL POINTS, WHICH IS OBVIOUS AND IS PROBABLY THE NUMBER ONE PROBLEM, WILL BE AT THE FINAL STAGE OF THE CONSULTANCY WORK THE RESULT OF DISCUSSIONS BETWEEN THE CONSULTANTS AND THE COMPETENT ETHIOPIAN AUTHORITIES. THIS STAGE IS NOT REACHED YET. THE MAIN OBJECTIVE OF THE CONSULTANT AT THIS STAGE IS TO PROMOTE DISCUSSION FOR DEVISING A POLICY WITHIN WHICH COHERENT UNESCO. OR FOR THAT MATTER, IF GLOBAL REGIONAL DEVELOPMENT IS BEING CONSIDERED AS HAVING A BEARING ON THE PARK, UN

EXPRESSED ON MATTERS AS VITAL TO THE REGION AND THE PARK AS PRESENCE

OF HUMANS WITHIN THE PARK. THERE WAS LITTLE DOUBT IN HIS MIND. AND THIS

PRIOR TO DEPARTURE TO ETHIOPIA AND ON BASIS OF INFORMATION GATHERED IN

SWITZERLAND WITH MESSRS HURNI (BERNE) AND NIEVERGELT (ZURICH), THAT THE

PROBLEMS OF SETTLEMENTS WITHIN THE PARK WAS ONE OF THE MAJOR ISSUES.

THEREFORE, WITH REGARD TO STABILITY OF THE CONSERVATION AREA THE QUESTION

OF THESE SETTLEMENTS WHICH ARE, OF COURSE, LINKED WITH THE GENERAL SETTLEMENT

SITUATION AROUND THE PARK SHOULD BE GIVEN FIRST ATTENTION AND APPROACHED.

IN AN UNBIASED WAY.

IN CONSEQUENCE THE CONSULTANT FELT DURING FIELDWORK THAT HE SHOULD INVEST ALL POSSIBLE EFFORTS TO GATHER RELEVANT INFORMATION ON PRESENT LANDUSE PRACTICES, ON VIEWS OF THE LOCAL POPULATIONS, AUTHORITIES AND RESPONSIBLE PERSONNEL OF THE PARK. THIS IMPLIED IN PARTICULAR EFFORTS FOR ATTEMPTING TO UNDERSTAND THE WAY PRESENTLY SOILS AND NATURAL VEGETATION ARE BEING USED. REPRESENTATIVE SOIL SAMPLES WERE COLLECTED AND AN ATTEMPT WAS MADE TO UNDERSTAND THE GLOBAL EROSION SYSTEM, MAINLY INDUCED BY THE PRESENCE OF PEOPLE. AN ATTEMPT WAS ALSO MADE TO REGISTER THE VARIETY AND DISTRIBUTION OF PLANT COMMUNITIES. IN THIS CONTEXT THE CONSULTANT SHOULD LIKE TO STRESS THAT HE WAS STRUCK BY THE RICHNESS OF THESE COMMUNITIES WITHIN THE RESTRICTED AREA OF THE PARK, WHICH, ON THE OTHER HAND, IS NO WONDER CONSIDERING THE ALTITUDINAL GRADIENT COVERED BY THE PARK AREA XX XXXXXXXX (2500 TO 4000 M). As previously mentioned a detailed technical REPORT WILL BE PRODUCED AT A LATER STAGE ON THESE TOPICS. DELAY WILL BE DUE TO SOIL ANALYSIS AND PLANT IDENTIFICATION. THE RESULTS OF INTERVIEWS WITH PEASANTS IN THREE DIFFERENT LOCALITIES MUST ALSO BE WORKED OUT.

THE WRITER WILL NOT REFRAIN FRO STATING THAT ON CERTAIN ISSUES

HIS MIND IS NOT CLEARER THAN A BOTTLE OF DARK INK IN A TUNNEL DURING

A MOONLESS NIGHT. THIS MAY BE DUE TO CUMMUNICATIONS VIA AMHARIC AND PRESSURE

BY TIME. THIS FACT SHOULD BE BORNE IN HIND WHILE USING THE INFORMATION IN

THIS PAPER.

D. SOME FACTS IN AND AROUND THE PARK

1. GENERAL LANDSCAPE

EVEN IF A SCIENTIST, OR FOR THAT MATTER A CONSULTANT WITH SCIENTIFIC PRETENSES, SHOULD NOT LET HIMSELF BE CARRIED OFF BY BEAUTY, WHICH MAY BE BUT AN ILLUSION, AND HERE MIGHT NOT BE THE RIGHT OCCASION TO STATE IT: SEMIEN NATIONAL PARK WITH ITS MIGHTY LANDSCAPE FEATURES CUTS OFF THE BREATH.

BY AND BY THE VISITOR DISCOVERS BEYOND THE SCENERY THE GREAT TUNCTUAL
RICHNESS OF THE SITE. IF HE IS NOT SENSIBLE TO THE FACT THAT IT IS

JERE ONLY ON EARTH THAT HE CAN SEE WALIA IBEX, HE WILL BE SENTITIVE

AT THE AGILITY OF THE ANIMAL WHICH, LIKE AN ACROBAT, CLIMBS ALMOST VERTICAL CLIFFS. AND IF HE THINKS HE SEES BUT A RARE GOAT, HE CAN ADMIRE

THE LAON LIKE MANE OF SENIOR GELADA MALES, GET, IF HE HAS GOOD AUCK, HE WILL GET

A GLIMPSE AT A HUNTING SEMIEN FOX. IF NOTHING OF THAT IMPRESSES HIM,

BECAUSE HE HAS BEEN SPOILT BY TOO MUCH FILM OR TV, HE CAN CAST HIS EYES

ON THE DANCING LEGS OF HIS MULE, WHICH INDEED ARE QUITE AGILE, OR THEN

BE MOVED BY THE KIDS IN THE VILLAGES, THE SPONTANEOUS HOSPITALITY OF

THE MEN AND THE GRACIOUS SMILE OF SOME WOMEN.

By this the writer means to say that Semien is not. In his eyes.

