

# NAVF'S

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Studies in Research  
and Higher Education

## Research relevant to Developing Countries

A Catalogue of Research Projects  
concerning Developing Countries  
at Norwegian Universities and  
Research Institutes

INSTITUTE FOR STUDIES IN RESEARCH  
AND HIGHER EDUCATION

The Norwegian Research Council  
for Science and the Humanities.

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and Higher Education

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## PREFACE

The present report is an attempt to describe the extent and contents of Norwegian research and development projects concerning developing countries, and is based on a questionnaire survey performed in the autumn of 1974.

The study has been carried out by the Institute for Studies in Research and Higher Education (The Norwegian Research Council for Science and the Humanities) at the request of the Norwegian Agency for International Development (NORAD). Hans Skoie, Deputy director of the Institute, has been in charge of the work on the report. It has been compiled and edited by Ivar Rusdal, M.Sc.

The Institute would like to thank all those who have contributed to the survey, as individuals or as representatives of the various institutions.

Oslo, January 1975

Sigmund Vangsnes  
Director

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## 1. SUMMARY

Our survey of Norwegian R&D for developing countries gave details of 145 projects currently going on or recently concluded. A rather wide definition of research and development for developing countries (RDC) was applied, including all research carried out in cooperation with a developing country or dealing with international relations involving developing countries.

A questionnaire was sent to 368 institutes in the fields of technology, agriculture, medicine, biology and the social sciences. 53 institutes reported RDC projects. 63% of the projects were carried out at universities and colleges, while the institute sector accounted for 37%. Nearly half of the projects were started on the initiative of the institution in question. Requests from international institutions were the initiating factor behind 24 projects, or 17% of the total. For 41% of the projects, no plans existed for the transfer of results to developing countries.

37 institutes were engaged in educational activities related to the developing countries. A similar number had served as consultants, mainly on technological problems or development projects.

According to our estimates, Norwegian scientists performed approximately 75 man-years on RDC projects in 1974 - about 1% of the total Norwegian R&D effort. RDC in Norway is generally financed as part of the ordinary activities of the institutes. In 1974, NORAD contributed 29 mill. N.Kr. to R&D activities - the greater part of it was spent abroad.

Comments were invited from the respondents on problems in RDC. Several institutes complained about lack of resources for expanding activities in this area. The need for close cooperation with institutions in developing countries was emphasized, and the lack of an interdisciplinary approach deplored. Norwegian RDC efforts were criticized as somewhat sporadic and unplanned.

Research fellows from developing countries had been or were working at 95 institutes, and several comments were concerned with this type of assistance. The language problem was underlined. Some institutes pointed to deficiencies in specialized knowledge and experience of many fellowship holders, which bar them from profiting extensively from a stay in Norway.

In the catalogue one page is devoted to each project, giving details on duration and funding as well as a general outline of the project. Publications and cooperation with developing countries, if any, are listed for each project. The names of researchers to whom inquiries may be directed are also included.

## 2. INTRODUCTION

A main problem when preparing the survey was determining what projects should be included. After consulting a panel of researchers with particular interest in this field, it was decided that the term "Research and Development for Developing Countries" (abbreviated to RDC) in this survey should cover all research which is part of a cooperative effort between Norway and a developing country, or which takes up a topic from a developing country. Research dealing with the relationship between developing countries or between these and industrial countries should also be considered as relevant. (See "Guidelines for filling out the forms", appendix I.) The institutes were asked to state why a particular project was reported as an RDC project, if this was not obvious from the definitions above.

For the purpose of the survey, we use the Unesco definition of "Developing country", which refers to all countries of Africa, Asia, Latin America and the Caribbean and Oceania, except South Africa, Japan, Australia and New Zealand.

An English translation of the questionnaire used in the survey is included as appendix I (page 215). It consists of two parts, Form A for general information about the activities of the responding institute, and Form B, which is filled out for each particular project.

It was emphasized in the accompanying letter that projects not classified as "Research and Development" in the strictest sense were also to be included, e.g. surveys or special studies, or the transfer of available results of research projects to the requirements of developing countries.

