

**Supply of Teaching Aid  
to  
the College of Agriculture  
and Aquatic Sciences  
at  
University of Asmara**

**Asmara, Eritrea**

**A Report to NORAD**

**NORAGRIC**  
BIBLIOTEKET  
Postboks 2  
N-1432 ÅS-NLN

**Aregay Waktola  
Liv Ellingsen  
Henning Svads  
Carl Grennes**

## Table of Contents

Acknowledgement.....	1
1. Executive Summary.....	1
2. Introduction.....	4
3. General background .....	5
4. Teaching aid priorities.....	7
5. Comments on major priority items .....	8
5.1 Textbooks.....	8
5.2 Reference books.....	8
5.3. Equipment.....	8
5.4 Audio-visual aid .....	9
5.5. Farm machinery.....	9
5.6. Transportation facilities.....	10
6. Other sources of funds for teaching aid.....	10
7. Institutional agreements.....	10
8. Annexes .....	11
8.1. Terms of Reference	
8.2. NORAD-NORAGRIC Agreement	
8.3. Itinerary	
8.4. AUN/NORAGRIC-CAAS Agreement	
8.5. Institutions/persons visited	
8.6. Library situation	
8.7. Priority lists	
8.7.1. Equipment and supply lists	
8.7.2. Book lists	
8.7.3. List of suppliers	



## Acknowledgement

The team wishes to express its sincere gratitude to the leadership of the University of Asmara and particularly to the Dean, Department Heads and staff of the College of Agriculture and Aquatic Sciences (CAAS) for their thoughtful co-operation and assistance. We were received cordially with adequate preparation and planning given the short notice and limited resources they had at their disposal. The task involved detailed work and was time consuming. Thanks to the devotion of the Dean, Department Heads and the staff, we managed to accomplish the terms and conditions set out in the Terms of Reference.

The institutional and private hospitality we enjoyed in Asmara was incredible.

We are also very grateful to a number of individuals and institutions we visited outside the College. They were helpful and provided useful information and advice to facilitate the conduct of this consultancy.

It is our wish that the recommendations contained in this report would be accepted to meet the urgent needs and priorities. Through this constructive initiative, dedicated by NORAD, we hope that the spirit of partnership between CAAS and NORAGRIC will grow to achieve the intended objectives.

### 1. Executive Summary

As a reflection of the emerging co-operation for development aid between the Government of Norway and the Government of Eritrea, in the field of natural resource management, NORAD, in July 1994 proposed an assistance in the form of institution strengthening package to CAAS. This college was assessed as having vital roles and responsibilities in the development of trained manpower required for agriculture and natural resource management, but seriously constrained by lack of educational infrastructure, particularly teaching aid. This was broadly defined to include textbooks, reference books, audio-visual aid, library equipment and facilities, laboratory equipment as well as means of transport to facilitate practical training in the field. The total amount of the grant earmarked for this one shot deal is about NOK 2 million.

NORAD awarded a contract to NORAGRIC to implement the provisions of the grant. The specific objective of the consultancy was to produce lists of textbooks, reference books, basic teaching aid and library materials among other things. The details including the conditions of implementation were specified in the Terms of Reference (TOR) as

presented in Annex 8.1. The agreement signed between NORAD and NORAGRIC to this effect is presented as Annex 8.2.

NORAGRIC assigned three of its staff (Liv Ellingsen, Aregay Waktola, Carl Grennes and, Henning C. Svads) as team members, the latter to serve as project co-ordinator for the task. As per the agreement implementation of the Project started on 1 August, 1994. The initial tasks involved were (a) communication with the colleges to secure facts and figures relevant for the work including syllabi and related background information, (b) gathering of current catalogues and information materials from potential suppliers of books and equipment, and (c) consultation with NORAGRIC staff and other relevant staff members at the Agricultural University of Norway (AUN). These were accomplished before the departure of the team members to Eritrea.

The team spent nearly 5 weeks in Eritrea and Ethiopia to accomplish the mission. The time spent in Eritrea was about a week (see Annex 8.3). The team was very impressed by the level of commitment and preparedness of the staff of CAAS to receive the provisions of the grant. Discussions and selection of options were conducted in an atmosphere of mutual trust and understanding .

Obviously, there were more needs presented by each of the Departments reflecting their precarious situation. These had to be trimmed down to comply with the proposed level of assistance. This was done by prioritising the critical needs at two levels, at College level reflecting needs for common use and at Departmental level, with emphasis on textbooks, reference books and some specialised equipment and materials. It must be noted that particular attention was given to the need for strengthening library services as part of the College level needs. Table 1 presents a summary of the priorities proposed for immediate purchase and delivery within the time frame of the grant period. Annex 8.7.1 shows the first priority needs.

**Table 1: Summary of allocations by priority items**

Items	Amount for Priority items in NOK
1. Textbooks	730,032 (2103 vols)
2. Reference books	170,792 (492 vols)
3. Lib. equipt. & supplies	79,900
4. TM prep. equipt.	477,002
5. Audio-visual aid	21,630
6. Lab. equipt. & supplies	42,960
7. Farm machinery	360,000
8. Transport	460,930
9. Contingency	79,854
Total	2,325,883

After having determined the above, the markets in Asmara and Addis Ababa were explored to ascertain the availability of local suppliers for the items included in the priority lists. With the exception of textbooks and reference books, it seemed possible that most of the priority items could be purchased through local suppliers.

Visits to several suppliers/importers of machinery and electronic equipment showed that much of the necessary equipment can be supplied from Asmara. The greatest advantage of this will be easy access to spares and services. However for reasons unknown to the team, the potential suppliers in Asmara failed to send their quotations on time while the suppliers in Addis Ababa did. After consulting the College authorities, the team relied on the Ethiopian and European sources to compute the prices and make appropriate selection of suppliers.

Regarding long term agreement between the Agricultural University of Norway (AUN)/NORAGRIC and the University of Asmara/CASS, a Memorandum of Understanding was signed between AUN/NORAGRIC and CASS which is presented as Annex 8.4.

The team also took time to visit some concerned institutions in Asmara to learn about current educational and technological policies affecting the provision of teaching aid covered under this grant. The institutions were

also briefed about the spirit of co-operation and the long term trends reflected through this NORAD initiative. NGOs, national and international institutions were also included in the visit to get general impressions about existing conditions as well as possibilities of future co-operation and linkages involving Eritrean and Norwegian institutions.

## **2. Introduction**

Following a visit made by Dr. Gustav Klem, Head, Natural Resources Division of NORAD, to Ethiopia and Eritrea, NORAD wished to offer assistance to three Colleges of agriculture (two in Ethiopia and one in Eritrea). This initiative was described as a fast and basic institution strengthening package designed to help the colleges to meet their basic needs and to stimulate further long term co-operation with AUN/NORAGRIC. It was understood that the level of development co-operation between the Government of Norway and the Governments of Ethiopia and Eritrea, was expanding especially in the field of natural resources management.

Based on the report and recommendation of Dr. Klem, the grant was specifically earmarked for the provision of teaching aid defined very broadly to include textbooks, reference books, audio-visual aid, equipment for teaching material preparation, laboratory and library equipment and supplies as well as transportation means to facilitate practical training and field experience. This was consistent with the urgent needs of the College. While the direct link between teaching and research was fully realised, the focus of the grant was on improving the quality of teaching through the provision of teaching aid.

The project was conceived as a one time emergency academic aid with the assumption that Norwegian assistance to Eritrea would soon be upgraded through bilateral agreements in which case long term co-operation and assistance would be eminent.

NORAGRIC was appointed by NORAD as consultant to facilitate the implementation of the project in close co-operation with CAAS and the University management. The specific objective of the consultancy was to produce lists of textbooks, reference books and basic teaching aid and select suppliers using prices and other criteria as a basis of selection. The full text of the TOR of the consultancy is given in Annex 8.1.

Already, there has been some initiatives taken by CAAS and NORAGRIC towards co-operation through exchange of visits to each other's institution. Furthermore, the University of Asmara had earlier submitted applications to NORAD for major long term assistance. This was under consideration when the present grant was proposed which amounted to a

total of about NOK 2 million, without any prejudice to the outcome of that application.

The NORAGRIC team consisted of Aregay Waktola (Agriculturist) as team leader, Liv Ellingsen (Librarian) and Henning Svads (Agronomist), the latter acting as project co-ordinator based at the home office of NORAGRIC.

After having made the necessary preparations, as per the NORAD-NORAGRIC agreement, the team travelled to Ethiopia and Eritrea to conduct the detailed field work for a period of nearly five weeks (see Annex 8.3) The time spent in Eritrea was about a week.

Several formal meetings were held with the University management involving the Academic Vice President, the Business Vice President, the Dean and the Department Heads as well as relevant persons in other government and nongovernment institutions. These included the Norwegian Church Aid, Redd Barna, and the Ministry of Agriculture. Annex 8.5 presents the list of institutions/persons visited. The list also includes some other institutions visited in Ethiopia which are of interest to the project.

Most of the time, however, was devoted to activities within CAAS. These included intensive discussions, observation of college facilities and the like. The exchange of views and interactions with Department Heads were more detailed. Facts and figures were provided with supportive documents which simplified the work for all concerned. Lists had to be revised several times to comply with the level of the grant. The final priority lists were endorsed by the Academic Commission of the College as well as the University management.

The remaining portion of this report presents brief accounts of the needs and priorities. A brief introductory background is given to serve as frame of reference. This is followed by comments on the rationale for the choice of the priorities. The detailed lists are presented in Annex 8.7.

### **3. General background**

The College of Agriculture and Aquatic Science (CAAS) was established in 1992 by incorporating the Faculty of Agriculture and the Department of Marine Biology & Fisheries. Going back to the origins, both programmes were initiated during the 1986/87 academic year when the University of Asmara was under the Ethiopian Commission for Higher Education. In 1990, at the height of the war, these programmes were relocated in central and south-eastern Ethiopia where the first batch of students somehow managed to graduate as discussed in connection with Mekele



College of Dryland Agriculture and Natural Resources (MCDANR). Scattered number of students of the lower classes are still enrolled in CAAS pursuing the various stages of their studies.

When the University of Asmara was re-established at the end of the war in 1991, the College of Agriculture was instituted as a full fledged Faculty with broader objectives than originally conceived in the former days. The following year, it was incorporated with the Department of Marine Biology & Fisheries, to create the present CAAS.

At present, the college offers 4 year programmes leading to a BSc degree. The first year is devoted to a common Freshman Programme which covers basic science courses as well as the English language, introductory courses such as the Geography and History of Eritrea and others. It is at the beginning of the second year that students choose their major areas of study.

The present academic structure of CAAS is composed of the following three Departments.

(a). Plant and Soil Sciences Department with concentration in Agronomy, Horticulture, Forestry, Plant Protection, and Soil Sciences.

(b). Agricultural Sciences Department with three units, namely, Agricultural Engineering, Environmental Sciences, and Animal Sciences.

(c). Marine Biology & Fisheries Department.

Further restructuring of the Department of Agricultural Sciences is anticipated in the near future into Agricultural Engineering, Environmental Sciences, and Animal Sciences. The plan also envisages the creation of the Department of Agricultural Economics at the same time. Similarly, it is planned that Marine Biology & Fisheries Department would gradually evolve into four departments including, Marine Biology & Fisheries, Marine Chemistry, Marine Physics, and Marine Biology.

The staffing situation has reportedly shown remarkable improvement during the 1993/94 academic year growing from 13 in the previous year to the present 23. Nevertheless the Department of Marine Biology & Fisheries remains weak. It is feared that this Department may not accept new students unless the staffing situation is improved. On the whole, there is a need for aggressive staff development efforts to increase the size as well as the quality of the staff. Table 2 shows the distribution of the academic staff by Departments and qualifications.

**Table 2 : Distribution of Academic Staff by Departments and Qualifications at CAAS**

Dept	PhD	MS/MA	BS/BA	Diploma	Total
Pl & Soil Sciences	3	3	2	--	8
Ag. Sciences	1	7	3	--	11
Marine Biology & Fisheries	-	2	2	--	4
Total	4	12	7	--	23

The student enrolment during the 1993/94 academic year was 261. This included 1 in the Fourth year, 130 in the Third year (these were on National Service out in the field) and 130 in the Second year. The plan is to accept 40 students annually in each Department until 1998 and thereafter 50 students annually in each Department except the Department of Marine Biology & Fisheries which intends to limit the intake to 15-20 students annually. This department had the smallest number of students (32) last academic year.