A NATURAL HISTORY MUSEUM, WHERE RARE, DISAPPEARING OR DISAPPEARED ITEMS

ARE BEING COLLECTED: IT IS A LIVING EXPERIENCE AND, FOR THE VISITOR (WHAT ELSE IS A SHORT TERM CONSULTANT | WONDER?), A LIVED EXPERIENCE. SEMIEN IS A WHOLE DELICATE ORGANISM.

AT PRESENT THE PARK TERRITORY IS STRUCTURED AROUND THE MAIN ESPCARPMENT TO THE NORTH WHICH SHOULD INCLUDE THE WHOLE TERRITORY OF THE WALIA, SO FAR THE WRITER COULD UNDERSTAND THE CRITERIA FOR ESTABLISHING THE PARK BOUNDARIES, SOME TEN YEARS AGO. BUT ACCORDING TO RECENTLY PUBLISHED MAP INFORMATION BY HURN! (I:100'000 Treking Map) IT DOES NOT. WALIAS ARE FOUND OUTSIDE THE PARK. HOW IMPORTANT ARE THESE HABITATS, IS THERE ANY EXTENSION OF THEM? FUTURE MONITORING OF THE ANIMAL SHOULD SHOW.

PRESENTLY THE PARK TERRITORY (APPROX. 150 SQ KM) INCLUDING WHAT CAN BE CALLED THE MAIN ESCARPMENT TO THE NORTH WITH ALMOST VERTICAL DROPS UP TO 6 TO 800 METERS EXTENDS SOME TO THE NORTH INTO THE SO CALLED LOWLANDS DOWN TO DISSECTED TERRACES OF SOME 2500 M ALT. AND INCLUDES PARTLY ANOTHER DROP OF 4 TO 500 METERS TO THE NEXT TERRACE SYSTEM WHICH IS NOT INCLUDED.

To the south, inserting itself into the main escarpment in a "U" shaped form, the highland plateau between 3200 m (lower level of the Jinbar Valley which divides it WSW-ENE) and about 3700 meters. The park misses just the next level of the plateau to the E up to \$4200 meters which is the realm of interesting high mountain vegetation formations.

THERE ARE A NUMBER OF LIVELY VILLAGES WHICH, EVEN IF NOT CONSPICUOUS AS SETTLEMENTS, SHOW UP IN THE LANDSCAPE BECAUSE OF THE IMPACT OF CULTIVATION. PRESENT IN SMALL CLEARINGS WITHIN THE ERICA WOODLAND AS LARGE EXTENSIONS OF PLOUGHED FIELDS. SUCH AS. THIS YEAR. THE WHOLE NORTH LOOKING SLOPE OF THE LOWER JINBAR VALLEY (UP TO LONGITUDE OF THE GICH CAMP). TO THE SOUTH OF THE VALLEY THESE VILLAGES ARE MAINLY AMBARAS AND ARGIN. BOTH NOT VISITED BY THE WRITER. THE VILLAGE OF GICH. WHERE THE WRITER HAS HAD EXTENSIVE CONTACTS WITH THE LOCAL POPULATION (SOME 700 INHABITANTS ACCORDING TO STÄHLI (1978)). OCCUPIES A CENTRAL POSITION IN THE PARK AND ITS PRESENCE IS DUE TO INDUCE SOME PROBLEMS WHICH WILL BE DISCUSSED AT A LATER STAGE.

IN THE FIRST TERRACE SYSTEM BORDERING THE MAIN ESCARPMENT TO THE NORTH AN EXTENSIVE ACTION OF REMOVING PEOPLE HAS TAKEN PLACE IN 1980.

BEYOND THE 5 VILLAGES MENTIONED BY HURNI IN HIS REPORT TO IUCN (JULY 1980): FROM W TO E: MUCHILA, ANTOLA, DIRNI, TIYA, TRUWATA, TWO OTHER VILLAGES LYING ON THE PATH OUT OF THE PARK TO THE NORTH HAVE BEEN MORE RECENTLY REMOVED: AGIDAMIYA AND AMBA BER. THIS MEANS OVER 1000 OF THE ORIGINALLY 2500 PEOPLE LIVING IN THE PARK AND SOME 14 SQ KM OF LAND NOW LYING FALLOW, AS ESTIMATED BY THE SAME HURNI:

* see foutuble page 14

2) SPECIFIC INFORMATION ON SOILS AND VEGETATION

AGAIN THE WRITER HAS TO REFER TO THE WORK UNDERTAKEN BY THE SWISS (MAINLY WITH REGARD TO HIS FIELDS OF INTEREST, BY THE UNIVERSITY OF BERNE) TO GIVE IT ALL THE CREDIT IT MERITS. THE MAPS PRODUCED BY THE GEOGRAPHICAL INSTITUTE OF THAT UNIVERSITY (BOTH DETAILED MAPS AT 1:25'000 AND MORE GENERAL MAPS AT 1:100'000) ARE MOST VALUABLE WORKING TOOLS. BECAUSE OF THEIR EXISTENCE THE WRITER WAS IN A POSITION TO UNDERTAKE SOME DETAILED WORK, MAINLY WITH REGARD TO AN ATTEMPT TO UNDERSTANDING THE EROSION SYSTEM AROUND GICH, WHICH OTHERWISE WOULD NOT HAVE BEEN POSSIBLE. (SEE NEXT CHAPTER).

YET BEING ECOLOGICALLY TRAINED THE APPROACH GIVEN TO THESE DETAILED OBSERVATIONS HAVE IN VIEW, NOT SO MUCH DESCRIPTION OF THE PHENOMENON OBSERVED. BUT THE UNDERSTANDING OF THEIR DYNAMICS.

THE WRITER MISSED BOTH BOTANICAL BACKGROUND KNOWLEDGE AS WELL AS CLIMATIC, AND APPARENTLY THE GAP WAS NOT TO BE FILLED WITHIN THE TIME AVAILABLE.