The questionnaire was sent to a selected group of 368 institutes including all institutes at the Agricultural University of Norway and the Norwegian Institute of Technology. In addition were included institutes doing research in human and veterinary medicine, the biological sciences, the social sciences

and certain private or semi-official institutes considered to be of particular interest to the survey. The research councils and their institutes were also consulted.

As the purpose of the study is to survey the activities of research institutions for the benefit of developing countries, no information is given on private firms (e.g. consultants or industrial concerns working in developing countries). References to such firms may be found only in certain cases where research institutes work in cooperation with industrial or consultant firms on particular research or development projects.

The results of the survey are outlined in chapter 3, which includes tables on the data supplied by the questionnaire. Chapter 4 deals with the extent of RDC in Norway and how it is financed. In question 7 of Form A, the institutes were invited to submit points of view on Norwegian RDC efforts. A selection of comments is included in Chapter 5.

The catalogue of projects, including information on other activities of interest to the survey, constitutes the major part of the report. It is preceded by a list of project titles.

An English translation of the questionnaire and a geographical and a subject index referring to all activities covered by the report are included as appendices. In connection with the survey, a list of Norwegian researchers with experience from developing countries has been compiled. This list may be obtained from the Institute.

### 3. THE SURVEY - AN OUTLINE OF RESULTS

The questionnaire was sent to a total of 368 institutes. The forms were sent out in mid-August 1974 and when the survey was concluded at the end of October 1974, replies had been received from 338 institutes (92%).

Table 3.1 indicates the types of replies.

Table 3.1. Types of replies.

Institutes reporting RDC projects .....	53	(16%)
Institutes reporting other activities or expressing opinions or interests .....	168	(50%)
Negative replies (i. e. institutes stating only "No such activity") .....	117	(34%)
Total .....	338	(100%)

A total of 145 projects<sup>1)</sup> were reported from 53 institutes. 97 of these are in progress, 39 concluded and 9 planned. (Master's degree theses are not included in these figures if no information was given other than the project title. 28 such projects are listed in the project catalogue.)

Table 3.2 shows the distribution of projects between types of institutes.

Table 3.2.

Type of institute	No. of inst. with projects	No. of projects
Universities .....	37	92 (63%)
Research Council Institutes .....	4	11 (8%)
Public Institutes .....	6	24 (17%)
Private or Semi-official institutes .....	6	18 (12%)
Total .....	53	145 (100%)

In addition to these 145 projects, the catalogue contains a list of 20 projects in which research fellows from developing countries participate. Such projects were originally intended to be included in the catalogue itself (see Definition, paragraph 1), page 216). This was not possible, however, as such information was received from only a few institutes.

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1) Exclusive of 6 projects added in proof.

A comment from an institute stating that "... we wish that fellowship holders from developing countries could work on problems concerning their own countries - but we have not been able to find feasible projects" may indicate that many of these fellows perform basic research. The institutes may not consider this work to be particularly relevant to developing countries, and have not reported such projects as RDC.

The question "Would your institute be interested in starting RDC in the future?" (Form A, q. 4) was answered by 165 institutes, as shown in Table 3.3.

Table 3.3. Interests in future RDC.

Yes, the "normal" activity of the institute should be of interest .....	84
Interested in cooperation with developing countries .....	7
Other positive answers .....	<u>7</u>
Total positive answers .....	<u>98</u>
No capacity (owing to lack of funds, personnel etc.) .....	38
No interest .....	17
Field of science not relevant .....	5
Other negative answers .....	<u>7</u>
Total negative answers .....	<u>67</u>

It is interesting to note that as many as 84 institutes consider their ordinary activities to be of interest to developing countries, while only 53 institutes have actually reported projects. This indicates an important potential for an increased RDC effort in Norway.

In response to the question concerning participation in "other activities relating to development countries" (Form A, q. 5), 77 university institutes and

18 others indicated that research fellows from developing countries have been or are working at their institute. 37 institutes have been consulted in matters relating to developing countries, mainly on technological problems or NORAD/UN organization projects. A total of 37 institutes are engaged in educational activities related to developing countries. 20 institutes reported lectures at Norwegian universities, and 12 were participating in university education in developing countries.