Regarding the infrastructure, the College is deficient of laboratory and library facilities and equipment. For all practical purposes, it shares the laboratories of the Biology Department of the Faculty of Science to teach laboratory practices. It has only two small laboratories - one soils laboratory while the other laboratory belongs to the Department of Marine Biology & Fisheries. Therefore, the urgent need for the construction and development of relevant laboratories is paramount. There are also, as yet, no provision to facilitate practical training in the field: no College farm, workshop and no means of transport other than what can be shared from the central pool which is inadequate. The College depends on the University Library which itself suffers from a number of deficiencies including book collections, accommodation, poor documentation and bibliographic services and lack of qualified staff.

#### **4. Teaching aid priorities**

The needs are enormous as can be seen from the above. As in the other colleges considerable time was devoted to critically examine the academic situation. With the exception of textbooks and reference books all the other priorities were to be included with College level needs. As pointed out transportation was considered as an urgent matter of priority. The

allocations agreed upon by the Academic Commission and endorsed by the University authorities are as described in item 5 below.

## **5. Comments on major priority items**

### **5.1 Textbooks**

A lack of recent information on new books was obvious, but some central catalogues of textbooks were available and were supplemented with the catalogues the team had brought from Norway. A textbook was selected for each course, except for courses given by the Department of Marine Biology and Fisheries, which preferred more titles of general texts in order to extract relevant portions and produce handouts to students. It was assumed that one textbook for each course with one copy for about three students could be purchased at an average price of NOK 200 per book which proved to be a reasonable estimate of the actual prices quoted by book shops contacted for tenders.

### **5.2 Reference books**

A list of required reference books to support each course given was set up. As already mentioned The Dept. of Marine Biology and Fisheries will buy more titles to compensate for lack of relevant textbooks. A small amount was also allocated for purchase of general reference material/ handbooks in agriculture and marine sciences, since the teachers felt the need for checking exact information in preparing lectures and teaching aid.

Because of the importance of other priorities, 5 titles were considered adequate for each course. This is a variation from the suggestion given in the TOR.

### **5.3. Equipment**

#### **5.3.1. Library equipment and supplies**

CAAS, being part of a university will be receiving some of its services from the University Library. The College library that is to be developed will thus have to relate to the University Library as well as the College management for its mandate and tasks.

Staff has so far not been appointed to the College library. There is acceptance for the need of trained staff.

The collection of agricultural books and journals is very poor both at the University Library and at the College.

A room at the College has been allocated to house the College library. Furniture and equipment are non-existent.

Basic furniture for the library (shelves, chairs and tables) is proposed to be paid over the NORAD grant.

Since the agricultural collection is very limited, the CGIAR centres' documents on CD-ROM was suggested to form a nucleus collection for teaching as well as research.

A PC with CD-ROM drive will be needed to utilise the compact library. The PC can also accommodate a copy of the University Library's database, as well as other relevant databases and software.

Microfiche reader/printer to utilise e.g. FAO documents and other sources on microfiche will be purchased.

A list of library supply for processing, strengthening and repair of books was also developed.

### 5.3.2 Laboratory equipment.

Since a grant from GTZ will cover laboratory equipment which can be shared with other Departments, this was not given priority. Only a set of student microscopes recommended.

### 5.3.3 Equipment and supplies for the preparation of teaching materials

High priority is given to the preparation of teaching materials by the College staff. To facilitate this the acquisition of photocopiers at College level was seen as essential to prepare handouts and transparencies. A supply of transparencies and markers are to be purchased. Desk-top publishing software and a scanner are strongly recommended for use in the preparation of advanced teaching aid as well as locally produced textbooks. Similarly, slide film and frames to make slide series covering local conditions was given priority. These items are listed under audio-visual aid along with numbers required.

### 5.4 Audio-visual aid

Overhead projectors, a slide projector, video set and television is proposed to be bought. Charts, models, slide series and educational videos are requested. Since there were no catalogues of such material available, the team was requested to make appropriate selections.

### 5.5. Farm machinery

There is no machinery available at the College farm. Tractor and accessories as well as installation of water pumps are needed. A heavy duty tractor with 70 HP is recommended and additional allocation for refurbishment and installation of pumps.

## **5.6. Transportation facilities**

A bus to take students to the field and to the marine environment was considered of very high priority. It was strongly recommended that the seating capacity should at least be 46.

## **6. Other sources of funds for teaching aid**

The major source of funds for the College is Government budgetary allocations. This is used to cover salaries, running costs, costs of feeding students etc. Little remains for developmental or investment purposes including the purchase of teaching aid and other educational materials that support teaching and research. The College essentially relies on external assistance for such purposes.

The team was informed that so far the College has secured assistance from SAREC and IDRC. Furthermore, efforts are underway to promote institutional development through the creation of linkages with institutions within and outside the country. Internally the relation between the Ministry of Agriculture is said to be smooth and functional in many ways.

## **7. Institutional agreements**

The approach to external linkages with academic and development institutions is more elaborate and creative. Accordingly, each college or academic discipline is encouraged to seek collaboration/co-operation with one or two suitable institutions in Europe, North America, and Australia. Such partnership is intended to involve institution building through the provision of senior staff, educational and research facilities, postgraduate training etc. with funds granted by the aid institution of the foreign country(ies) in question as the case may be.

In the case of CAAS, contacts have been established with NORAGRIC, the Agricultural University of Norway for possible assistance from NORAD. Application has been submitted by the University of Asmara to this effect. Similarly, agreement is concluded with a Dutch College of agriculture with financial support from NUFFIC.

To fulfil the condition of the present grant a Memorandum of Understanding was concluded between the University of Asmara and AUN. This is attached as Annex 8.4.

## **8. Annexes**



**TERMS OF REFERENCE**  
for  
**A CONSULTANCY TO SUPPLY TEACHING AIDS**  
to  
**THE COLLEGE OF AGRICULTURE AND AQUATIC SCIENCE AT**  
**THE UNIVERSITY OF ASMARA**

### **1. Background**

The Governments of Eritrea and Norway have agreed to cooperate within the field of natural resources management, with an emphasis on strengthening of relevant Eritrean institutions. One such institution is the College of Agriculture and Aquatic Science (CAAS) at the University of Asmara.

CAAS is most fortunate in having an increasing number of dedicated teachers, and highly motivated students, but the teaching suffers from of a severe lack of even the most basic textbooks and teaching aids.

CAAS urgently needs relevant textbooks for its students and the teachers are in equal need of up to date reference books. The teachers further need teaching aids in the form of good blackboards, overhead projectors, slide projectors and demonstration material and proper means of producing handouts. Furthermore, CAAS needs means of transport in order to carry out field practicals and basic equipment for laboratory and practical classes.

The items to be provided as a result of this consultancy is meant as a fast and basic institution strengthening package. Other support needed by CAAS may result from cooperation of a more long term nature with a Norwegian institution.

### **2. Objective**

To produce lists of textbooks, reference books and basic teaching aids, and to secure purchase, delivery and facilities for storage and use of such items.

### **3. Scope of work**

In all matters mentioned below it is assumed that the consultant cooperates closely with CAAS to ascertain CAAS' priorities. The CAAS syllabi for the various courses shall form the basis for the work.

- 3.1 Produce prioritized lists of the most relevant textbooks (3-5) for students in each of the two diploma years and for students in each of the four B.Sc. years according to Standards for African Universities and the UNESCO



Standard. These books are to be purchased in class sets, i.e. one copy pr. two-three students.

- 3.2 Produce prioritized lists of the most relevant textbooks/reference books (10-15) in each of the subjects taught. These books are meant to serve as the individual teachers "hand library".
- 3.3 List the extra equipment needed by the University Library for proper cataloguing, storage and lending of the above books.
- 3.4 Produce a list of the most urgently required, and relatively simple, equipment and material which will enable the teachers to produce notes and handouts for the students.
- 3.5 Produce lists of an appropriate amount of suitable teaching aids such as blackboards, overhead projectors and slide projectors with the necessary accessories, including demonstration material in the form of slide series etc.
- 3.6 Produce lists of the most basic equipment missing for proper teaching of laboratory and practical classes.
- 3.7 Present concrete proposals on additional items for the institution strengthening package not indicated above, suitable for quick disbursement and not of the type which may be included in a possible long-term agreement on institutional cooperation.

When making up the lists, due consideration shall be given to possible contributions from other donors.

All lists specified above shall contain exact numbers of each item, purchase costs of each item and freight costs from the supplier to Asmara.

All suggested purchases shall be based on tenders or fixed list prices and preference shall be given to suppliers in Eritrea, in the Region and outside the Region, in that order, unless the prices delivered Asmara indicate otherwise.

#### **4. Team members, mode of work**

- 4.1 The team shall consist of two persons from NORAGRIC/The Agricultural University of Norway, one with teaching experience and a general understanding of agriculture/aquatic science in the tropics and one being a professional librarian with a specialization in tropical agriculture/aquatic science. In addition, NORAGRIC shall draw upon the experiences of a selected group of teachers at the Agricultural University of Norway.

- 4.2 In Asmara, the team shall work in close collaboration with representatives from and appointed by CAAS. The Dean of CAAS, the different department Heads and the Chief Librarian of the University are obvious resource persons.
- 4.3 The work shall start in Norway with the team seeking information on the CAAS syllabi, gathering catalogues and making tentative lists.
- 4.4 At a suitable time after relevant catalogues and tentative lists have been received by CAAS, the team shall travel to Asmara for detailed discussions with CAAS. These discussions shall lead to the detailed lists indicated above.
- 4.5 The final lists, with titles, descriptions, prices, names of suppliers and details concerning shipment and necessary arrangements in Asmara, together with a copy of the signed institutional agreement between CAAS (University of Asmara) and NORAGRIC (Agricultural University of Norway), shall be presented to NORAD/Oslo not later than four weeks after the team has returned to Norway.
- 4.6 The total cost of the proposed institution strengthening package, excluding the cost of the consultancy, shall not exceed a sum of approximately NOK 1,5 - 2,0 mill.
- 4.7 A precondition for the assistance indicated is that CAAS (University of Asmara) enters into an agreement on institutional cooperation with NORAGRIC (The Agricultural University of Norway).
- 4.8 Implementation of purchases and other NORAD financed inputs in relation to this institution strengthening package depends on the final approval of the Royal Norwegian Ministry of Foreign Affairs and will, if approved, be entrusted to NORAGRIC, based on a contract between NORAGRIC and NORAD.

Oslo, 6. juli 1994

  
Gustav S. Klem

Head

Natural Resources Management Division  
Norwegian Agency for Development Cooperation





**NORAD**

DIREKTORATET FOR  
UTVIKLINGSHJELP  
NORWEGIAN AGENCY FOR  
DEVELOPMENT COOPERATION

Annex 8.2

NORAGRIC  
Postboks 5002  
1432 ÅS

Deres ref.:  
Your ref.:

Vår ref.:  
Our ref.:

Dato:  
Date:

5. juli 1994

## OPPDRAK I ERITREA OG ETIOPIA

Det vises til tidligere kontakter om saken.

Vedlagt følger kopier av brev til tre institusjoner for høyere landbruksutdanning, en i Eritrea og to i Etiopia. Brevene er vedlagt Terms of Reference som i hovedsak er like for alle institusjonene.

NORAD ber NORAGRIC om å påta seg de oppdragene som er skissert i brevene innenfor disse rammene:

1. Hvert av de tre oppdragene, beskrevet i de tre TOR, skal kun starte etter skriftlig anmodning fra vedkommende institusjon.
2. Konsulentgruppen skal bestå av to personer slik som indikert i para 4.1 i TOR. Gruppen, eventuelt forsterket av sekretær/koordinator, skal arbeide tilsammen inntil 150 timer før utreise, gruppen på to skal arbeide inntil 2x25 dager i Etiopia og Eritrea og gruppen, eventuelt igjen med sekretær/koordinator, inntil 100 timer etter hjemkomst. I tillegg tilstås NORAGRIC inntil 150 timer for assistanse fra en prosjektgruppe rundt konsulentgruppen.
3. Hvis ikke alle tre oppdragene blir å gjennomføre, vil nye tidsrammer bli avtalt.

---

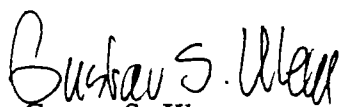
Postadresse/Postal address:  
P.B. 8034 Dep., 0030 Oslo, Norway  
Kontoradresse/Office address:  
Tollbugaten 31, Oslo

Bankgiro/Bank account:  
6054 05 03012  
Postgiro/Postal account:  
0804 5172903

Telefon/Telephone:  
+47 22 31 44 00  
Telefax: 76540 NORAD-N  
Telefax: +47 22 31 44 01

4. All honorering og refusjon av utgifter skal skje ifølge samarbeidsavtalen mellom NORAD og NORAGRIC datert februar 1994.