ACTIVE ECOLOGICAL FACTORS ON SOILS AND VEGETATION OF NON BIOTIC NATURE ARE NATURALLY ALTITUDE, SLOPE, BUT ALSO SURPRISINGLY, EXPOSITION, LATTER MOST PROBLABLY NOT IN CONNECTION WITH RAINFALL DISTRIBUTION, BUT WITH THE ENERGY BALANCE. IT IS GUESSED HERE AND BROUGHT FORWARD AS A HYPOTHESIS TO INVESTIGATE THAT NORTH FACING AND SOUTH FACING SLOPES RECEIVE DIFFERENT AMOUNTS OF ENERGY ACCORDING TO INTERACTION BETWEEN THE SUN'S APPRRENT MOVEMENT AND THE OCCURENCE OF THE RAIN SEASONS AND THAT THIS ECOLOGICAL DIFFERENCE SHOWS IN THE EXTENSION OF VEGETATION BELTS ON BOTH TYPES OF SLOPES AS WELL AS IN THE SOIL PROFILE. THIS ARGUMENT IS BROUGHT FORMWARD FOR THE PLATEAU BETWEEN SAY 3700 M AND 3200 M. THE HYPOTHESIS HAS CERTAINLY A BEARING ON THE DISTRIBUTION OF ERODIBILITY OF THE SOILS AND ON ITS FERTILITY. THERE ARE THEREFORE CONSEQUENCES BOTH FROM A POINT OF VIEW OF PRIMARY PRODUCTION AS WELL AS ON THE SECONDARY AGRO-ECOLOGICAL SYSTEMS WHICH, IN TURN, HAVE A BEARING ON WILDLIFE DISTRIBUTION.

BUTION.

THE WRITER WAS STRUCK BY THE UPWARD DISTRIBUTION OF VEGETATION

(ABOVE 3900 M) SHOWING QUITE UNEXPECTED WOODY FORMATIONS (LOBELIA SP).

ON THE LOWER SIDE, BETWEEN 2500 AND 2200 M AT THE NORTHERN FOOT OF THE MAIN ESCARPMENT, THERE ARE, IN SHADOWED AND DEEP (UP TO SEVERA HUNDRED METERS) CANYONS EXTRAORDINARY AND BOTANICALLY VERY RICH FOREST FORMATIONS.

BOTH THESE FORMATIONS ARE EITHER AT THE VERY MARGIN OF THE PARK
OR NOT INCLUDED IN ITS TERRITORY, AND THIS IS FOUND AS VERY REGRETTABLE.

3) THE GICH EROSION SYSTEM

Any unexercised eye is Struck by the occurence of more or less extended reddish coloured gullies of variable depth <u>Below</u> the Gich village.

Temptation is great to tie the phenomenon exclusively to cultivation, deforestation and absence of contouring of fields. i.e. to the presence of man. Yet it is Stricking that on the slope opposite to the village, where extensive cultivation of the whole slope up to 3600 m where fields are laid out on slopes up to 60 to 70%, there are almost no traces of Gullying!

DISSECTION AND ACCUMULATION PROCESSES ARE PRESENT ON ALL RELIEF

AND THE STATEMENT OF HURNI P. 94 UNIVERSITY OF BERNE, 1978 WHEREBY "SOIL

EROSION IS CAUSED BY MAN'S IMPACT ON NATURE..." OVERSIMPLIFIES THE

PROBLEM. SOME COLLUVIAL ACCUMULATIONS HAVE BEEN OBSERVED ABOVE THE

CULTIVATION LIMIT ON GICH SLOPE WHICH ARE A PRODUCT OF "EROSION", THAT

IS TO SAY OF MOVEMENTS OF WEATHERED MATERIAL WHICH ARE MUCH ELDER THAN

THE PRESENCE OF MAN. IT IS THE CONJUNCTION OF CERTAIN PHYSIOGRAPHICAL

FEATURES AND THE OCCURENCE OF CERTAIN LANDUSE PRACTICES WHICH CREATE

THE PHENOMENA OBSERVED, NOT LATTER ALONE ON STEEP SLOPES, GIVEN CERTAIN

CLIMATIC CRITERIA, MAINLY RAINFALL INTENSITY FOR WHICH THERE IS NO DATA

AVAILABLE. AT LEAST TO THE CONSULTANT.

THIS FIRST AND CRUDE OBSERVATION LED THE WRITER TO LOOK FURTHER

INTO THE SYSTEM AND SAMPLE OBSERVATIONS IN GREATER DETAIL ALONG A TRANSECT STARTING ABOVE GICH RIGHT ACCROSS THE VALLEY (140° BEARING). THE STARTING POINT OF THE TRANSECT HAS BEEN CLEARLY IDENTIFIED ON THE GROUND WITH A HEAP OF STONES, AND THEREFORE SAMPLE POINTS PINNED ON THE L:25'000 MAP CAN BE TRACED BACK.

SOIL PITS WERE DUG AND SOIL SAMPLES TAKEN.

GENERAL CONCLUSIONS ARE FOLLOWING:

- A) MOVEMENTS OF SOILS PARTICLES AND ACTUAL DISSECTION OF SOIL BURFACE STARTS WAY ABOVE CULTIVATION AND BARE LAID PATCHES ARE TO BE FOUND IN THE TUSSOCK STEPPE COVER. THESE PATCHES CREATE RUN-OFF SURFACES. AND GULLIES APPEAR AT A CERTAIN CONCENTRATION OF THESE PATCHES IN CONJUNC-TION WITH ROCK-OUTCROPS. THE PRESENCE OF THESE ROCKOUTCROPS IS A DETERMINENT FACTOR FOR CREATING THE NECESSARY VOLUME OF WATERFLOW AND HENCE, THE GULLYING. IF OVERGRAZING, OR LETS CALL IT BADLY DISTRIBUTED GRAZING, IS RESPONSIBLE FOR THE OCCURENCE OF BARELAID PATCHES, TOTAL RUNOFF CANNOT BE ATTRIBUTED EXCLUSIVELY TO OVERGRAZING. IT IS NOW CLEAR WHY GULLYING DOES NOT TAKE PLACE ON THE OPPOSITE SLOPE: MAINLY BECAUSE THESE ROCKOUTCROPS AT THE HEAD OF THE CATCHMENT ARE ABSENT. BECAUSE IT IS POSSIBLE TO DIMINISH CONSIDERABLY THE VOLUME OF RUNOFF BELOW THESE MOCKOUTCROPS, THE WRITER CONVENED ON-THE-SPOT SURVEY OF SUCH AREAS WITH THE PARKWARDEN AND RESPON-SIBLE PEASANTS. IT WAS AGREED THAT BELOW SUCH ROCKOUTCROPS GRAZING WOULD BE RESTRICTED, IF NOT STOPPED ALTOGETHER, IND BANDS OF AT LEAST 100 METERS. THE EFFECTS OF SUCH A SIMPLE MEASURE SHOULD NATURALLY BE MONITERED DURING THE COMING NEXT RAINY SEASON.
- B) BELOW SUCH RUNOFF SURFACES ONE FINDS SOMETIMES COLLUVIAL SOIL ACCUMULATIONS WHICH MAY HAVE BEEN CULTIVATED AT A TIME AND SHOW SIGNS OF GULLYING. THE GULLYING INTENSITY SHOULD BE REDUCED BY THE ABOVE MEASURE, IF RESPECTED. THE PEASANTS WERE SHOWN HOW TO FORM SMALL DITCHES ALONG THESE GULLIES. SPECIALLY IN THEIR UPPER SEGMENTS. IN ORDER TO