Table 3.4. How was the project started?

On the initiative of the institution .....	70	(48%)
Request from authorities or institution in a developing country .....	12	(8%)
Request from NORAD .....	18	(12%)
Request from other Norwegian institutions (private assistance projects etc.) .....	11	(8%)
Request from international institution (UN organizations etc.) .....	24	(17%)
Other (especially international research programs) .....	20	(7%)
Total .....	145	(100%)

(Note: Some institutions have indicated both "on the initiative of the institution" and another reason why a project was started. In such cases the former has been neglected in the table above.)

Nearly half of the projects were started on the initiative of the researcher or institution. In fact very few projects (12, or 8% of the total number) were started on a direct request from a developing country.

We also asked the institutions to state if any plans exist for the transfer of the results of the projects in question to developing countries (Form B, q.4B). The replies to this question are reported in Table 3.5.

Table 3.5. Has a transfer plan been worked out?

No/no answer .....	60	(41%)
Cooperation with institutions in developing countries .....	26	(18%)
Publications will be forwarded .....	10	(7%)
The project is performed in a developing country .....	21	(15%)
Results will be published internationally (exchange contacts, congresses, international organizations etc.) .....	26	(18%)
Through Norwegian agencies .....	2	(1%)
Total .....	145	(100%)

One of the "no"-answers have "I am grateful for good ideas" as an additional comment. In only about 1/3 of the projects are results to be transferred through direct contact with the developing country in question.

#### 4. THE EXTENT OF NORWEGIAN RESEARCH AND DEVELOPMENT FOR DEVELOPING COUNTRIES

Throughout the catalogue of projects, information on the resources applied is given for most of the current projects. On the basis of this, we estimate that Norwegian scientists performed approximately 75 man-years (full time equivalents) on RDC projects in 1974. (Work performed by auxiliary personnel is not included, as little information on this is given by the survey.) This amounts to about 1% of the total R&D effort in Norway according to the Research councils' statistics.

RDC in Norway is generally financed as a part of the ordinary activity of the institutes, with additional funds from NORAD, the research councils, or international assistance organizations. The following paragraphs contain an outline of the total financing of research by NORAD, and an account of a special grant from the NAVF.

#### A. NORAD (Norwegian Agency for International Development)

This agency was given a total appropriation of 693 million N.kr. in 1974, and the proposed amount for 1975 is 989 million N.kr. The Norwegian research councils estimate<sup>1)</sup> that of the 1974 budget, 29 million N.kr. are allocated directly to R&D activities: scholarships or support to research projects abroad or in Norway. Most of these funds are spent abroad. Only the budget items for scholarships etc. (totalling 9 million N.kr.) and research in Norway (2.2 million N.kr.) support activities at Norwegian research institutions covered by this survey.

At present, NORAD has appointed a Research Committee comprised of 5 representatives from research institutions and the Government. This Committee is assigned to advise NORAD on evaluation and initiation of research projects, and on the priorities to be followed by NORAD in this area in the future.

#### B. NAVF (Norwegian Research Council for Science and the Humanities)

For several years this Research Council has had a Committee for Non-European studies, with the aim of supporting field work etc. for graduate students. In 1974, 120.000 N.kr. was distributed to students in Social Anthropology and Geography, supporting field work in for instance Malaysia, Kenya, Algeria, Ethiopia, and Argentina.

### 5. COMMENTS FROM THE INSTITUTES

In question 7 of Form A, comments were invited on the "work on the problems of developing countries at Norwegian research establishments, for instance: experience, what problems should be given priority, and the application of research results". We have tried to concentrate in the following paragraphs the information obtained.

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1) NAVF - NLVF - NTNIF: "Bevilgninger over statsbudsjettet til FoU 1974".

As already mentioned, a large number of institutes point out that their "normal" scientific activity is of interest to developing countries (see Table 3.3). This is also reflected in the other comments made in connection with the questionnaire (Form A, q.4 and 7). Several institutes state that a major problem is the lack of resources for any expansion of contact with developing countries.