Vennlig hilsen,



Gustav S. Klem

kontorsjef

Kontor for naturressursforvaltning

cc. NORAD/AFR

cc. NORAD/Addis Ababa

### 8.3. Itinerary

Departed from Oslo/Fornebu on 29 August 1994 at 1700

Arrived at Addis Ababa/Bole on 30 August 1994 at 0915

Travelled to Awassa on 31 August 1994

Returned to Addis Ababa on 6 September 1994

Travelled to Mekele on 12 September 1994 at 1200 noon

Travelled to Asmara from Mekele by road on 18 September

Returned to Addis Ababa from Asmara on 25 September 1994

Liv Ellingsen returned to Norway on 1 October 1994 at 2200

Aregay Waktola returned to Norway on 10 October 1994



ዩኒቨርሲቲ ኣስመራ



جامعة اسمرأ

## UNIVERSITY OF ASMARA

Ref. No.....

Date.....

Asmara, October 20, 1994

## COOPERATION AGREEMENT

between

THE UNIVERSITY OF ASMARA

and

THE AGRICULTURAL UNIVERSITY OF NORWAY

WHEREAS the University of Asmara and the Agricultural University of Norway are linked by a common academic and cultural interest, and WHEREAS these two institutions wish to foster cooperation and exchange in academic areas of mutual interest and specially directed at assisting the University of Asmara recover from the effects of 30 years of war. Now, therefore the University of Asmara represented by its President and the Agricultural University of Norway, represented by its Rector set forth the following articles of cooperation agreement.

## Article 1

## GENERAL AIM OF COOPERATION

The Agricultural University of Norway shall assist the University of Asmara to build the Faculty of Agriculture and Aquatic Sciences so as to expand the basis for friendship and cooperative educational exchange between Eritrea and Norway, and thereby deepen the understanding of the economic social and cultural issues and traditions of our respective countries. The two Universities therefore will open the cooperative actions not only in the two named areas but as far as applicable for all fields of knowledge.


 Mailing Address :

Tel:

Fax:

Telex:

 University of Asmara  
 P.O.Box 1220  
 Asmara - Eritrea

 113600  
 113601  
 113818

291-1-113831

 42091  
 ASMUNIV



**Article 2**  
**GENERAL FIELDS OF COOPERATION**

The two Universities agree to cooperate in the following fields and activities:

- a) Identification, planning and implementation of joint activities in the fields of Agriculture and Aquatic Sciences.
- b) Curriculum development for the identified fields of studies especially during their establishment phases but also during curriculum review exercises at the University of Asmara.
- c) Reciprocal research/teaching visits of academic staff and students.
- d) Procurement of teaching and research facilities.
- e) Strengthening the Library of the University of Asmara.
- f) Cooperative research and teaching projects, seminars, workshops and conferences.

**Article 3**  
**FACULTY VISITS**

- a) The two Universities will encourage Senior staff from the Agricultural University of Norway to serve at the University of Asmara as part of the staff secondment programme and junior staff from Asmara to pursue advanced degrees in Norway as part of the staff development programme.
- b) The two Universities will also endeavour to facilitate the meeting of research teams working on comparable topics.
- c) On the basis of jointly prepared project proposals public funding programs will be exploited to facilitate a sustainable development of the Faculty of Agriculture and Aquatic Sciences through strengthening staff secondment, staff development and joint research activities.
- d) The two Universities will endeavour to find accommodation for the visiting members of staff.



**Article 4  
COOPERATION IN TEACHING AND CURRICULUM DEVELOPMENT**

The two Universities will endeavour to develop appropriate curricula for the Faculty of Agriculture & Aquatic Sciences at the University of Asmara and effort will also be made to develop teaching methods through the application of modern techniques and equipment.

**Article 5  
ORGANIZATION AND IMPLEMENTATION**

- a) The President of the University of Asmara and the Rector Agricultural University of Norway shall assign the appropriate agencies or authorities within their institutions to manage matters pertaining to this cooperation undertaking.
- b) Every implementation project in this cooperation shall be documented in a cooperation implementation agreement which shall be agreed upon and signed by authorised representatives of the respective institutions.

**Article 6  
DURATION**

This cooperation agreement is set into force for a first period until 30th October 1998.

The two Universities will declare their intention to continue this agreement by a written notice not later than six months prior to this date.

**SIGNATURE**

As witness of their subscription of the above articles the appropriate authorities of the University of Asmara and the Agricultural University of Norway have here unto set their hands.

Date: 22-10-1994  
For the  
University of Asmara



*[Signature]*  
President Dr. Wolde-Ab Yisak

Date: 01-11-94  
For the  
Agricultural University  
of Norway

*[Signature]*

Rector





**8.5. Institutions/persons visited.****Ethiopia:**

School of Information Studies for Africa. Addis Ababa University.

Getachew Birru, Dean

Addis Ababa University Library

Adhana Mengsteab, Chief Librarian

Norwegian Embassy/NORAD representative

Knut Kayser, Gudrun Landbø, Inger Dybdahl, Per Amund Gulden

Awassa College of Agriculture (ACA)

Assefa Gebre-Amlak, Dean

Zinabu Gebre-Mariam, Assistant Dean for Academic Affairs

Mogessie Ashenafi, Assistant Dean for Research and Extension

Fekadu Beyene, Dept. of Animal Production and Range Management

Gulilat Dessi, Basic Sciences Dept.

Endalkawach Woldemeskel, Dept. of Plant Production and Dryland Farming

Befakadu Wolde, Dept. of Agricultural Engineering and Mechanization

Assefach Hailu, Dept. of Home Science and Technology

Woubshet Wakie, Intermediate Library Assistant

Ethiopian Science and Technology Commission (ESTC)

Beyene Kebede, Head of Agricultural Dept.

Mulugeta Libse, Head of Computer Centre

Eshetu Alemu, Head of National Scientific and Technological Information Centre

Akale Selassie, ESTC Library

International Livestock Centre for Africa (ILCA)

Pramod Kumar Sinha, Head of Information Dept.

Paul J.H. Neate, Head of Publications Dept.

Institute of Agricultural Research (IAR)

Gashaw Kebede, Head of Library and Documentation Section, Information Services.

Relief Society of Tigray, Addis Ababa (REST)

Norwegian Church Aid

Kjell Solberg, Residential Representative

Hoechst Ethiopia Pvt. Ltd. Co.  
Michael Seyoum, General Manager

Mekele College of Dryland Agriculture and Natural Resources  
(MCDANR)

Mitiku Haile, Dean

Tilahun Abebe, Assistant Dean

Fassil Kebede, Dept. of Soil and Water Conservation

Mekonnen Yohannes, Dean of Students

Seyoum Gebre-Hiwot, Librarian

Girmay Tesfay, Dept. of Crop Production

Tigray Education Bureau

Teklehaimanot Haileselassie, Head of the Bureau

Relief Society of Tigray (REST)

Solomon Inquai

Tigray Agricultural Bureau

Berhane Hailu

Tigray Region Natural Resources Development and Environmental  
Protection Bureau

Belete Tafere, Deputy Head of the Bureau

PC-House Integrated Computer Services, Addis Ababa

Zak A. Salman, Marketing Manager

Munir Abdulahi, Technical Manager

Computer Professionals United (CPU)

Adisu Engda, General Manager

TELCO Pvt. Ltd. Co

Tessema Getahun, Managing Director

Allene Molla, Sales Engineer

The Motor And Engineering Company of Ethiopia Ltd. (MOENCO)

Addis Ababa University

- Book Centre
- Bookbinding Section
- Printing Press

Ethiopian Nutrition Institute

Sherif & Sons Light Industrial Products Importer & Distributor  
A.A. Sherif, General Manager

A number of small shops and companies for market information and prices.



## 8.6. Library situation.

There is very little documentation available on the library situation at the college as well as at the University as a whole at present. Since library development is seen as an important part of the institution fabric, the team found a need for giving a description of the situation as well as some general comments based on the team members' opinion which can be of help to further institutional cooperation.

The descriptions are not very detailed, since time did not permit to go in depth, but it is our belief that even a rather superficial description like this will pinpoint some of the areas on which to focus in the future.

CAAS, as part of a University will be receiving some of its services from the University Library, some from a planned college library. The below comments are based on discussions and information partly from the Acting Librarian of the University Library, partly on information received from the CAAS staff.

### 8.6.1. *Staff.*

The University has a total staff of 22 persons. three are holders of a diploma in library science. The Acting librarian has no formal professional training, but long practical experience in the library, partly in cooperation with expatriate librarians.

Two members of the staff are abroad for further studies pursuing M.Sc.degrees.

Since agriculture is a new field in the university, the staff is not very familiar with sources of agricultural information, central institutions etc.

The College libraries are planned to be staffed with professionals holding minimum diploma. I got no clear idea whether there are sufficient trained librarians in the country, or whether training will be necessary to implement the plans.

### 8.6.2. *Collections.*

#### 8.6.2.1. Books.

The collection of agricultural books in the main library consists of 5-6 shelf metres (ca. 200 titles?) of which less than one metre (20-30 titles?) seem to be of some relevance to the teaching and research of the college. Likewise an agricultural reference collection is non-existent.



The College has received some new books as donations from CTA and other sources, and there is an expressed policy that documents received from any source should be included in the library collection. The books have so far not been recorded in any way, but shelves have been collected - also from different sources - to store the books in the library to be while awaiting processing and further establishment of the College library.

#### 8.6.2.2. Journals.

The main library has got some current journals subscriptions through SAREC and the American Association for the Advancement of Science (AAAS).

We spotted no more than 10-12 agricultural journals among them.

#### 8.6.3. *Building and furniture.*

The College library will be placed in a square room measuring ca. 240 m<sup>2</sup>. The only furniture present so far are some wooden shelves collected here and there, some of them are the private property of staff members.

The library has good daylight, and with partition walls to make a small office and the basic furniture, it may function as a College library for the first few years.

#### 8.6.4. *Working processes.*

Acquisitions and processing of books will be done by the main library. A dBase cataloguing system has recently been taken into use to produce a database as well as card catalogue which can form both the central library's union catalogue as well as individual catalogues of the College libraries.

Since collections, in our case in agriculture, will be decentralized to the Colleges, it is essential that College library staff get appropriate training in general library work as well as documentation and information sources within their college's particular field.

A clear model for the relationship between the central library and College libraries has not yet been worked out. The University library is awaiting an international consultant, financed by SAREC, to go through the whole library system and advice on its further development.

## 8.7. Priority lists

### *(a) Local, regional and international markets*

Time constraint prohibited detailed investigation concerning the local markets. From the observations made, the team was able to determine that many of the major items requested by the College can be supplied from Addis Ababa by/through local agents of international companies. This is especially true for transport, computers, photocopiers, overhead and slide projectors with accessories, chemicals, laboratory equipment and many of the consumable such as papers, markers, etc.

These suppliers have assured the team that they are in a position to provide essential services, spare parts and the like to the institutions payable in local currency. This is a very positive development. It will also have a stimulating effect on the growing internal markets. The companies visited gave impression of being serious and well organised. They were able to provide necessary information on availability and prices of commodities of interest to the team.

After the team returned to Norway, telecommunications with Eritrea were broken down which prevented some of the local suppliers from forwarding their quotations on time. It must be noted that no attempt was made by the team to explore the markets in other cities in the region, e.g. Nairobi for short of time. Furthermore, the college reported any business contacts there to encourage any extraordinary efforts within this limited time. On the other hand, European and North American markets were sought which responded rather quickly for books, library equipment, and audio-visual teaching aid.

### *(b) Choice of book suppliers*

The lists of books required by all three colleges were sent for bids to three different book shops: Blackwell's, UK, Buchhandlung Kaiser, Germany, and Wiley Eastern, India.

Because of the very restricted time, Wiley Eastern could not come up with a bid in time.

The bids from Blackwell's and Kaiser are not directly comparable, since Blackwell's has left out-of-print titles, whereas Kaiser has allowed an average price of US\$ 30/copy for replacement titles to be ordered by the institutions.

CAAS has given absolute first priority to literature and states that it is important for them to be able to get replacement for titles unavailable at this point. They have no other funds available for literature.