REDUCE WATERFLOW AND HENCE FURTHER DISSECTION.

- B) BELOW THIS LEVEL OF RUNOFF THE EROSION SYSTEM, HAVING BEEN SET IN MOTION, ACCELERATES WITH RUNOFF PROGRESSING IF NO NATURAL OBSTACLE SETS AN END TO IT (PRESENCE OF A TORRENT, E.G.). RUNOFF MAY PROGRESS INTO CULTIVATED FIELDS, WHERE TRACES OF IT DISAPPEAR BECAUSE OF PLOUGHING. IT WILL APPEAR AGAIN BELOW CULTIVATED SURFACES ON STEEP SLOPES (ABOVE 50%) AS DEEP REDDISH GULLIES WHICH ARE ACTIVE ON SURFACES WHERE CULTIVATION HAS BEEN ABANDONED BECAUSE ALL TOPSOIL HAD DISAPPEARED. THIS IS THE PHENOMENON WHICH HURNI HAS BEEN ABLE TO SHOW IN PROGRESSION ON HIS MAP "SOIL EROSION IN THE UPPER JINBAR VALLEY" 1978, WHICH SHOWS THE STATE OF DAMAGE, BUT DOES NOT INDICATE THE GENETICS OF THE SYSTEM ORIGINATING, IN THE VIEW OF THE WRITER, AT THE TOP OF THE CATCHMENT.
- C) FROM TOP TO BOTTOM OF THE SLOPE (OR HEAD TO TAIL OF THE CATCH-MENT) THERE ARE CONSPICUOUS CHANGES IN THE SOIL PROFILE. THERE ARE ALSO DIFFERENCES BETWEEN THE NORTH EXPOSED AND SOUTH EXPOSED SLOPES.

 PARTLY THE CHANGES OBSERVED IN THE PROFILE MAY BE DUE TO DIFFERENCES IN THE PEDOGENETIC CONDITIONS BETWEEN 3600 M AND 3000 M, RANGE OF THE ALTITUDINAL GRADIENT IN THE TRANSECT CHOSEN. BUT THE MAIN DIFFERENCES ARE CERTAINLY DUE TO MAN'S MISUSE OF THE SOIL.
- PROFILE TO COMPLETE DISAPPEARANCE OF IT LINKED WITH OBVIOUS COLOUR CHANGES (DARK BROWN TO REDDISH) AND DESTRUCTURATION OF THE UPPER HORIZON WITH GRADUAL REDUCTION OF ORGANIC MATTER CONTENT AND TOTAL ABSENCE OF IT IN EXTREME CASES.

BOTH PEDOGENETIC FACTORS AND CONTINUOUS CULTIVATION WITH ONLY ONE YEAR FALLOW CREATE IN SOME INSTANCES VERY WORRYING SOIL CONDITIONS WITH DECREASING SOIL FERTILITY AS INEVITABLE CORRELATE. THE CONSEQUENCE IS THAT STILL MORE LAND HAS TO BE PUT UNDER THE PLOUGH TO MAINTAIN YIELDS.

SOIL ANALYSIS ON SOME 10 PROFILES WILL SHOW, IT IS HOPED, THE DETAILED TRENDS OF C/N RATIOS AND MAY GIVE, IF NOT A COMPLETE, YET A

REPRESENTATIVE PICTURE OF THE SOIL CONDITIONS IN THE PLATEAU AND PIEDMONTS, AS GREAT CARE WAS TAKEN WITH REGARD TO THE CHOICE OF SITES SAMPLED.

IT IS ASSUMED THAT ACCORDING TO THE FAO-UNESCO SOIL CLASSIFICATION THE DEGRADATION PROCESS OF WHAT MIGHT BE CALLED ANDOSOILS RANGE FROM MOLLIC TO OCHRIC.

4) TRADITIONAL LANDUSEPRACTICES*

AN ATTEMPT WAS MADE TO UNDERSTAND THE VISIBLE ASPECTS OF TRADITIONAL LANDUSE, BUT THIS IS A FIELD OF EXPLORATION WHERE ONE FALLS, PARTICULARLY BECAUSE ONE IS PRESSED WITH TIME, INTO THE DARK-INK BOTTLE. GATHERED PEOPLE WERE INTERROGATED IN THREE VILLAGES, BUT BEING BECAUSE OF FEAR OR OF DIFFICULTY OF LANGUAGE COMMUNICATION, THE ARISING PICTURE APPEARS FAR FROM BEING CLEAR IN PARTICULAR WITH REGARD TO DECREASING YIELDS.

IN NO INSTANCES DID THE PRESENTED LANDUSE PRACTICE INCLUDE NUTRIENT INPUT. NOR NUTRIENT RECYCLING (AVAILABLE COWDUNG IS MOSTLY BURNT). FALLOW PERIODS FROM ONE TO FIVE (TO DESIRED TEN YEARS) ARE RELIED ON TO GAIN BACK FERTILITY.