The largest group of comments concern the priorities in development aid.

The Norwegian Building Research Institute states:

We find it most important that topics and areas for cooperation are found in close connection with the developing country. The developing country has to play an important role in selecting the problems to be solved. Particularly for the implementation, it is important that the developing country takes an active part, identifying itself with the problem and feeling responsibility for the project.

Institute for Nutrition Research (University of Oslo):

- Up to now the RDC effort in Norway appears to have been sporadic and unplanned, is based on individual interest and only to a lesser extent a result of cooperation with institutions in developing countries. There seems to be in Norway a general lack of cooperation with institutions in developing countries both to strengthen their prestige and possibilities and for the identification of relevant problems for study. Most important of all: there is a lack of official and professional understanding that the greater part of research in developing countries should be of an interdisciplinary nature. This applies in particular to research on nutrition problems.

The Fridtjof Nansen Foundation at Polhøgda comments:

It seems to us that when allocating funds for research on developing countries, priority is given to projects which are somewhat limited in scope and of a definite practical value. This is understandable, but it is our opinion that undesirable consequences can result if this is the only criterion for priority. It is, after all, important to understand macro-conflicts so as to be able to act at the micro-level.

Our impression is that a large part of the social science community thinks that insufficient attention is paid to their possible contribution in this field. The allocation of funds to specified research projects, and the attitude of the

authorities to the view of development problems represented by the social sciences contribute to this feeling on their part. This is indicated in the following statement from The International Peace Research Institute, Oslo:

We would emphasize that it is necessary to include social science research at all levels of projects on developing countries in the planning, carrying out and follow-up or testing. Projects of a more theoretical or long-term nature should also be encouraged. These should be orientated towards particularly important problem areas where sufficient insight is at present lacking. Particular mention can be made of:

- the place of the developing countries in the international system and the relevance this has for their pauperization
- alternative models for development
- political and economic dominance and problems related to the dependence of the third world
- Possibilities and limitations of development projects and strategies, in particular the role played by development aid, food production and nutrition, intermediary technology and political and social mobilization.

#### Possible measures

- a considerable increase in funds for research on developing countries, up to 2% of the total allocation to development aid over a five-year period
- a definite involvement of social science in research projects on developing countries
- the establishment of an independent, professionally competent research body responsible for research on developing countries.

The following comment was made by the Institute of Sociology (University of Oslo):

As Norway's cooperation with developing countries or groups of developing countries is expected to increase in the years to come, higher priority should be given to development research. This may in turn result in a better professional background for Norwegian development aid and form the basis for a better understanding of the conditions facing developing countries. Social science research projects in this field should not be restricted to research on development aid and project evaluation. This

is a form of ethnocentricity which is of little value to research, development aid, or to the developing countries. This department would emphasize research on the repercussion of external assistance and national development efforts in given countries. Such research should be done in cooperation with research institutions in the countries concerned. However, achieving continuity in our research efforts in this field is extremely difficult in our present situation of scarce financial and personnel resources.

The Institute of History, University of Trondheim:

Historical research on developing countries is justified primarily because it gives us a better understanding both of conditions in developing countries, particularly the long-term perspective in the development process, and of Norwegian activities in these countries.

The knowledge gained can also help to give the developing countries a better understanding of their own position, particularly as regards questions of development (see President Nyerere's contribution in T.O. Ranger, "Engineering Themes of African History", London 1968).

Both aims would be strengthened if the two-sidedness of this type of research could be extended, for example by the exchange of research personnel and by grants to researchers from developing countries to participate in projects carried out in Norway.

The importance of a mutual exchange of researchers and projects has also been stressed by the Institute of Social Anthropology, University of Oslo.

Comments of a different type were also received; the Institute of Inorganic Chemistry (The Norwegian Institute of Technology):

In several countries, as for instance Tanzania, the lack of technical personnel causes a bottle-neck for further industrialization. Although it is possible for outside organizations to put forward proposals for new projects and fields of development, many of the developing countries lack personnel who can make a proper evaluation of these projects, and misjudgements are likely to occur. This is our experience even in Norway in connection with industrially oriented research at our institute. For our results to be put to full use, the industrial partner need sufficiently qualified personnel to grasp the full implication of the research results.