Both book shops are well recognized international book shops and much used and recommended by Norwegian research libraries.

During the team's visit, the University Library indicated that their relations with Blackwell's was strained because of unsettled business from former times.

The consultancy team suggests that the books for Asmara are ordered through Kaiser for the above mentioned reasons.

*(c). Logistics and shipment*

In spite of the limitations mentioned above, the team managed to get few tenders. Some of these came in the form of pro forma invoices which make the task of purchasing very simple. However, in some cases a selection of items or a reduction in numbers has to be made to match the requests with the available funds.

As far as possible, freight costs have been included in the listed prices. Nevertheless, some smaller companies have no export procedures and as such freight will have to be arranged by the purchasing agent. A lump sum of money is held as contingency to cover unforeseen freight and insurance costs.

For speed as well as safety of arrival, air freight should be preferred. However, it will be necessary to ship by surface heavier items such as bus, tractor, farm machinery and even books. Also, there may be restrictions on commodities like chemicals. Suppliers are very well familiar with such regulations and can arrange for proper dispatch methods.

Qty	Item	Model/type	Catno.	Value	Price	Total price	Price in NOK	Supplier
	UNIVERSITY OF ASMARA COLLEGE OF AGRICULTURE & AQUATIC SCIENCES							
	Books							
	Books according to lists					900 824 00	900 824 00	Buchhandlung Kaiser
	<b>Totale of books</b>					<b>900 824.00</b>		
	<b>3. Equipment needed by the collage library</b>							
1	Microtome (reader/printer)	Gateway 2000		\$	6 590 00	6 590 00	42 840 71	Gaylord
1	PC with accessories			\$	3245 00	3245 00	21 086 54	CRJ
1	Compact International Agricultural Research Library Basic Retrospective Set			\$	1950 00	1950 00	12 659 40	WB Publications
	Metal shelves acc. to specifications			NOK	23472 80	23472 80	23472 80	Systemhyller A/S
	Chairs and table (locally made)			NOK	10000 00	10000 00	10000 00	Local
	Gaylord electric styler							
1	pc Styler holder		1040	\$	21 95	21 95	142 50	Gaylord
10	pc Transfer tape		1041	\$	3 35	33 50	21 75	Gaylord
1	pc Book press		1078	\$	20 20	20 20	131 14	Gaylord
	Bookcraft tools							
1	pc AWL		712	\$	2 20	2 20	14 28	Gaylord
1	pc Knife		782	\$	1 65	1 65	10 71	Gaylord
1	pc All-purpose shears		784	\$	13 15	13 15	85 37	Gaylord
	Thread			Birr	55 00	55 00	58 15	Local supplier
	D 68-9							
6	spoons Book repair cond		768	\$	3 90	23 40	25 32	Gaylord
6	plugs Needles		773	\$	5 10	30 60	33 11	Gaylord
3	plugs Needles		769	\$	6 45	19 35	41 87	Gaylord
12	rolls Perforated adhesive cloth		778	\$	16 80	199 07	109 07	Gaylord
12	rolls Perforated adhesive cloth		2709	\$	85 40	619 34	619 34	Gaylord
6	plugs End paper		770	\$	9 30	55 80	60 36	Gaylord
12	rolls Waterproof book cloth		2712	\$	12 90	156 60	83 75	Gaylord
12	rolls Waterproof book cloth		2713	\$	166 20	198 80	821 89	Gaylord
	<b>SUM</b>						<b>79 904 23</b>	
	<b>Slides and Videos</b>							
1	The Locust Slide Kit		SL4	GBP	10 00	10 00	105 85	Natural Resources Institute, UK
1	Good storage practice / NRI, 1990 (25 minutes video)			GBP	20 00	20 00	211 70	CPL Vision (see NRI catalogue)
1	A reference slide collection for soil micromorphology (115 slides)			\$	50 00	50 00	324 60	Soil Science Society of America
1	Soil microbiology and biochemistry (143 slides)			\$	45 00	45 00	292 14	SSSA
1	Phosphate fertilizer Technology (45 slides)			\$	20 00	20 00	129 84	SSSA
1	Building on traditions - conserving land and alleviating poverty. (30 min. video)			\$	20 00	20 00	129 84	IFAD (see Spore no. 44)
1	Treasures of Ethiopia (70 minutes video on Ethiopia's genetic heritage)			Austria sch	400 00	400 00	83 20	WILDart, Wilhelm Exner-gasse 23/32, 1090 Vienna
1	Integrated Management of legume pests (30 minutes video)		VCE 001	Rs	225 00	225 00	139 23	ICRSAT
1	Participatory research with women farmers (30 minutes video)		VC 002	\$	5 60	5 60	36 36	ICRSAT
1	Living with drought (50 minutes video)		VC 005	\$	25 00	25 00	162 30	ICRSAT
1	Looking after our land (60 min. video)			GBP	14 95	14 95	158 25	OKFAM
	<b>SUM</b>						<b>1 773 30</b>	
	<b>Charts</b>							
	<b>Spermatozoense and Oogonrese</b>							
1	Amoeba		ZRF-105-M	\$	3 84	3 84	24 93	Carolina Biological supplies
1	Amoeba		ZRF-175-J	\$	2 40	2 40	15 58	Carolina Biological supplies
1	Malaria		ZRF-185-S	\$	3 84	3 84	24 93	Carolina Biological supplies
1	Trypanosomes		ZRF-220-U	\$	3 84	3 84	24 93	Carolina Biological supplies
1	Hydra		ZRF-250-W	\$	3 84	3 84	24 93	Carolina Biological supplies
1	Parame		ZRF-304-T	\$	3 84	3 84	24 93	Carolina Biological supplies
1	Taenia Solium		ZRF-360-H	\$	3 84	3 84	24 93	Carolina Biological supplies
1	Molusc Type		ZRF-395-C	\$	3 84	3 84	24 93	Carolina Biological supplies
1	Earthworm		ZRF-435-N	\$	3 84	3 84	24 93	Carolina Biological supplies
1	Spider		ZRF-475-Y	\$	3 84	3 84	24 93	Carolina Biological supplies
1	Ordans of Insecte		ZRF-482-T	\$	3 84	3 84	24 93	Carolina Biological supplies
1	Typee of Insect Mouth-parts		ZRF-495-R	\$	3 84	3 84	24 93	Carolina Biological supplies

1	Insect respiratory system	ZRF-510-D	\$	3.84	3.84	24.93	Carolina Biological supplies
1	Incomplete Metamorphose	ZRF-545-V	\$	3.84	3.84	24.93	Carolina Biological supplies
1	Complete Metamorphose	ZRF-545-X	\$	3.84	3.84	24.93	Carolina Biological supplies
1	Mosquito	ZRF-565-H	\$	3.84	3.84	24.93	Carolina Biological supplies
1	House Fly	ZRF-570-H	\$	3.84	3.84	24.93	Carolina Biological supplies
1	Honey Bee	ZRF-575-A	\$	3.84	3.84	24.93	Carolina Biological supplies
1	Frog egg Development	ZRF-575-M	\$	3.84	3.84	24.93	Carolina Biological supplies
1	Chick development	ZRF-785-V	\$	3.84	3.84	24.93	Carolina Biological supplies
1	Insect group Hymenoptera	ZRH-132-M	\$	3.84	3.84	24.93	Carolina Biological supplies
1	Frog	ZRH-152-V	\$	3.84	3.84	24.93	Carolina Biological supplies
1	Hen	ZRH-162-X	\$	3.84	3.84	24.93	Carolina Biological supplies
1	Rabbit	ZRH-172-H	\$	3.84	3.84	24.93	Carolina Biological supplies
1	Bacteria	ZRP-100-L	\$	3.84	3.84	24.93	Carolina Biological supplies
1	Plant kingdom phylogenetic tree	ZRP-110-E	\$	3.84	3.84	24.93	Carolina Biological supplies
1	Trilobophyes	ZRP-120-U	\$	3.84	3.84	24.93	Carolina Biological supplies
1	Bryophytes	ZRP-130-N	\$	3.84	3.84	24.93	Carolina Biological supplies
1	Pteridophytes	ZRP-140-G	\$	3.84	3.84	24.93	Carolina Biological supplies
1	Gymnosperms	ZRP-270-A	\$	3.84	3.84	24.93	Carolina Biological supplies
1	Angiosperms	ZRP-330-U	\$	3.84	3.84	24.93	Carolina Biological supplies
1	Mass life history	ZRP-430-M	\$	3.84	3.84	24.93	Carolina Biological supplies
1	Fern life history	ZRP-470-H	\$	3.84	3.84	24.93	Carolina Biological supplies
1	Plant life history	ZRP-490-M	\$	3.84	3.84	24.93	Carolina Biological supplies
1	Mosses and Dicots	ZRP-500-C	\$	3.84	3.84	24.93	Carolina Biological supplies
1	Gamnation	ZRP-540-U	\$	3.84	3.84	24.93	Carolina Biological supplies
1	Palination	ZRP-550-N	\$	3.84	3.84	24.93	Carolina Biological supplies
1	Seeds and Fruits	ZRP-552-B	\$	3.84	3.84	24.93	Carolina Biological supplies
1	Seed Dispersal methods	ZRP-554-M	\$	3.84	3.84	24.93	Carolina Biological supplies
1	Grass types	ZRP-560-G	\$	3.84	3.84	24.93	Carolina Biological supplies
1	Dicot stem Anatomy	ZRP-580-P	\$	3.84	3.84	24.93	Carolina Biological supplies
1	Monocot stem Anatomy	ZRP-590-Y	\$	3.84	3.84	24.93	Carolina Biological supplies
1	Dicot root	ZRP-600-R	\$	3.84	3.84	24.93	Carolina Biological supplies
1	Root anatomy	ZRP-610-K	\$	3.84	3.84	24.93	Carolina Biological supplies
1	Timber Section	ZRT-510	\$	1.83	1.83	11.88	Carolina Biological supplies
1	Parasitic Plants	ZRP-630-T	\$	3.84	3.84	24.93	Carolina Biological supplies
1	Plant adaptations	ZRP-640-M	\$	3.84	3.84	24.93	Carolina Biological supplies
1	The Leaf	ZRP-715-S	\$	3.58	3.58	23.24	Carolina Biological supplies
1	Flowers	ZRP-725-L	\$	3.58	3.58	23.24	Carolina Biological supplies
1	Fruit Dispersal and Seed germination	ZRP-735-E	\$	3.36	3.36	21.81	Carolina Biological supplies
1	A section of a Leaf	ZRP-920-C	\$	4.32	4.32	28.05	Carolina Biological supplies
1	Freshwater	ZRS-100-E	\$	15.84	15.84	102.83	Carolina Biological supplies
1	Fungi	ZRS-120-N	\$	15.84	15.84	102.83	Carolina Biological supplies
1	Mushroom	ZRS-190-G	\$	15.84	15.84	102.83	Carolina Biological supplies
1	Wheat rust	ZRS-140-W	\$	15.84	15.84	102.83	Carolina Biological supplies
1	Lichen	ZRS-160-Y	\$	15.84	15.84	102.83	Carolina Biological supplies
1	Moss	ZRS-170-B	\$	15.84	15.84	102.83	Carolina Biological supplies
1	Horse-tail	ZRS-180-R	\$	15.84	15.84	102.83	Carolina Biological supplies
1	Male Fern	ZRS-190-K	\$	15.84	15.84	102.83	Carolina Biological supplies
1	Paie	ZRS-200-T	\$	15.84	15.84	102.83	Carolina Biological supplies
1	Maize	ZRS-210-M	\$	15.84	15.84	102.83	Carolina Biological supplies
1	Rye	ZRS-220-F	\$	15.84	15.84	102.83	Carolina Biological supplies
1	Apple	ZRS-240-X	\$	15.84	15.84	102.83	Carolina Biological supplies
1	Mistlec	ZRS-260-C	\$	15.84	15.84	102.83	Carolina Biological supplies
1	Pea	ZRS-300-L	\$	15.84	15.84	102.83	Carolina Biological supplies
1	Potato	ZRS-310-E	\$	15.84	15.84	102.83	Carolina Biological supplies
2	SLM		\$			2 763.19	