IT IS ANTICIPATED THAT SOME OF THE BARLEY GROWING EXTENDS BEYOND WHAT ONE CAN CONSIDER AS AN ACCEPTABLE LEVEL OF YIELD.

IT IS ALSO ASCERTAINED THAT THE PROBLEM OF DOMESTIC FUEL IS PARA-

ANIMAL REARING (MAINLY SHEEP AND CATTLE) IS FOR SELF CONSUMPTION.

BUT APPEARS TO CONSTITUE ALSO THE MAIN SOURCE OF CASH FOR OUTSIDE PURCHASES.

MARKETS OF DEBARK OR ADI ARKAY ARE WITHIN A FEW TO SIX HOURS OF REACH ON FOOT.

IF QUESTIONED WITH CARE AND TACT, PEASANTS WILL ADMIT THAT THEY LACK KNOWLEDGE, BUT APPEAR VERY WILLING TO ACQUIRE IT.

^{*} THE LAST TWO CHAPTERS WILL HAVE FULL MEANING ONCE THE BASIC DATA

E. AREAS OF PROBLEMS

1) GENERAL

BEFORE STATING SOME DIFFICULT ISSUES WITH WHICH PARK AUTHORITIES ARE
BEING CONFRONTED FULL CREDIT MUST BE GIVEN TO THEM HAVING SO FAR BROUGHT
THE PARK TO THE PRESENT STANDARD, AND THIS FACING THE USUAL CONSTRAINTS
TIED TO CONSERVATION ACTIVITIES PLUS THE PAST DIFFICULTIES IN A REGION
FACING GRAVE LOCAL PROBLEMS, NOW FORTUNATELY UNDER CONTROL.

If the writer feels that at this stage, and with all reserves pertaining to an obviously insufficient level of information on his side, but also to scanty knowledge about some basic issues, some of the delicate problems with which the future of the park is confronted should be brought up, so because in any case these problems will become sooner or later bottle-necks. Sooner if the build up of the animal population, as seems the trend to be (see Dr Bekele's report), is facing a success.

ON THE OTHER HAND THE REGION APPEARS TO BE IN THE HANDS OF ADMINISTRATORS WHO DO NOT MAKE A HEAL THAT THEY WANT, AND THE WRITER'S OPINION IS THAT TEY ARE RIGHT. TO DEVELOP AND RAISE CONCURRENTLY THE WELLFARE OF THE POPULATIONS INVOLVED.

ROAD CONNECTIONS FOR INCREASED SECURITY AND FOR BETTER HEALTH MANAGEMENT, AFFORESTATION PROGRAMMES AND TOURIST DEVELOPMENT ARE ENVISAGED. HOW DOES THE PARK STAND WITH REGARD TO THESE OBVIOUS PRESSURES? IS ITS TERRITORY WIDE ENOUGH AND ITS BOUNDARIES DESIGNED WITH SUFFICIENT CARE TO HOLD AS A CONSERVATION UNIT, ORIGINALLY MAINLY GEARED AT PRESERVING THE WALLA? WHEN WILL THE PROBLEM OF CONTROL OF THE WALLA POPULATION ARISE, IT EVER DOES, AND HOW TO COPE WITH IT? LAST BUT NOT LEAST: HOW FAR IS THE PRESENCE OF HUMAN POPULATIONS COMPATIBLE WITH THE CONSERVATION PURPOSES?

These questions require all careful consideration if the attempt

SHOULD BE MADE HERE OF LINKING WITH POSSIBLE WORLD HERITAGE HELP

TO THE PARK A LONG TERM MANAGEMENT POLICY FOR STABILISING THE CONSER
VATION PURPOSES.

THE WRITER HAS TAKEN THE POSITION THAT HE SHOULD ENDEAVOUR TO SHOW THAT WHATEVER IS BEING DONE TO-DAY WILL HAVE ITS CONSEQUENCES FOR THE FUTURE BIOLOGICAL MANAGEMENT OF THE RESERVE. YET OTHER VIEWS ARE VALID TOO: THE AUTHORITIES INVOLVED MIGHT FEEL THAT THEIR DAY TO DAY PROBLEMS CREATE SUCH PRESSURE, THAT FIRST THIS MUST BE RELEASED BEFORE ANY LONGER TERM THINKING CAN TAKE PLACE.

THE DUTY OF THE WRITER IS NOT TO TAKE POSITION WITH REGARD TO
THE ONE ORE THE OTHER STAND. HE MUST ADMIT THAT THERE ARE PRIORITES

O BE TAKEN CARE OF. BUT THESE DO NOT APPEAR TO CREATE OTHER BUT FINANCIAL
PROBLEMS OF DECISION, WHEREBY LONGER TERM PLANNING REQUIRES DELICATE
WEIGHING OUT OF SOME COMPLEX FACTORS THE ROLE OF WHICH CANNOT BE ASCERTAINED.
THE WRITER NOT BEING AN ADMINISTRATOR WILL LEAVE TO COMPENTENT DECISION
MAKERS TO TRANSLATE INTO FINANCIAL DECISION TERMS THE PRIORITIES HE
THINKS HE MUST ATTEMPT TO DEFINE.

THE OBJECT OF THIS PRELIMNARY REPORT IS, IT WILL BE REMINDED,
TO OBTAIN THE NECESSARY, IT IS HOPED, CONVERGENT VIEWS IN ORDER TO
PRESENT TO UNESCO A CLEAR PICTURE ENABLING THE GOVERNING AUTHORITIES
OF WORLD HERITAGE TO TAKE THE NECESSARY AND DESIRABLE DECISIONS WITHIN
THE FRAME WORK OF THAT INSTITUTION.

2) THE CONSERVATION TERRITORY

APART FROM THE SECOND PROBLEM THEREAFTER MENTIONED WHICH CONCERNS THE PRESENCE OF HUMAN SETTLEMENTS WITHIN THE REALM OF THE PARK, THE QUESTION ARISES

- A) WHETHER THE PRESENT TERRITORY OF THE PARK INCLUDES OR NOT ALL HABITATS (PLANT AND ANIMAL) REPRESENTATIVE OF HIGH SEMIEN
- B) WHETHER OR NOT THE EXTENSION & TO-DAY AVAILABLE OF HABITATS,

 PARTICULARLY WITH REGARD TO ANIMAL LIFE, IS SUFFICIENT FOR ASSURING

 DEVELOPMENT OF THE PRESENT POPULATIONS WITH THE ANTICIPATED GROWTH RATE

C) WHETHER PREENTLY RECORDED ELEMENTS OF POPULATIONS OF WALIA AND SEMIEN FOX OUTSIDE THE PARK ARE SIGNIFICANT OR NOT TO THE WHOLE CONSERVATION. WALIA BEING OBVIOUSLY THE PRIORITY FOR JUSTIFYING THE CONSERVATION.