The Institute of Zoology (University of Oslo):

Many programmes of aid to developing countries should be evaluated from an ecological point of view. There are ample examples of aid projects which were initially met with enthusiasm, but resulted in long-term ecological damages which could have been avoided.

The Institute of Urban and Regional Planning (The Norwegian Institute of Technology):

In our opinion, questions relating to population settlement and problems connected with urban and town planning and development are of the utmost importance in developing countries, and seem to become more and more difficult to solve. Many industrialized countries ought to devote time, money and efforts in this field, and thus make their contribution towards improving these conditions.

We also think that Norway should make an effort in this area, perhaps by establishing a NORAD "centre for urban development problems" for the further education of research fellows from developing countries in the fields of sociology, economics, geography and physical planning.

A member of the staff of the Department of Vegetable Crops at the Agricultural University of Norway pursues quite another line of thought, and states:

I have personally been absorbed by the idea that NORAD should establish a number of supporting branches nearer to the countries where development programmes are being carried out. By this is meant not just administrative offices but centres where problems of a purely technical nature could be solved, too.

The basic thought behind this proposal is that while working here in a Norwegian environment one is not disposed towards making a concentrated effort to solve problems of vital importance to the developing countries. This can be illustrated by reference to work connected with the fellowship programme at the Agricultural University. This programme has been useful in many respects and it has been possible to provide the visiting researchers with technical and professional assistance which would not have been available to them in their home country. On the other hand, university personnel may have difficulties in freeing themselves from their routine tasks to such an extent as to make a positive contribution to the future work of the research fellows. In my opinion, the environmental pressure under which we live at present results in our not being keenly interested in solving the problems of developing countries. If too much of our work on development aid is carried out in Norway, a physical and mental dissociation from the tasks under hand may arise.

This comment is the first of a group of statements concerning research fellows from developing countries.

Institute of Microbiology (The Agricultural University):

We are somewhat doubtful as to the value of the fellowship programme. The large sums of money involved could probably be used more effectively to improve schools and teacher training in the developing countries themselves.

The Hormone & Isotope Laboratory (Aker Hospital, University of Oslo):

In several cases our fellowship programme has not been particularly productive. Visiting researchers have been placed in our very specialized research milieu without the necessary special knowledge in this particular field, and have no real possibility of putting into practice in their home country the experience gained here. The language problem makes Norway generally unsuitable for the further training of researchers from developing countries. They do not speak Norwegian and can therefore benefit very little from contact with wider circles. They are entirely dependent on their closest colleagues in the laboratory.

The Mineralogical-Geological Museum (University of Oslo)

Research fellows are chosen on the basis of written applications. It is very difficult to determine from these whether the applicant is sufficiently capable and motivated. Information about knowledge of languages tends to be exaggerated. We have had some visiting researchers who have derived considerable benefit from our expenditure of time and attention while others have been severely handicapped due to a lack of scientific qualifications and previous experience.

From our experience one should concentrate on training personnel from developing countries in the use of instruments which these countries can be expected to acquire in the near future.

Institute of Medical Genetics (University of Oslo):

NORAD's practice of providing fellowships for a period of one year at a research institution is of little purpose. The visiting fellows need an extended stay in order to carry out independent research projects. In some countries, the procedure for choice of candidates seems to be particularly undemocratic, often dependent upon the candidate's contacts in the local administration. NORAD should therefore modify selection methods in the fellowship programme.