<b>Biological Models</b>									
1	Animal cell		ZOS 120	NCK	3 706.00	3 706.00	3 706.00	Haaland & Hamre	
1	Worker bee		ZOS 47/1	NCK	3 372.00	3 372.00	3 372.00	Haaland & Hamre	
1	Starfish		ZOS 114	NCK	4 173.00	4 173.00	4 173.00	Haaland & Hamre	
1	Plant cell		BOS 16/1	NCK	3 969.00	3 969.00	3 969.00	Haaland & Hamre	
1	Chloroplast of higher plant		BOS 16/2	NCK	3 367.00	3 367.00	3 367.00	Haaland & Hamre	
<b>Overhead transparencies</b>									
1	Plants, set of 12			NCK	960.00	960.00	960.00	Haaland & Hamre	
1	Vertebrate animals, set of 12			NCK	1 140.00	1 140.00	1 140.00	Haaland & Hamre	
1	Invertebrate animals, set of 12			NCK	840.00	840.00	840.00	Haaland & Hamre	
<b>SUM</b>									
							21 627.00		
<b>Teaching aids</b>									
2	Overhead projectors with accessories				\$	461.70	2 997.36	PC House	
10	Slide lamps for overhead projectors				\$	650.00	4 219.80	PC House	
1	Slide projectors with accessories, (on the wall) particularly with lamps and fuses				\$	400.00	2 596.80	PC House	
1	Opaque projector		OPS-4006		\$	899.00	5 771.39	Gayford	
10	Slide films (Agfa CTX)				NCK	490.00	490.00	As Foto	
200	Frames				\$	355.00	355.00	As Foto	
5	Transparencies				\$	275.00	1 785.30	PC House	
10	Water proof markers for transparencies				\$	11.00	714.12	Gayford	
2	Portable projection screen				\$	187.65	1 216.22	PC House	
1	Heavy duty Photocopier		Kerox RX 5355 PD/HOCT		\$	20 640.00	139 994.88	CPU	
1	Video set & color television		JVC 27" VCR		\$	1650.00	10 711.90	PC House	
3000	Photocopy Paper				\$	65.00	206 176.15	PC House	
<b>SUM</b>									
							371 033.82		
<b>Total of Teaching materials</b>									
							477 001.55		
<b>Equipment</b>									
10	Microscopes			GP	294.65	2 946.50	31 188.70	Talco	
1	Scanner		HP Scanjet II Cx	NCK	11 773.00	11 773.00	11 773.00	Haystole data	
<b>Total of Equipment</b>									
							42 961.70		
<b>Farm machinery</b>									
	Tractor with accessories (70 hp)		Massey Ferguson 3652	NCK			170 000.00	EK Maskin a.s Oslo	
			Smulsa 50 tilhenger, 4t				16 500.00	EK Maskin a.s Oslo	
			Overrun plow, type BT 387F, 3-strians tilhogor utviller				15 000.00	EK Maskin a.s Oslo	
			Waerge harv, type MB 125S12, 2.5 m				12 000.00	EK Maskin a.s Oslo	
	College farm (refurbishment & installation of water pumps)						150 000.00		
<b>Total of Farming equipment</b>									
							363 600.00		
<b>Transportation facilities</b>									
1	Bus 45 seats		Iveco A19S.17 Bus		\$	71 000.00	71 000.00	The Automotive Manufacturing Company of Ethiopia	
<b>Total of transportation</b>									
							460 932.00		
<b>Contingencies</b>									
					6%		80 663.71		
<b>Total ASMARA</b>									
							2 325 892.96		



# Buchhandlung Kaiser

Wolbecker Str. 89, D - 48155 Münster P.O.Box 4224, D - 48023 Münster  
Tel.: 49-(0)251-608770 Fax : 49-(0)251-64649  
E-Mail: Internet BH-KAISER-MU@DCFRZ1.DAS.NET, Compuserve 100067,12  
V.A.T. Reg. Number DE126114388; Verkehrsnummer 47430

## PROFORMA-INVOICE

Inv. Asmara	NOK	893.888,00
Freight 7 w/m	NOK	6936,00
		<hr/>
<u>TOTAL</u>	<u>NOK</u>	<u>900824,00</u>

The end-calculation will be made by the original price multiplied with exchange rate of the day minus 10 percent. The freight-charges are estimated up to the University of Asmara, Eritrea and including insurance. The delivery time of the main delivery to Eritrea will be approximately 8 - 10 weeks.

The amount is to be paid in NOK to our Post Giro 0805 1981406 in Oslo/Norwegen.



Buchhandlung Kaiser GmbH

Wolbecker Str. 89, D-48155 Münster, Tel. 0251/608770, Fax 0251/64649  
Unsere MwSt-Nr DE 126114388

NORAGRIC

PObox 5002  
N - 1432 Ås-NLH

Ihr Bestellzeichen	Kundennummer	Rechnungsnummer	Datum
Asmara	35092	38319	26.10.94

Rechnung  
=====

1	Biological Control	30.40 -10%	27.36 DM	0
30	Broad leaf Forestry	23.90 -10%	645.30 DM	0
1	Brown's Nautical Almanac	73.00 -10%	65.70 DM	0
2	Center for Ocean Management Studies	45.50 -10%	81.90 DM	0
1	Flowering Plants of the World	50.20 -10%	45.18 DM	0
1	Integrated Pest Management in Developing Countries	25.10 -10%	22.59 DM	0
5	Law of the sea	75.20 -10%	338.40 DM	0
5	Law of the sea	19.70 -10%	88.65 DM	0
1	Life at the sea shore	60.80 -10%	54.72 DM	0
1	Maine Biology Vol. 5	374.00 -10%	336.60 DM	0
1	Marine Biology Vol. 4	287.30 -10%	258.57 DM	0
1	Marine Biology: Vol 2	230.90 -10%	207.81 DM	0
1	Marine Biology: Vol. 3	205.80 -10%	185.22 DM	0
1	Marine pollution by oil	65.40 -10%	58.86 DM	0

Rechnung 38319 vom 26.10.94

10	Ornamental Plants & Shrubs		45.60	-10%	410.40	DM	0
1	Pest Management and the African Farmer		45.60	-10%	41.04	DM	0
1	The Agrochemicals Handbook		499.50	-10%	449.55	DM	0
1	The influence of Red Sea		62.30	-10%	56.07	DM	0
1	World Atlas of Desertification		224.60	-10%	202.14	DM	0
1	World Desertification Bibliography		45.60	-10%	41.04	DM	0
3	Zooplankton Sampling		13.70	-10%	36.99	DM	0
10	Abbot	0-582-02903-1					
	Agricultural Economics & Marketing		22.50	-10%	202.50	DM	0
30	Adams, M. E.	0-582-65025-9					
	Agricultural Extension		19.80	-10%	534.60	DM	0
30	Adams, M. E.	0-582-65025-9					
	Agricultural Extension		183.20	-10%	4946.40	DM	0
1	Alain & Francis	0-8493-4828-5					
	Fundamental Concepts Vol. 1		301.00	-10%	270.90	DM	0
1	Alain & Francis	0-8493-4829-3					
	Fundamental Concepts and Methodology of Aquatic		422.90	-10%	380.61	DM	0
3	Alekseer, A.P.	0-7065-1181-6					
	Fish behavior and Fishing techniques		66.10	-10%	178.47	DM	0
30	Allard, R.W.	0-471-02315-9					
	Principles of Plant Breeding		50.10	-10%	1352.70	DM	0
1	Bioeconomics of Aquaculture		163.80	-10%	147.42	DM	0
30	Anderson, J. M.	0-07-001653-4					
	Introduction to Surveying		112.80	-10%	3045.60	DM	0
3	Anderson, R.N.	0-471-88444-8					
	Marine Geology		39.40	-10%	106.38	DM	0
30	Anderson, Roger W.	0-471-50407-6					
	Marine Geology		128.00	-10%	3456.00	DM	0
3	Anderson, Roger W.	0-471-50407-6					
	Marine Geology		128.00	-10%	345.60	DM	0
2	Arnold, A.F.	0-486-21949-6					
	Sea Beach at Ebb Tide		15.12	-10%	27.22	DM	0

Rechnung 38319 vom 26.10.94

30	Crops of the Dry Regions of the Tropics		45.60	-10%	1231.20	DM	(
1	Atampugre Behind the lines of stone	0-85598-258-6	27.50	-10%	24.75	DM	(
10	Austic & Lea Poultry Production	0-8121-1241-5	72.20	-10%	649.80	DM	(
5	Austin, B. Marine Microbiology	0-521-31130-6	37.90	-10%	170.55	DM	(
1	Ageing of Fish		106.40	-10%	95.76	DM	(
2	Baker, J.M. Marine Ecology and oil pollution	0-85334-447-7	246.00	-10%	442.80	DM	(
1	Baker, J.M. Marine Ecology and oil pollution	0-85334-447-7	246.00	-10%	221.40	DM	(
2	Barbour, M.G. Costal Ecology	0-520-02147-9	47.40	-10%	85.32	DM	(
30	Bardach, John E. Aquaculture: The farming	0-471-04826-7	75.90	-10%	2049.30	DM	(
3	Bardach, John E. Aquaculture: The farming	0-471-04826-7	75.90	-10%	204.93	DM	(
1	Bates & Gaskell Geophysics in the Affairs of Man	0-08-024025-9	63.80	-10%	57.42	DM	(
5	Bates, J.H.U.K. Marine Pollution Law	1-85044-028-X	129.20	-10%	581.40	DM	(
1	Bayn, B.L. The effect of stress and pollution	0-03-057019-0	127.90	-10%	115.11	DM	(
30	Bazin & Smith Soil Microbiology	0-8493-5952-X	221.90	-10%	5991.30	DM	(
3	Red Sea Coral reefs		83.60	-10%	225.72	DM	(
1	Beverton, R.J. Marine Mammals and Fisheries	0-04-639003-0	152.00	-10%	136.80	DM	(
10	Bhoywani & Razdan Plant Tissue Culture	0-444-42164-5	218.90	-10%	1970.10	DM	(
1	Bird, C.J. / Ragan, Proceedings of the 11th International Seaweed Symposium	90-619-3773-6	442.30	-10%	398.07	DM	(
1	Bird, K.T./ Benson, Seaweed Cultivation for Renewable Resources	0-444-42864-X	120.50	-10%	108.45	DM	(

Rechnung 38319 vom 26.10.94

2	Bishop, P.L.	0-07-005482-7	77.40	-10%	139.32	DM	0
	Marine Pollution and its Control						
1	Blaxter, J.H. et al.	0-12-026118-9	273.60	-10%	246.24	DM	0
	Advances in Marine Biology						
1	Bliss, D.E. / Proven	0-12-106410-7	171.80	-10%	154.62	DM	0
	Biology of Crustacea, Vol. 10						
30	Soil chemistry		88.10	-10%	2378.70	DM	0
1	Bolis, L. et al.	0-387-13643-6	120.00	-10%	108.00	DM	0
	Toxins, Drugs and Pollutants in Marine Animals						
1	Boonman	0-7923-1867-6	375.20	-10%	337.68	DM	0
	East Africa's Grasses and Fodders						
1	Bougis, P.	0-444-11033-X	161.90	-10%	145.71	DM	0
	Marine Plankton Ecology						
10	Bouthillette, G.	0-89933-053-3	4.50	-10%	40.50	DM	0
	Tidal Zones						
60	Brady, N.C.	0-02-313361-9	45.60	-10%	2462.40	DM	0
	The Nature & Properties of soils						
1	Branson, D.R. / Dick	0-8031-0799-4	65.40	-10%	58.86	DM	0
	Aquatic Toxicity and Hazard Assessment						
4	Brown, G.M. / Crutch	0-295-95982-7	18.20	-10%	65.52	DM	0
	Economics of Ocean Resources						
10	Ocean and its Resources		7.50	-10%	67.50	DM	0
3	Bunk, C.A. / Drake,	0-387-06866-X	95.80	-10%	258.66	DM	0
	The Geology of Continental Margins						
1	Burger, J. et al.	0-306-37574-5	144.40	-10%	129.96	DM	0
	Behavior of Marine Animals, vol. 4						
1	Cabioch, L. / Glemar	2-04-011898-5	42.60	-10%	38.34	DM	0
	Fluctuation and Succession in Marine Ecosystems						
3	Cady, R.A.	0-934114-70-6	60.70	-10%	163.89	DM	0
	Marine Survey Practice						
1	Cairss, V.W. et al.	0-471-88014-0	186.50	-10%	167.85	DM	0
	Contaminant Effects of Fisheries						
5	Castio / Huber	0-8016-0362-5	30.30	-10%	136.35	DM	0
	Marine Biology						