THE WRITER WILL NOT TAKE POSITION WITH REGARD TO POINTS B) AND C).

WITH REGARD TO POINT A) HE WILL STATE THAT THERE ARE MISSING SOME IMPORTANT PLANT COMMUNITIES WITHIN THE PARK, SPECIALLY THE HIGH ALTITUDE ONES (ABOVE 3900 M). Some LOWLAND PLANT COMMUNITIES ARE TOO PERIPHERICAL TO THE PARK AND SHOULD BE-PROTECTED BY A GREATER BUFFER ONE. THIS CONCERNS MAINLY THE KORKSX SHADE FORESTS IN LOWLAND VALLEYS.

IT SHOULD BE ASCERTAINED ALSO THAT PRIMARY PRODUCTION LEVELS

ARE COMPATIBLE WITH POPULATION BUILD UPS, WHICH IMPLIES SOME MONITORING

OF PLANT LIFE, NOTHING JOF WHICH SEEMS TO BE A CONCERN TO-DAY.

3) THE PROBLEM OF EXISTING HUMAN SETTLEMENTS

IN RESTRICTED CONSERVATION TERMS, THE PROBLEM MIGHT NOT EVEN EXIST.

NATIONAL PARK = ABSENCE OF HUMAN INTERFERENCE. THE EQUATION IS SIMPLE

ENOUGH TO PUT IN VIRGIN COUNTRY WHICH SHOULD BE KEPT SO FOR FUTURE RECORDS.

FOR SEMIEN IT IS NOT THE CASE. ACCORDING TO AN INTERVIEW OF AN OLD MAN

IN DIHWARA (EAST OF THE PARK), THE LAND IN THAT AREA HAS BEEN OCCUPIED

FOR AT LEAST FOUR GENERATIONS. NOT ONLY THIS OCCUPATION HAS HAD LONG TERM

EFFECTS ON THE ECOLOGICAL POTENTIAL OF THE LAND SOME OF WHICH WILL BE

REVERSED, IF AT ALL FEASIBLE, ONLY IN FAR REMOTE FUTURE, NAMELY WITH

THE SOILS, BUT OUT OF IT HAS EVOLVED SOME LOCAL HUMAN CULTURAL FEATURES

WHICH, THE WRITER FEELS, NOW BELONG TO THE FEATURES OF THE COUNTRY AND

PRESENT A POTENTIAL NOT TO BE NEGLECTED.

CONSIDERING THE STATE OF THE SOILS LEFT OVER AFTER REMOVAL OF CULTIVATION (SAY ON THE TERRACES* OF THE LOWLANDS) IT IS DOUBTFUL, PROBABLY QUITE UNREALISTIC TO HOPE, THAT THE ORIGINAL FOREST WILL REESTABLISH THROUGH NATURAL PLANT SUCCESSION. IT IS EVEN QUESTIONABLE THAT ARTIFICIAL AFFORESTATION PRACTICES WOULD IN ALL CASES SUCCEED, EVEN IN SELECTED SITES. IF LEFT ALONE, THE ABANDONED LAND WILL SEE ENCROACHMENT WITH SECONDARY BUSH WHICH MIGHT VERY WELL EVOLVE TO SOME PSEUDO-CLIMAX WITH ONE OR A FEW DOMINANT BUSHES, VERY SENSITIVE TO BUSHFIRES AND NOT WITH ALL GARANTEES SUITABLE TO EXISTING WILDLIFE, EVEN IF EXEMPT FROM BUSHFIRES.

THE ARGUMENT GOES TO SAY THAT THE POLICY "OUT-WITH-THE-PEOPLE"

HAS ALSO ITS ECOLOGICAL CONSEQUENCES WHICH MAVE TO BE WEIGHED OUT.

On the other hand to leave the existing settlements in the state they are with their present landuse practices hoping that some equilibre will spontaneously arise is not feasible. It is well known in Europe that because of outside attraction poles the youth tends to migrate out of the mountainous areas and to leave behind the desert of old age, first step to the human desert short.

IT MAY BE THAT ON A LONG TERM THE PASENCE OF A SELF-CONTROLED

POPULATION WITHIN THE PARK, WHO CAN ADOPT ADAPTED AGRO-FORESTRY TECHNIQUES

TOGETHER WITH APPROPRIATE ANIMAL HUSBANDRY PRACTICES. CAN BECOME AN ASSET

TO THE CONSERVATION: BE IT THAT THEY EXERT CONTROL OVER POACHING, DE IT

THAT THEY PROVIDE THE NECESSARY SERVICES TO THE CONSERVATION.

Whatever view is taken, there are ecological consequences. The view of the writer is that no decision either way can be taken without proper monitoring of these consequences. The other factor is the social receptivity to change of the existing populations which is an unknown factor.

* The Term Terrace is here used in its wide sense and not the way it is being used in Quaternary Geology

This important question of resettlement versus requalification of existing populations within the park should be the object of a proper study, if the decision is not to be left only with political authorities who probably themselves would appreciate objective views on the problem. Naturally the compatibility or not of requalified populations with wildlife development should be given ample attention.