As shown in Table 3.4, however, 95 institutes have received NORAD or other fellowship holders from developing countries and the four comments quoted above are neither intended as, nor to be read as a consensus of opinion on the programme. They do, however, illustrate some present problems. The following comment from the Institute of Botany, the Agricultural University of Norway, gives another point of view:

As regards the fellowship programme in particular, experience at our institute has been predominantly positive. We have received fellows from Thailand, Egypt and Tanzania for varying periods of study. Language and social problems will always give rise to difficulties in the beginning. A period of study in Norway probably demands a great deal more of the fellowship-holder, both as regards energy, working capacity and adaptability, than would be the case in an English-speaking country. Even so, we are both willing and interested in receiving fellowship holders if conditions seem appropriate, that is to say, when we consider a period of study here to be of real value to the fellow's future work in his home country.

## 6. CATALOGUE OF PROJECTS

The projects described in this chapter have been arranged according to the institution carrying out the work. Placing the projects in groups dealing with similar or related problems might have been desirable. We have tried to meet this need by including a Subject Index where reference is made to essential elements of the projects.

The institutions are grouped as follows:

1. Universities and Colleges
2. Research Council Institutes
3. Public research institutes
4. Private or semi-governmental institutes and institutions

A fifth group is projects carried out with the participation of fellowship holders from developing countries. The list of projects on the following pages shows all institutes and project titles included in the catalogue.

Certain abbreviations have been used throughout the catalogue, particularly for important organizations which finance or support RDC. These are:

- NAVF: Norges almenvitenskapelige forskningsråd  
(The Norwegian Research Council for Science and the Humanities)
- NORAD: Direktoratet for utviklingshjelp  
(The Norwegian Agency for International Development)
- NTNF: Norges Teknisk-Naturvitenskapelige forskningsråd  
(The Royal Norwegian Council for Scientific and Technical Research)

If no other information is given, the term M.A. refers to the heavily research-oriented Norwegian mag.art. degree throughout the catalogue.

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**UNIVERSITIES  
AND  
COLLEGES**

AGRICULTURAL UNIVERSITY OF  
NORWAY

Dept. of Agricultural Hydrotechnics

Duration: 1972-1973

Inquiries to: Kristoffer Haugum

BUILDING MATERIALS, BUILDING METHODS AND TYPES OF  
BUILDINGS - KENYA

Description:

A study of building materials, building methods and types of buildings in rural areas of Kenya. Based on this survey, a textbook for students and extension workers was produced on the Construction of Farm Buildings.

Cooperation/connection with developing Countries:

The textbook is used to educate farmers and agricultural advisers in Kenya.

Resources applied:

1. Man-years 1972/73: Scientific personnel 0,6  
(applied to project)
2. Financing: NORAD scholarship 1972-73:  
Kr. 16.500

Publications:

- K. Haugum: "A survey of buildings in rural areas of Kenya"  
(Embu, Kenya 1972)
- K. Haugum: "The Construction of Farm Buildings in Kenya"  
(Embu, Kenya 1973)

AGRICULTURAL UNIVERSITY OF  
NORWAY

Department of Botany

Duration: 1968-1974

Inquiries to: G. Hygen

INFLUENCE OF GROWTH FACTORS ON PROTEIN PRODUCTION IN CROP PLANTS
---

(Project of the International Biological Programme)

Description:

Experiments on the influence of growth factors on protein production in wheat, barley and horsebean (*Vicia faba*)

(Other parts of the Protein Production (PP) programme performed at

- 1) Dept. of Genetics and Plant Breeding (Agric. U. of Norway)
- 2) Institute for Nutrition Research

Cooperation/connection with developing Countries:

Protein Laboratory, Kampala, Uganda (Temporarily closed 1972 owing to the political circumstances)

(See also IBP project "Protein Laboratory" page 159)

Resources applied:

- |                    |                            |
|--------------------|----------------------------|
| 1. Man-years 1974: | Scientific personnel ca. 3 |
| 2. Financing:      | IBP: Total on PP programme |
|                    | 1971 313.000               |
|                    | 1972 559.000               |

Publications:

See Annual reports from IBP-Norway.

AGRICULTURAL UNIVERSITY OF  
NORWAY

Department of Botany

Inquiries to: Kåre Lye

EAST AFRICAN FLORA
--------------------

Description:

In connection with the project "Studies in African Flora etc." (p. 69) this project contains

- 1) A study of East African flora, with special emphasis on Cyperaceae.
- 2) A study of East African plant sociology and ecology.