Rechnung 38319 vom 26.10.94

10	Cattle & Bufalo Production in the Tropic Hill	0-582-07493-2	45.60	-10%	410.40	DM	(
10	Chamberlain Milk production in the tropics	0-582-77513-2	22.50	-10%	202.50	DM	(
1	Champ, M.A. et al. Marine Waste Management	0-89874-812-7	98.00	-10%	88.20	DM	(
10	Charlier, R.H. Non-living Ocean Resources	0-686-27713-9	7.60	-10%	68.40	DM	(
3	Business Management in Fisheries and Aquaculture		38.90	-10%	105.03	DM	(
1	Chleg Vanishing Land and Water	0-333-44597-X	13.20	-10%	11.88	DM	(
2	Christopher, L. / Wy The Biology of Sea Weeds	0-521-26508-8	150.60	-10%	271.08	DM	(
2	Christopher, L. / Wy The Biology of Sea Weeds	0-521-26508-8	150.60	-10%	271.08	DM	(
12	Churchill Law of the sea	0-7190-2634-2	69.00	-10%	745.20	DM	(
5	Law of the Sea		175.70	-10%	790.65	DM	(
1	Bioeconomic Modeling and Fisheries Management		106.40	-10%	95.76	DM	(
2	Clark, J.R. Coastal Ecosystem Management	0-89874-456-3	113.20	-10%	203.76	DM	(
12	Clark, R. B. Marine Pollution	0-19-854685-8	41.40	-10%	447.12	DM	(
2	Clark, R.B. Introduction to the Long-Term Effects of Oil Pollution on Marine	0-85403-188-X	121.60	-10%	218.88	DM	(
3	Clark, R.B. Marine Pollution	0-19-854182-1	53.20	-10%	143.64	DM	(
30	Clifton, Robert R. Marine fish	0-9618625-5-6	18.20	-10%	491.40	DM	(
5	Clifton, Robert R. Marine fish	0-9618625-5-6	18.20	-10%	81.90	DM	(
3	Clifton, Robert R. Marine fish	0-9618625-5-6	18.20	-10%	49.14	DM	(

Rechnung 38319 vom 26.10.94

2	Sampling Techniques		103.30	-10%	185.94	DM	0
1	Cole, H.A.	0-85403-112-X					
	Assessments of sublethal Effects in the Sea		83.60	-10%	75.24	DM	0
2	Caribbean Reef. Invertebrates and Plants		45.50	-10%	81.90	DM	0
3	Colin, P.L.	0-86622-875-6					
	Marine Invertebrates and Plants of the Living Reef		45.50	-10%	122.85	DM	0
10	Cook	0-89464-682-6					
	Soil Management		91.10	-10%	819.90	DM	0
2	Cormack, D.	0-85334-182-6					
	Response to Oil and Chemical Pollution		186.20	-10%	335.16	DM	0
2	Costlow, J.D. / Tipp	0-87021-530-2					
	Marine Biodeterioration		45.50	-10%	81.90	DM	0
30	Crickshank, J.G.	0-7153-5157-5					
	Soil Geography		45.60	-10%	1231.20	DM	0
30	Cross & Overby	0-444-42578-0					
	Meat Science		418.00	-10%	11286.00	DM	0
30	Cushing, D.H.	0-299-08110-9					
	Fisheries Biology		34.20	-10%	923.40	DM	0
2	Cushing, D.H.	0-521-09911-0					
	Marine Ecology and Fisheries		62.60	-10%	112.68	DM	0
3	The Impact of Marine Pollution		49.40	-10%	133.38	DM	0
2	Darwin, C.	0-404-08402-8					
	On the Structure and Distribution of Coral Reefs		64.60	-10%	116.28	DM	0
30	Fundamentals of Soil Mechanics		322.20	-10%	8699.40	DM	0
2	Davis, W.M.	0-404-01998-6					
	Colar Reef Problem		57.00	-10%	102.60	DM	0
30	Dawes, J.C.	0-471-07844-1					
	Marine Botany		150.40	-10%	4060.80	DM	0
10	Dawes, J.C.	0-471-07844-1					
	Marine Botany		145.00	-10%	1305.00	DM	0
1	Dean, F.M.	0-317-07993-X					
	Marine Chemistry, Vol. 1		152.50	-10%	137.25	DM	0

Rechnung 38319 vom 26.10.94

1	Marine Chemistry: Theory and Applications (Vol. 2)	183.00	-10%	164.70	DM	(
10	Devendra & McLeroy 0-582-60935-6 Goat and Sheep Production	28.50	-10%	256.50	DM	(
3	Dick, M. 0-7513-1020-4 Aquarium Fishes	32.60	-10%	88.02	DM	(
5	Donald, R.S. 0-85238-136-0 Aquaculture Training Manual	37.20	-10%	167.40	DM	(
3	Droop, M. / Wood, F. 0-12-003001-2 Advances in Microbiology of the Sea, vol. 1	128.00	-10%	345.60	DM	(
1	Duursma, E.K. / Daws 0-444-41892-X Marine Organic Chemistry	214.30	-10%	192.87	DM	(
30	Earle, J.M. 0-201-11318-X Engineering Design Graphics	45.60	-10%	1231.20	DM	(
2	Emmens, C.W. 0-86622-742-3 Marine Aquarium in Theory and Practice	37.50	-10%	67.50	DM	(
2	Endean, R. 0-7022-1678-X Australia's Great Barrier Reef	49.40	-10%	88.92	DM	(
5	Erin, B.J. 0-8357-8936-5 Law of the Sea	69.60	-10%	313.20	DM	(
30	Evans 0-19-442444-8 Plantation Forestry in the Tropics	75.30	-10%	2033.10	DM	(
30	Silviculture of Broad Leaved Woodland	45.60	-10%	1231.20	DM	(
2	Falkowski, P.G. 0-306-44192-6 Primary Productivity in the Sea	209.20	-10%	376.56	DM	(
2	Ferguson-Wood, E. / 0-444-41298-0 Tropical Marine Pollution	144.40	-10%	259.92	DM	(
5	Finstein 0-7837-0791-6 Pollution Microbiology	74.30	-10%	334.35	DM	(
3	Fishelson 0-911378-53-7 Mysteries of the Red Sea	45.50	-10%	122.85	DM	(
5	Fredrick, T. 0-88090-043-1 Pollution Control and Environmental Protection	6.10	-10%	27.45	DM	(

Rechnung 38319 vom 26.10.94

30	Processing Aquatic Food Products		45.60	-10%	1231.20	DM	0
10	Friedrich, H.J. Marine Biology	0-295-95011-0	91.20	-10%	820.80	DM	0
3	Aquaculture: Fisheries Management		35.00	-10%	94.50	DM	0
1	Geyer, R.A. Marine Environmental Pollution, vol. 1	0-444-41847-4	306.70	-10%	276.03	DM	0
2	Gosliner, T. Nudibranches of Southern Africa	0-930118-13-8	37.90	-10%	68.22	DM	0
30	Graaff, J. de Soil Conservation and Sustainable Land Use: an Economic Approach	90-683-2042-4	45.60	-10%	1231.20	DM	0
10	Gracey Meat Hygiene	0-7020-1495-8	107.90	-10%	971.10	DM	0
3	Graham, M. Map of the World	0-14-051114-8	10.60	-10%	28.62	DM	0
3	Gray, J.S. The Ecology of Marine Sediments	0-521-28027-3	34.90	-10%	94.23	DM	0
10	Greenberg, I. Red Sea Fishwatcher's Field Guide	0-913008-12-5	7.60	-10%	68.40	DM	0
10	Greenberg, I. Waterproof Guide to Corals and Fishes	0-913008-07-9	19.70	-10%	177.30	DM	0
30	Gulland, A.J. Fish population Dynamics	0-471-91151-8	139.80	-10%	3774.60	DM	0
2	Gulland, J.A. Fish Stock Assessment	0-471-90027-3	144.30	-10%	259.74	DM	0
10	Gulland, J.A. The Management of Fisheries	0-295-95335-7	38.00	-10%	342.00	DM	0
2	Gunderson, D.R. Surveys of Fisheries Resources	0-471-54735-2	104.20	-10%	187.56	DM	0
3	Gunner, B. / Rupert, Red Sea Coral Reefs	0-7103-0007-7	83.60	-10%	225.72	DM	0
1	Gunther, S. Aquarium Encyclopedia	0-262-19207-1	68.40	-10%	61.56	DM	0
2	Hans, F. The Freshwater Aquarium	0-85613-620-4	21.20	-10%	38.16	DM	0



Rechnung 38319 vom 26.10.94

3	Harris, G.P.	0-685-20001-9	Photosynthesis, Productivity and Growth	57.80	-10%	156.06	DM	(
3	Harris, G.P.	0-412-30690-5	Phytoplankton Ecology	57.00	-10%	153.90	DM	(
3	Harvey, H.W.	0-521-05225-4	Chemistry and Fertility of Sea Waters	75.20	-10%	203.04	DM	(
1	Hashimoto, Y.	0-89955-131-9	Marine Toxins and Other Bioactive Marine Metabolites	69.90	-10%	62.91	DM	(
10	Heady	0-582-60896-1	Range & Wildlife Management in the tropics	17.60	-10%	158.40	DM	(
30	Heath & Olusanya	0-582-77519-1	Anatomy and Physiology of Tropical Livestock	22.50	-10%	607.50	DM	(
10	The role of animal technology in rural Development			121.60	-10%	1094.40	DM	(
30	Hexebrodt, H.R.	0-87666-513-X	Marine Fishes	14.90	-10%	402.30	DM	(
5	Hexebrodt, H.R.	0-87666-513-X	Marine Fishes	15.10	-10%	67.95	DM	(
30	The Camel in Health & Disease			45.60	-10%	1231.20	DM	(
2	Hilborn, R. / Walter	0-412-02271-0	Quantitative Fisheries Stock Assessment	113.00	-10%	203.40	DM	(
30	Hillel	0-12-348560-6	Fundamentals of Soil Physics	102.90	-10%	2778.30	DM	(
10	Hillson, C.J.	0-271-01247-1	Seaweeds	19.00	-10%	171.00	DM	(
3	Hobson, E. / Chave,	0-8248-1307-3	Hawaiian Reef Animals	30.30	-10%	81.81	DM	(
2	Holme, N.A. / McInty	0-632-00894-6	Methods for the Study of Marine Benthos	75.20	-10%	135.36	DM	(
1	Hopper	3-11-007375-7	Marine Algae in Pharmaceutical Science	235.00	-10%	211.50	DM	(

Rechnung 38319 vom 26.10.94

3	Hughes, R.N. / Barne Introduction to Marine Ecology	0-632-02049-0	102.60	-10%	277.02	DM	0
3	Hundloe, T.J. Fisheries Management	0-949725-02-1	55.50	-10%	149.85	DM	0
5	Irby, B.N. Marine and Estuarine Ecology	0-87805-201-1	11.40	-10%	51.30	DM	0
1	Irby, B.N. et al. Diversity of Marine Animals	0-87805-203-8	11.40	-10%	10.26	DM	0
3	Irby, B.N. et al. Diversity of Marine Plants	0-87805-204-6	11.40	-10%	30.78	DM	0
3	Isabella, A. et al. How to Know the Sea Weeds	0-685-18995-3	45.60	-10%	123.12	DM	0
3	Assessment of the Effects of Pollution on Fisheries and Aquacult		12.50	-10%	33.75	DM	0
5	Jeffrey, S.L. Marine Ecology	0-13-556852-8	76.00	-10%	342.00	DM	0
10	Jessop & Wright Alternative Crop Species	0-909605-80-7	91.70	-10%	825.30	DM	0
3	Johnson, R. Marine Pollution	0-12-387650-8	158.10	-10%	426.87	DM	0
3	Johnson, S. Coral Reefs	0-8225-1451-6	30.30	-10%	81.81	DM	0
1	Johnston, D.M. Marine Policy and the Costal Community	0-312-51520-0	39.50	-10%	35.55	DM	0
2	Johnstone, J. Conditions of Life in the Sea	0-405-10401-4	41.80	-10%	75.24	DM	0
2	Jones, O.A. / Endean Biology and Geology of Coral Reefs, vol. 1: Geology	0-12-389601-0	152.80	-10%	275.04	DM	0
2	Jones, O.A. / Endean Biology and Geology of Coral Reefs, vol. 2: Biology	0-12-389602-9	126.90	-10%	228.42	DM	0
2	Jones, O.A. / Endean Biology and Geology of Coral Reefs, vol. 3: Biology two	0-12-389603-7	145.20	-10%	261.36	DM	0
2	Jones, O.A. / Endean Biology and Geology of Coral Reefs, vol. 4	0-12-389604-5	114.00	-10%	205.20	DM	0