4) THE QUESTION OF TOURISM DEVELOPMENT

IN VIEW OF THE FRAGILITY OF THE EXISTING CONSERVATION AND THE SCANTY NOWLEDGE AVAILABLE ON THE HABITAT AND SPECIES CHARACTERISTICS IT IS

CERTAINLY PREMATURE TO DEVISE DEFINITE PLANS TO DEVELOP TOURISM WITHIN THE PARK. YET THE PROBLEM WILL ARISE GOONER OR LATER AND WORLD HERITAGE MAY ALREADY HAVE BEEN A MEDIA TO PROPAGATE THE EXISTENCE OF SEMIEN

NATIONAL PARK. WITH TO-DAY'S MASS MEDIA AND FAMINE FOR EXOTIC OUT-OF-THE-ORDINARY OF ULTRA-URBANISED OVERCONGESTIONED, BUT WELL-OFF POPULATIONS, IT CAN BE EXPECTED THAT SOONER THAN PERHAPS DESIRED PRESSURE WILL BE EXERTED ON THE PARK TO OPEN UP ITS BEAUTIES. THAT THIS BEAUTY SHOULD NOT BE RAPED IS EVERYBODIES CONCERN, BUT NOT TO BE RAPED MEANS TO BE PREPARED FOR NOT BEING SO, AT LEAST WITHOUT CONSENT.

AGAIN HERE THE WRITER FEELS THAT ALREADY NOW SOME THOUGHT SHOULD

BE GIVEN AS TO THE KIND OF TOURISM WHICH MIGHT BE ENVISAGED. THIS REFLEXION

HAS CERTAINLY A BEARING ON THE POLICY WHICH MIGHT BE ADOPTED TOWARDS

THE EXISTING POPULATIONS. IT MIGHT BE SO THAT FOR HIGH QUALITY TOURISM.

READ FOR A TOURISM: ACTIVITY WHICH TAKES INTO CONSIDERATION ECOLOGICAL

IMPERATIVES, THE PRESENCE OF CERTAIN LOCAL POPULATIONS, RATHER THAN URBANISED

WAITERS, MIGHT BE AN ASSET.

ROAD BUILDING POLICY, BUILDING POLICY SHORT HAVE TO BE ENVISAGED ALSO IN THIS LIGHT.

F. SUGGESTED LINE OF ACTION

THE MERE EXISTENCE OF THE CONSULTANCY FINANCE BY UNESCO SHOWS THE INTEREST WHICH THE WORKS ENLIGHTENED WORLD COMMUNITY CASTS ON SEMIEN NATIONAL PARK. IT SHOULD BE THEREFORE OUR ENDEAVOUR TO COMPLY WITH THIS HIGH QUALITY DEMAND WITH AN EQUAL LEVEL OF SUGGESTIONS FOR FUTURE ACTION. IN VIEW OF WHAT SEMIEN REPRESENTS TO ETHIOPIA THERE IS NO DOUBT THAT THIS GOAL CAN BE ACHIEVED, EVEN WITHIN THE SHORT TIME STILL AVAILABLE DURING THE PRESENCE OF THE CONSULTANT IN THE COUNTRY. SHOWING ITS WILLINGNESS UNESCO HAS ALREADY ACCPEPTED, IN SPITE OF FINANCIAL CONSTRAINTS. TO EXTEND TWICE THE MISSION ORIGINALLY ALLOTED.

THE MAIN POINTS WHICH REMAIN TO CLARIFY BEFORE PUTTING A FORMAL REQUEST FOR ASSISTANCE ARE THE FOLLOWING:

- 1) Absolute priority action to be taken so that ongoing conservation practices be not hampered
- 2) FURTHER INFORMATION TO BE GATHERED WITHIN SHORT DELAY:
 IN ORDER TO DEVICE FUTURE PLANS FOR STABILISING THE CONSERVATION
 ON A LONG TERM BASIS
- 3) DEFINITION OF A BIOLOGICAL SCIENTIFIC PROGRAMME TO BE INSERTED IN THE MAB ACTIVITIES OF ETHIOPIA
- 4) Co-ordination with other programmes on-going or to be initiated by other bodies (IUCN, Swiss Universities, etc.)
 - 5) CO-ORDINATION WITH THE REGIONAL AND LOCAL AUTHORITIES
- 6) Co-ordination with other UN programmes (e.g. FAO's Landuse planning studies in Entiopia, FAO's co-operation with the resettlement commission, etc)

- 1) PRIORITY TECHNICAL PROGRAMME OF ASSISTANCE TO THE PARK
- A) IMPROVED SCOUTING CONDITIONS

THE WRITER WILL BACK ANY MEASURES UNDERTAKEN TO INTENSIFY, RENDER MORE EFFICIENT AND KNOWLEDGEBAL. THE SCOUTING PROVIDED IT REMAINS A DISCREET TOOL.

IN VIEW OF THE FACT, THAT WITH TIME GOING ON, THE SCOUTS WILL BECOME THE BEST SOURCE OF FIRST HAND INFORMATION, THERE SHOULD BE AN ADAPTED PROGRAMME OF TRAINING FOR THEM, ALSO BECAUSE THE PRESENT EXISTING 18 SCOUTS ARE INSUFFICIENT TO COPE WITH THE NECESSARY SCOUTING COVERAGE FOR THE WHOLE PARK AND AT ALL TIMES, NEW SCOUTS MUST BE HIRED AND TRAINED.

THE IMPROVED SCOUTING SYSTEM SHOULD DISPOSE OF:

- A RADIO COMMUNICATION NET MOST DESIRABLY TIED TO THE RURAL RADIO COMMUNICATION SYSTEM RECENTLY SET UP BY E.T.S. WITH THE COLLABORATION OF UNDP
- LIGHT EQUIPMENT FOR OBSERVATION AND CAMPING
- PROPER TRAINING, MOST DESIRABLY ON THE SPOT, INVOLOVING MAP READING, USE OF COMPASS, PLOTTING ON MAPS, CAPACITY TO RECORD PROPERLY ROUTINE OBSERVATIONS ON VEGETATION AND WILDLIFE, ETC
- CAMPS SHOULD BE OCCUPIED PERMANENTLY AND THEREFORE METEOROLOGICAL

 BSERVATONS, WITH THE APPROPRIATE SIMPLE EQUIPMENT, BE MADE AVAILABLE.