Cooperation/connection with developing Countries:

Project started during Mr. Lye's stay in Uganda 1968-71.

Resources applied:

Man-years not indicated

AGRICULTURAL UNIVERSITY OF  
NORWAY

Dept. of Farm Management and Agricultural  
Economics (see below)

Duration: 1970-1975

Inquiries to: O. Aresvik

- |   |
|---|
| <ol style="list-style-type: none"><li>1. AGRICULTURAL DEVELOPMENT OF JORDAN</li><li>2. AGRICULTURAL DEVELOPMENT OF IRAN</li></ol> |
|---|

Projects performed by Mr. O. Aresvik,  
present address: UNDP-IBRD Planning  
Project National Planning  
Council Amman, Jordan

Description:

The projects aim at a fairly complete analysis of the structure and performance of Jordanian and Iranian agriculture in recent decades so as to locate the main problems and factors in the development process as well as major future problems and opportunities, with a view to reaching conclusions as to optimum strategies for agricultural development which can be of general interest to less developed countries and to those agencies and organizations which support agricultural development in these countries.

Cooperation/connection with developing Countries:

Indicated above

Resources applied:

- |                           |   |
|---------------------------|---|
| 1. Man-years 1975: (exp.) | Scientific personnel 0,5                            |
| 2. Financing:             | IBRD (World Bank)<br>Application submitted to NORAD |

Publications:

- O. Aresvik, Agricultural Development of Jordan. (To be published by Praeger Publishers S. A. , New York, probably in 1975.)
- O. Aresvik, Agricultural Development of Iran. (As above.)

AGRICULTURAL UNIVERSITY OF  
NORWAY

Dept. of Farm Management and  
Agricultural Economics

Duration: -1975

Inquiries to: Siegfried Pausewang

THE LOCAL COMMUNITY, CLASS ANTAGONISM AND  
DEVELOPMENT AID

Description:

On the basis of an analysis of land tenure and social structure in Ethiopia, the project tries to identify the effects of development efforts in the local community, both from an economic and a socio-political point of view.

Cooperation/connection with developing Countries:

Project based on a four-year stay in Ethiopia as a university teacher of sociology.

Resources applied:

1. Man-years 1973/1974: Scientific personnel  $\frac{1}{2}$
2. Financing: Ordinary budget of institution  
NAVF (Scholarship)

Publications:

- S. Pausewang: "Methods and Concepts of Social Research in a Rural Developing Society" (München 1973).  
S. Pausewang: Articles: Syn og Segn, hefte 1, 1973  
Dagbladet, 25 and 26 March, 1974  
Samtiden, hefte 2, 1974  
Sociologia Ruralis, 2, 1974

AGRICULTURAL UNIVERSITY OF  
NORWAY

Dept. of Forest Mensuration and  
Management

Duration: 1970

Inquiries to: Lars Strand

AFFORESTATION IN EAST AFRICA

Description:

An appraisal of the growth potential for exotic pines in Uganda. The project took the form of a report based on existing research data.

Cooperation/connection with developing Countries:

(indicated above)

Resources applied:

- |                    |                          |
|--------------------|--------------------------|
| 1. Man-years 1970: | Scientific personnel 0,2 |
| 2. Financing:      | NORAD                    |

Publications:

Report.

AGRICULTURAL UNIVERSITY OF  
NORWAY

Dept. of Genetics and Plant Breeding

Duration: 1971-

Inquiries to: Knut Aastveit

WHEAT BREEDING - EGYPT

Description:

The project aims at breeding types of wheat better suited to cultivation in Egypt. It was started in cooperation with two NORAD scholarship holders.

Cooperation/connection with developing Countries:

If the project is continued in Egypt, the results may be of great importance for the country's food supply.  
Present cooperation with University of Alexandria.

Resources applied:

- |                    |  |
|--------------------|--|
| 1. Man-years 1974: | Scientific personnel 1                                 |
| 2. Financing:      | Ordinary budget of institution<br>NORAD (scholarships) |

Publications:

H. M. El-Haddad: "Continuous variations in generations derived from crosses between Scandinavian and Mexican wheat varieties"  
(Scientific Rep. of the Agric. Univ. Norway, Vol. 53  
(1974) No. 3.)