Rechnung 38319 vom 26.10.94

1	Judkins, J.F. / Bene	0-13-722975-5	Process Chemistry for Water and Waste-Water Treatment	106.40	-10%	95.76	DM	(
30	Agricultural Climatology			45.60	-10%	1231.20	DM	(
10	Keen, M.J.	0-08-012505-0	An Introduction to Marine Geology	21.30	-10%	191.70	DM	(
5	Kennet, J.P.	0-13-556936-2	Marine Geology	179.00	-10%	805.50	DM	(
1	Marine Pollution and the Law of the Sea (6 vols.)			82.10	-10%	73.89	DM	(
1	Kinne, O.	0-471-99693-9	Disease of Marine Animals, vol. 3: Echinodermata to Vertebrata	121.60	-10%	109.44	DM	(
3	Kinne, O.	0-471-99694-7	Disease of Marine Animals, vol. 4: Pisces, Applied Aspects, Conclusion	121.60	-10%	328.32	DM	(
1	Kinne, O.	0-471-99584-3	Diseases of Marine Animals: General Aspect - Protoza to Gastrop	103.50	-10%	93.15	DM	(
2	Kinne, O. / Bulnheim	3-87429-059-X	Cultivation of Marine Organisms and its Importance for Marine Biolo	195.30	-10%	351.54	DM	(
1	Kiss	0-8213-1872-1	Integrated Pest Management and African Agriculture	22.50	-10%	20.25	DM	(
1	Kiss	0-8213-1872-1	Integrated Pest Management and African Agriculture	22.50	-10%	20.25	DM	(
1	Kniper / Bunick	90-247-3489-4	Fate and Effects of Oil in Marine Ecosystems	229.70	-10%	206.73	DM	(
1	Kohlmeyet, J.	0-12-418350-6	Marine Mycology: Higher fungi	148.10	-10%	133.29	DM	(
2	Komar, P.D.	0-306-41497-X	Beach Processes and Sedimentation	98.80	-10%	177.84	DM	(
30	Kristjonsson, Hilman	0-685-63437-X	Fishing Gears	273.60	-10%	7387.20	DM	(
2	L'Hermit, P.	90-277-1727-3	Processing and Use of Sewage Sludge	266.70	-10%	480.06	DM	(

Rechnung 38319 vom 26.10.94

30	Landon, J.R. Booker Tropical Soil Manual	0-582-00557-4	38.90	-10%	1050.30	DM	0
3	Lapidoth Red Sea and the Gulf of Aden	90-247-2501-1	207.50	-10%	560.25	DM	0
2	Lasker, R. Marine Fish Larvae	0-295-95883-9	12.90	-10%	23.22	DM	0
30	Laverack, M.S. Physiological Adaptation of Marine Animal	0-948601-00-0	82.80	-10%	2235.60	DM	0
2	Laverack, M.S. Physiological Adaptation of Marine Animal	0-948601-00-0	82.80	-10%	149.04	DM	0
1	Lawson, G.W. / John, The Marine Algae and Coastal Environment of Tropical West Africa	3-7682-5470-4	235.60	-10%	212.04	DM	0
10	Lerman, M. Marine Biology	0-8053-6402-1	55.90	-10%	503.10	DM	0
5	Lerman, M. Marine Biology	0-8053-6402-1	55.90	-10%	251.55	DM	0
1	Levering, T. Tenth International Seaweed Symposium	3-11-008389-2	217.40	-10%	195.66	DM	0
3	Lewis, T.R. Stochastic Modeling of Ocean Fisheries Resources Management	0-295-95838-3	45.60	-10%	123.12	DM	0
2	Lewis, W.M. Zooplankton Community Analysis Studies on a Tropical System	0-387-90434-4	82.80	-10%	149.04	DM	0
1	Lindstrom, S.C. / Ga Thirteenth International Seaweed symposium	0-7923-0763-1	456.00	-10%	410.40	DM	0
2	Littler, M.M. / Litt Handbook of Physiological Methods	0-521-24915-5	188.30	-10%	338.94	DM	0
3	Livingstone, R.J. Ecological Process in Coastal and Marine Systems	0-306-40318-8	120.80	-10%	326.16	DM	0
2	Lobban, C.S. Physiological Ecology of Sea Weeds	0-12-455560-8	150.60	-10%	271.08	DM	0
2	Lobban, C.S. Physiological Ecology of Sea Weeds	0-12-455560-8	151.20	-10%	272.16	DM	0

Rechnung 38319 vom 26.10.94

5	Longhurst, A.R. / Pa	0-12-455562-4	Ecology of Tropical Oceans	91.20	-10%	410.40	DM	(
1	MacDonald, A.G.	0-318-34818-7	Physiological Aspects of Deep Sea Biology	183.50	-10%	165.15	DM	(
10	MacDonald, A.G. / Pr	0-12-464160-1	Experimental Biology at Sea	158.10	-10%	1422.90	DM	(
5	MacLean, J.L. / Temp	971-10-2259-1	Bibliography on Indo-Pacific Red Tides	7.60	-10%	34.20	DM	(
2	Makower, Joel	0-679-72767-1	Map Catalogue	27.40	-10%	49.32	DM	(
1	Mance, G.	1-85166-039-9	Pollution Threat of Heavy Metals in Aquatic Environments	183.20	-10%	164.88	DM	(
15	Martin & Leonard	0-02-376720-0	Principles of field crop production	130.40	-10%	1760.40	DM	(
1	Mass, S.T.	0-521-30899-2	The Biology of Marine Fungi	90.50	-10%	81.45	DM	(
1	Mauchercke, P.C.	0-9602978-2-0	Map Use	38.00	-10%	34.20	DM	(
2	Maunice, M.	0-668-06124-3	Marine Aquarium Manual	18.20	-10%	32.76	DM	(
1	May, R.M.	0-387-15028-5	Exploitation of Marine Communities	30.40	-10%	27.36	DM	(
30	McDonald, Edward & G	0-582-40903-9	Animal Nutrition	60.20	-10%	1625.40	DM	(
2	McLusky, D.S.	0-412-02101-3	The Estuarine Ecosystems	45.50	-10%	81.90	DM	(
2	Meade	0-442-20570-8	Aquatic Management	126.80	-10%	228.24	DM	(
10	Michael	0-471-04688-4	Farm Management	180.70	-10%	1626.30	DM	(
1	Michael, R.G.	0-444-42517-9	Managed Aquatic Systems	221.80	-10%	199.62	DM	(
10	Forage Crops			45.60	-10%	410.40	DM	(
2	Mills, D.	0-668-06554-0	Fishkeeper's Guide to Marine Fishes	15.10	-10%	27.18	DM	(

Rechnung 38319 vom 26.10.94

3	Mills, D. Fishkeeper's Guide to the Tropical Aquarium	0-668-06347-5	12.10	-10%	32.67	DM	0
3	Minelli Marine Life	0-8160-1556-2	24.20	-10%	65.34	DM	0
2	Moe Marine Aquarium Handbook	0-939960-02-8	19.70	-10%	35.46	DM	0
3	The Biology of Marine Fungi		106.40	-10%	287.28	DM	0
1	Mucatine / Lenhoff Coelentarate Biology	0-12-512150-4	170.20	-10%	153.18	DM	0
2	Neville A Fish Keeper's Guide to Maintaining of Health Aquarium	0-668-06592-3	30.40	-10%	54.72	DM	0
2	Newell Biology of Interdial Animals	0-9506920-0-X	80.30	-10%	144.54	DM	0
1	Newman Marine Hydrodynamics	0-262-14026-8	118.60	-10%	106.74	DM	0
1	Nicholas Monitoring the Marine Environment	0-275-90401-6	75.90	-10%	68.31	DM	0
30	Norton C. F. Mircobiology	0-201-11037-7	22.70	-10%	612.90	DM	0
1	Nraigu Aquatic Toxicology and Water Quality Management	0-471-61551-X	253.50	-10%	228.15	DM	0
10	Nybakken, J. Reading in Marine Ecology	0-06-044837-7	38.80	-10%	349.20	DM	0
10	Orskov Feed Science	0-444-42662-0	317.60	-10%	2858.40	DM	0
30	Page, A.L. Methods of Soil Analysis	0-89118-072-9	45.60	-10%	1231.20	DM	0
5	Parsons et al. A Manual of Chemical and Biological Methods for Sea Water An	0-08-030287-4	38.90	-10%	175.05	DM	0
1	Partin Pollution and the Biological Resources of the Oceans	0-408-10840-1	38.90	-10%	35.01	DM	0
2	Partin Pollution and the Biological Resources of the Oceans	0-408-10840-1	38.90	-10%	70.02	DM	0

Rechnung 38319 vom 26.10.94

1	Partin	0-408-10840-1					
	Pollution and the Biological Resources of the Oceans		38.90	-10%	35.01	DM	(
10	Pathah & Jakhmia	0-7069-2323-5					
	Forage & Livesock Production		45.60	-10%	410.40	DM	(
1	Pauly / Morgan	971-10-2228-1					
	Length Based Methods in Fisheries Research		49.40	-10%	44.46	DM	(
1	Pawlowski	0-444-42067-3					
	Physiological Methods for Water and Wastewater Treatment#		256.50	-10%	230.85	DM	(
30	Payne, W.J.A.	0-582-40407-X					
	An introduction to Animal Husbandy in the Tropics		138.10	-10%	3728.70	DM	(
30	Perrens, S.	0-85825-176-0					
	Agricultural Engineering		42.80	-10%	1155.60	DM	(
2	Pielou	0-471-88950-4					
	The Interpretation of Ecological Data		143.00	-10%	257.40	DM	(
1	Potterge	0-316-35848-7					
	Red Sea Sharks		12.00	-10%	10.80	DM	(
20	Pratley, J.	0-424-00131-4					
	Principles of crop production		69.00	-10%	1242.00	DM	(
10	Purselglove	0-470-20567-9					
	Tropical Crops: Dicotyledons		101.80	-10%	916.20	DM	(
2	Reise	0-387-15447-7					
	Tidal Flat Ecology		126.20	-10%	227.16	DM	(
2	Rhenheimer	0-471-92695-7					
	Aquatic Microbiology		126.20	-10%	227.16	DM	(
1	Rhoads / Lutz (eds.)	0-306-40259-9					
	Skeletal Growth of Aquatic Organisms		197.60	-10%	177.84	DM	(
15	Fruit & Vegetable Production in Africa		32.60	-10%	440.10	DM	(
30	Richard & Davies	0-412-15230-4					
	Imm's General Textbook of Entmology		75.90	-10%	2049.30	DM	(
10	Romashako	0-89317-005-4					
	The Coral Book		7.50	-10%	67.50	DM	(

Rechnung 38319 vom 26.10.94

10	Rothschild	0-674-21879-5						
	Dynamics of Marine Fish Populations		80.20	-10%	721.80	DM	0	
1	Ruivo	0-685-63432-9						
	Marine Pollution and Sea Life		144.40	-10%	129.96	DM	0	
1	Russel	0-12-026101-4						
	Advances in Marine Biology, vol. 1		123.00	-10%	110.70	DM	0	
1	Advances in Marine Biology, vol. 10		121.60	-10%	109.44	DM	0	
1	Russel	0-12-026111-1						
	Advances in Marine Biology, vol. 11		91.20	-10%	82.08	DM	0	
1	Advances in Marine Biology, vol. 12		121.60	-10%	109.44	DM	0	
1	Russel	0-12-026113-8						
	Advances in Marine Biology, vol. 13		121.60	-10%	109.44	DM	0	
1	Russel	0-12-026114-6						
	Advances in Marine Biology, vol. 14		135.50	-10%	121.95	DM	0	
1	Russel	0-12-026115-4						
	Advances in Marine Biology, vol. 15		145.60	-10%	131.04	DM	0	
1	Russel	0-12-026116-2						
	Advances in Marine Biology, vol. 16		158.00	-10%	142.20	DM	0	
1	Russel	0-12-026102-2						
	Advances in Marine Biology, vol. 2		123.00	-10%	110.70	DM	0	
1	Russel	0-12-026121-9						
	Advances in Marine Biology, vol. 21		95.40	-10%	85.86	DM	0	
1	Russel	0-12-026104-9						
	Advances in Marine Biology, vol. 4		91.20	-10%	82.08	DM	0	
1	Advances in Marine Biology, vol. 5		106.40	-10%	95.76	DM	0	
1	Russel	0-12-026106-5						
	Advances in Marine Biology, vol. 6		106.40	-10%	95.76	DM	0	
1	Russel	0-12-026107-3						
	Advances in Marine Biology, vol. 7		106.40	-10%	95.76	DM	0	
1	Russel	0-12-026108-1						
	Advances in Marine Biology, vol. 8		106.40	-10%	95.76	DM	0	
1	Russel	0-12-026109-X						
	Advances in Marine Biology, vol. 9		136.80	-10%	123.12	DM	0	
1	Advances in Marine Ecology, vol. 3		91.20	-10%	82.08	DM	0	
30	Russell, E.W.	0-582-44677-5						
	Soil conditions & plant growth		135.50	-10%	3658.50	DM	0	