THE WRITER IS NOT OF THE OPINION THAT BECAUSE OF DISTURBANCE TO THE WILDLIFE ANY TREND OF BRINGING INTO THE PARK MOTOR VEHICLES OR POWER GENERATORS SHOULD BE ENCOURAGED, WITH THE POSSIBLE EXCEPTION OF SPECIFIC SCIENTIFIC PURPOSES. WITHIN THE PARK THE MAIN TRANSPORT SYSTEM SHOULD REMAIN WHAT IT IS: FOOT TREK AND MULE RIDING. YET THE PARK MAY FIND IT OF INTEREST TO HAVE ITS OWN HERD OF MULES AND HORSES.

B) PROTECTION OF THE ROAD BETWEEN DEBARK AND SANKABER AGAINST
EROSION AND LANDSLIDES

THIS RECENTLY ESTABLISHED ROAD OF 31 KM STARTING AT 2800 M AND FINISHING AT 3250 M (ACTUALLY IT IS EXTENDED BEYOND SANKABER) IS THREATENED BY THE COMING RAINY SEASON, BECAUSE OF THE ABSENCE OF ANY EROSION PROTECTION. SOME SEGMENTS OF IT WILL NOT WITHSTAND THE NEXT RAINS WITHOUT EXTENSIVE DAMAGE. THE WRITER HAS SUGGESTED SOME SIMPLE DEVICES OF PROTECTION ON THE BASIS OF HIS EXPERIENCE IN THE ALPS, YET THEIR IMPLEMENTATION IMPLY THAT WORK STARTS IMMEDIATELY AND THAT THE NECESSARY WOODPOLES BE PURCHASED. THOSE SEGMENTS WITH

C) REHABILITATION OF BROKEN DOWN BUILDINGS AND REPAIR TO ROOFS
OF BUILDINGS IN SCOUT CAMP SITES

EFFICIENT SCOUTING CONDITIONS IMPLY THAT THE SCOUTS BE OFFERED DECENT LIVING QUARTERS AND ACTION IN THIS RESPECT SHOULD BE TAKEN.

These are but a few suggestions concocted by the writer himself, who was surprised that his request to elaborate on them was not followed up by park personnel.

OTHER SUGGESTIONS MIGHT BE TO STUDY THE POSSIBILITY OF MR&EMX HOW

TO COPE WITH URGENT NEEDS: PARACHUTING, USE OF A HELICOPTER ? MUCH

WILL DEPEND ON THE EFFICIENCY OF THE RADIO COMMUNICATION SYSTEM. FOR THIS

THE ADVICE OF A SPECIALIST IN RADIO COMMUNICATIONS (THE PROBLEM OF SHADING

BY THE RELIEF IS IMPORTANT TO CONSIDER) IS REQUIRED AND CAN BE CERTAINLY

COPED DIRECTLY BY THE ÉTHIOPIAN AUTHORITIES SO AS TO PRESENT A DETAILED

PLAN FOR EQUIPMENT NEEDED.

IT MUST ALSO BE CONSIDERED THAT FOR THE TIME BEING THE DEBARK PARK OFFICE HAS NO DOCUMENTATION FACILITIES WITH REGARD TO MAPS IN PARTICULAR. IT SHOULD BE ENVISAGED TO PURCHASE FROM THE BERNE UNIVERSITY THE SET OF MAPS AND DOCUMENTS THEY HAVE PRODUCED.

2) AGRO-SOCIO-ECOLOGICAL, WILDLIFE AND PROSPECTIVE ECONOMICAL SURVEY
OF THE PARK AND ITS ADJACENT ZONES

AS PREVIOUSLY STATED NO LONG TERM POLICY CAN BE PROPOSED EITHER TO UN AUTHORITIES OR THE EHIOPIAN GOVERNMENT AND FOR THAT MATTER LOCAL AUTHORITIES, IF PROPER DATA ON LANDUSE AS PRACTICED BY THE FARMERS, WILDLIFE TERRITORIES AND ITS EXTENSION, ANTICIPATED SOCIAL RESPONSE TO CHANGE BY THE LOCAL POPULATIONS, ETC IS NOT MADE AVAILABLE.

SECOND TO HELPING THE PARK WITH REGARD TO PRIORITY ACTION STATED PREVIOUSLY THE WRITER FEELS THAT UN BODIES SHOULD ENVISAGE TO ASSIST

THE ETHIOPIAN AUTHORITIES WITH THE INTERVENTION OF AN INTEGRATED TEAM OF APPROPRIATE ETHIOPIAN AND FOREIGN EXPERTS, AS NEEDED, FOR UNDERTAKING WITH SOME URGENCY AN APPRAISAL OF THE LONG TERM ACTIONS TO BE UNDERTAKEN WITHIN AND ON THE OUTSKIRTS OF THE PARK ENDING UP WITH CONCRETE RECOMMENDATIONS AND A PLAN OF FINANCE.

THE WRITER WILL ELABORATE FURTHER ON THIS TOPIC IN HIS FINAL REPORT, POSSIBLY MAKING CONCRETE PROPOSALS AS TO THE TERMS OF REFERENCE OF SUCH A MISSION. IF THE SUGGESTION IS MET WITH INTEREST BY THE ETHIOPIAN AUTHORITIES WHOM THEY ARE PRESENTED.

■3) Long-term biological monitoring of the Semien

THIS IS WHAT COULD BE CALLED THE SCIENTIFIC PROGRAMME. IT HAS NOT YET BEEN DISCUSSED WITH DR E. BEKELE, BUT SHOULD RECEIVE ATTENTION WHILST THE CONSULTANCY MISSION IS STILL IN THE COUNTRY, POSSIBLY DISCUSSED WITH THE ETHIOPIAN MAB COMMITTEE.

4) OTHER ACTIVITIES IN THE SEMIEN

THE PARTICULARITY OF SEMIEN. AND FOR THAT MATTER OF MOST OF EHIOPIA.

IS THAT THERE ALL MANY SCATTERED TESTIMONIES OF THE ANCIENT, BUT IN PARTS

STILL VERY VIVID. CULTURE. IT IS FELT THAT THE EXISTENCE OF SEMIEN NATIONAL PARK

AS WORLD HERITAGE TRUSTEE SHOULD GIVE RISE TO AN OCCASION TO INCLUDE IN UNESCO ACTIVITIES AN INVENTORY OF THE CULTURAL VALUES IN SEMIEN MOUNTAINS.