Rechnung 38319 vom 26.10.94

30	Russell, E.W.	0-582-44677-5						
	Soil conditions & plant growth		135.50	-10%	3658.50	DM	(	
30	Sabins, F.	0-7167-1793-X						
	Remote sensing		120.40	-10%	3250.80	DM	(	
10	Sainsbury	0-7020-1161-4						
	Livestock Health		30.10	-10%	270.90	DM	(	
29	Samson, J.A.	0-582-40409-6						
	Tropical fruits		100.40	-10%	2620.44	DM	(	
1	Samson, J.A.	0-582-40409-6						
	Tropical fruits		100.40	-10%	90.36	DM	(	
10	Sasimoski	0-444-99504-8						
	Animal Breeding & Production		372.40	-10%	3351.60	DM	(	
1	Schaeffer / Mendenha	0-534-92185-X						
	Elementary Survey Sampling		75.90	-10%	68.31	DM	(	
20	Schlieper	0-295-95234-2						
	Research Methods in Biology		45.60	-10%	820.80	DM	(	
1	Schocder / Purser	0-387-16594-0						
	Reef Diagenesis		171.80	-10%	154.62	DM	(	
30	Schwab, Glenn	0-471-57490-2						
	Soil and water conservation engineering		143.10	-10%	3863.70	DM	(	
2	Seitz	0-915463-58-X						
	Scientific prespective on the Green House Problem		28.80	-10%	51.84	DM	(	
5	Sharabati	0-7103-0103-0						
	Red Sea Shells		45.50	-10%	204.75	DM	(	
30	Principles & Practice of irrigation Engineering		30.00	-10%	810.00	DM	(	
3	Sherman / Alexander	0-8133-7145-7						
	Variability and Management of Large Marine Ecosystems		72.80	-10%	196.56	DM	(	
1	Shuttleworth	0-387-18769-3						
	Physiology of Elasmobranch Fishes		272.00	-10%	244.80	DM	(	
1	Simpson	0-387-90893-5						
	The Cell Biology and Songes		331.40	-10%	298.26	DM	(	
5	Sisters of the Commu	0-941478-79-3						
	Red Sea Waters		12.00	-10%	54.00	DM	(	

Rechnung 38319 vom 26.10.94

3	Smith et al. Keys to the Marine Invertebrates of the woods	0-912544-01-5	13.70	-10%	36.99	DM	0
1	Soule / Kleppel Marine Organism as Indicators	0-387-96565-3	196.00	-10%	176.40	DM	0
2	Soule / Walsh Waste Disposal in the Oceans	0-87395-688-5	60.00	-10%	108.00	DM	0
5	Sournia Phytoplankton Manual	92-310-1572-9	21.30	-10%	95.85	DM	0
3	Southward Life on the Sea Shore	0-674-53351-8	22.80	-10%	61.56	DM	0
30	Spillers Introduction to Structures	0-85312-558-9	40.00	-10%	1080.00	DM	0
30	Stancy & Stephen Reproductive Ecology of Marine	0-87249-379-2	65.30	-10%	1763.10	DM	0
3	Stancy & Stephen Reproductive Ecology of Marine	0-87249-379-2	65.30	-10%	176.31	DM	0
1	Steele Marine Food Chain	3-87429-047-6	146.70	-10%	132.03	DM	0
3	Steele The Structure of Marine Ecosystems	0-674-84421-1	13.60	-10%	36.72	DM	0
3	Steeman Marine Photosynthesis	0-444-41320-0	128.90	-10%	348.03	DM	0
2	Stein Handbook of Physiological Methods	0-521-29747-8	106.40	-10%	191.52	DM	0
3	Stephanson Sea Weed in Agriculture and Horticulture	0-9600698-3-6	19.80	-10%	53.46	DM	0
30	Weeds & Weeds Control		45.60	-10%	1231.20	DM	0
1	Sterrer / Schoepfer- Marine Fauna and Flora of Bermuda	0-471-82336-8	381.50	-10%	343.35	DM	0
1	Stetson Processing of Environmental Information in Vertebrates	0-387-96558-0	183.90	-10%	165.51	DM	0
1	Stoddart / Johannes Coral Reefs	92-310-1491-9	28.90	-10%	26.01	DM	0
3	Styles Faunal Exploration and Resource Selection	0-942118-09-X	18.20	-10%	49.14	DM	0

Rechnung 38319 vom 26.10.94

5	Sumich / Dudley Laboratory and Field Investigations in Marine Biology	0-697-05107-2	30.00	-10%	135.00	DM	0
30	Sumich, J.I. An Introduction to the Biology of Marine life	0-697-05296-6	45.60	-10%	1231.20	DM	0
10	Swenson Physiology of Deomestic Animals	0-8014-2804-1	105.60	-10%	950.40	DM	0
30	Tail, R.V. Elements of Marine Ecology	0-408-71054-3	45.60	-10%	1231.20	DM	0
10	Tail, R.V. Elements of Marine Ecology	0-408-71054-3	45.60	-10%	410.40	DM	0
1	Thomas Marine Chemistry in the Coastal Environment	0-8412-0531-0	53.10	-10%	47.79	DM	0
1	Thomson Marnie Biodetorioration	90-619-1488-4	129.20	-10%	116.28	DM	0
30	Seed Technology		45.60	-10%	1231.20	DM	0
5	Thurman / Webber Marine Biology	0-673-39913-3	62.60	-10%	281.70	DM	0
30	Thurman, Harold V. Essentials of Ocanography	0-675-10716-4	8.80	-10%	237.60	DM	0
1	Tiffen More people, less erosion	0-471-94143-3	56.50	-10%	50.85	DM	0
1	Tore Marine Algae	3-11-005621-6	170.20	-10%	153.18	DM	0
1	Trainor Introductory Phycology	0-89464-279-0	64.60	-10%	58.14	DM	0
10	Urguhart Veterinary Parasitology	0-582-40906-3	136.70	-10%	1230.30	DM	0
3	Valiela Marine Ecological Processes	0-387-90929-X	82.00	-10%	221.40	DM	0
1	Venberg Marine Pollution	0-12-718260-8	85.10	-10%	76.59	DM	0
2	Venberg Marine Pollution and Physiology	0-87249-446-2	65.30	-10%	117.54	DM	0
2	Vernberg / Vernberg Functional Adaptation of Marine Organisms	0-12-718280-2	109.40	-10%	196.92	DM	0

Rechnung 38319 vom 26.10.94

2	Vernberg et al. Biological Monitoring of Marine Pollutants	0-12-718450-3	75.20	-10%	135.36	DM	0
1	Veron Corals of Australia and Indo Pacific	0-685-65264-5	136.80	-10%	123.12	DM	0
10	Vickery, V.R. The honey bee	0-9694759-0-X	45.60	-10%	410.40	DM	0
3	Vine Red Sea	0-907151-10-8	67.60	-10%	182.52	DM	0
1	Vine Red Sea Handbook	0-907151-12-4	45.00	-10%	40.50	DM	0
30	Management of Semi-Arid Ecosystems		45.60	-10%	1231.20	DM	0
30	Plant Pathology		45.60	-10%	1231.20	DM	0
1	Offshore Ecology Investigations		30.40	-10%	27.36	DM	0
2	Wells Coral Reef of the World	2-88032-943-4	62.80	-10%	113.04	DM	0
2	Wells / Jenkin Corals of the World	2-88032-945-0	62.80	-10%	113.04	DM	0
2	Wells / Sheppard Coral reefs of the World	2-88032-944-2	62.80	-10%	113.04	DM	0
3	Wheaton / Lawson Processing Aquatic Food Products	0-471-09736-5	129.10	-10%	348.57	DM	0
10	Whitemore Elements of Pig Science	0-582-45599-5	35.10	-10%	315.90	DM	0
30	Irrigation Management		45.60	-10%	1231.20	DM	0
30	Wilkins Advanced Plant Physiology	0-273-01853-1	43.90	-10%	1185.30	DM	0
1	Williams Shrimps, Lobsters and Crabs of the Atlantic Coast	0-87474-960-3	76.00	-10%	68.40	DM	0
3	Winberg Methods for the Estimation of Productivity of Aquatic Animals	0-12-758350-5	60.00	-10%	162.00	DM	0
1	Winn / Oll Behavior of Marine Animals	0-306-37573-7	136.00	-10%	122.40	DM	0



### 8.7.3. List of Suppliers

Buchhandlung Kaiser Gmbh  
Wolbecker Str. 89  
D-48155 Munster  
Germany

British Council  
P.O.Box 1043  
Addis Ababa  
Ethiopia

Addis Ababa University (AAU) Book Centre  
P.O.Box 1176  
Addis Ababa  
Ethiopia

Gaylord Bros.:  
Box 4901 Syracuse  
NY 13221  
4901 USA

CPU :  
Computer Professionals United  
P.O.Box 31166  
Addis Ababa  
Ethiopia

WB Publications:  
P.O.Box 7247-8619  
Philadelphia, PA  
19170-8619 USA

Systemhyller A/S:  
Stålfjæra 3  
0975 Oslo  
Norway

Natural Resources Institute (NRI)  
Publishing Unit  
Chatham Maritime  
Kent ME4 4TB  
United Kingdom

CFL Vision  
Hercules House  
Hercules Road  
London SE1 7DU  
United Kingdom

Soil Science Society of America (SSSA)  
Headquarters Office, Book Order Dept.  
677 South Segoe Road  
Madison, WI  
53711 USA

International Fund for Agricultural Development (IFAD)  
Via del Serafico 107  
00142 Rome  
Italy

WILDart  
Wilhelm Exner-gasse 23/32  
Vienna  
Austria

ICRISAT  
Information Management and Exchange Program  
Patancheru  
Andhra Pradesh 502 324  
India

OXFAM  
274 Banbury Road  
Oxford OX2 7DZ  
United Kingdom

Carolina Biological Supplies  
2700 York Rd.  
Burlington, N.C.  
USA

Haaland & Hamre  
Skytterveien 200  
Postboks 175  
1371 Asker  
Norway

PC House Integrated Computer Services:  
P.O.Box 839  
Addis Ababa  
Ethiopia

Ås Foto:  
Brekkev 5  
1430 Ås  
Norway

Telco: ES (Eagle Scientific ltd):  
Box 2287  
Addis Ababa  
Ethiopia

Høyskoledata as:  
Drammensvn. 130 B  
0277 Oslo  
Norway

Eik Maskin as:22 64 68 20  
Box 35 Risløkka  
0516 Oslo  
Norway

Kjær & Kjær WorldWide  
Grønmmosevej 6  
P.O.Box 260  
5700 Svendborg  
Denmark

TELCO: Riedel-de Haén Aktiengesellschaft:  
Box 2287  
Addis Ababa  
Ethiopia

TALC (Teaching Aids at Low Costs):  
P.O.Box 49  
St Albans  
Herts AL1 4AX  
UK

Hameg Germany

John & Fluk Co USA:  
P.O.Box C9090  
Everett  
Washington 98 206  
USA

Ericsson Electronic Services  
P.O.Box 34  
1361 Billingstad  
Norway

F. Arngren  
Arngren Electronics as  
Stasjonsv. 51  
Box 2 Holmen  
0322 Oslo  
Norway

Fisher

Karl Kolb comb. &Co.-Kg. scientific & Tech.supplies, Germany



Adam Rouilly  
Crown Quay Lane Sittingbourne  
Kent  
ME103JG  
UK

AMCE The Automotive Manufacturing Company of Ethiopia:  
P.O.Box 5736  
Addis Ababa  
Ethiopia

Sherif & Sons  
P.O.Box 50053  
Addis Ababa  
Ethiopia

Metric Analyse Division:  
Metric as  
P.O.Box 93 Holmlia  
N-1201 Oslo  
Norway

Local suppliers - used for minor items which can be bought in Addis Ababa.