AGRICULTURAL UNIVERSITY OF  
NORWAY

Dept. of Horticulture and Greenhouse  
Crops

Duration: 1968-1972

Inquiries to: Erling Strømme

FLOWER PRODUCTION - KENYA

Description:

The aim of this project was to establish production of flowers (carnations) in Kenya for export to Northern Europe during the winter months.

The production was to be started with Norwegian capital and expertise. The project was abandoned, however, as the first season resulted in heavy losses due to insufficient refrigerating capacity at Nairobi airport.

Interest in this type of production is again on the increase.

Cooperation/connection with developing Countries:

No information.

Resources applied:

Financing:

NORAD supported project

AGRICULTURAL UNIVERSITY OF  
NORWAY

Department of Wood Technology

Duration: 1971-1980

Inquiries to: Ludvik Nagoda

EDUCATION - WOOD TECHNOLOGY AND WOOD UTILIZATION
--

Description:

Compiling material on technology and utilization of tropical woods.  
(The project is a continuation of work done while Mr. Nagoda was teaching at Makerere University, Uganda.)

Cooperation/connection with developing Countries:

Results will be distributed through contacts in Kenya, Uganda and Tanzania.

Resources applied:

- |                    |                                |
|--------------------|--------------------------------|
| 1. Man-years 1974: | Scientific personnel 0,1       |
| 2. Financing:      | Ordinary budget of institution |

L. NAGODA

Publications from Uganda (1970 - 1973)

a) Lecture notes

Wood anatomy. Wood Utilization I. The structure of wood. Makerere University, Kampala, Dep. of Forestry. 1971, 54 pp.

The fine structure of cell wall. Wood Utilization I. The structure of wood. Makerere University, Kampala. Dep. of Forestry. 1971, 13 pp.

Strength properties of wood & Methods of testing small clear wood specimens. Wood Utilization II. Wood Properties I. Makerere University, Kampala. Dep. of Forestry. 1971, 26 pp.

Physical properties of wood. Wood Utilization II. Wood properties II. Makerere University, Kampala. Dep. of Forestry. 1971, 30 pp.

Growth-related defects. Wood Utilization II. Wood properties III. Makerere University, Kampala, Dep. of Forestry. 1971, 21 pp.

Sawmilling. Wood Utilization II. Makerere University, Kampala. Dep. of Forestry. 1972.

Sawmilling - sawblades and their maintenance. Report 1/72. Makerere University, Kampala, Dep. of Forestry. 1972.

Drying of sawnwood. Wood Utilization II. Makerere University, Kampala. Dep. of Forestry. 1972, 52 pp.

Charcoal. Charcoal production and uses. Wood Utilization III. Makerere University, Kampala, Dep. of Forestry. 1973, 44 pp.

Budongo Sawmill Ltd. - Sawmill and particle board plant. Makerere University, Kampala. Dep. of Forestry. 1973, 13 pp + 3 fig.

Sawnwood. Wood Utilization II. Sawmilling. Makerere University, Kampala. Dep. of Forestry. 1973, 10 pp.

Wood-destroying fungi. Wood Utilization III. Biological deterioration of wood I. Makerere University, Kampala. Dep. of Forestry. 1973, 11 pp.

Wood-destroying insects. Wood Utilization III. Biological deterioration of wood II. Makerere University, Kampala. Dep. of Forestry. 1973, 15 pp.

b) Travel reports

Travel report. Travel to Tanzania. From 13th - 20th February, 1970. Makerere University, Kampala. Dep. of Forestry. 13 pp.

Notes on Travel in Uganda. From 5th - 11th March, 1970. Makerere University, Kampala. Dep. of Forestry.

Notes on the Trip to Lendu Forest Reserve. 15th April 1970. Makerere University, Kampala. Dep. of Forestry, 4 pp.

Forestry Study Tour to Kigezi. From 1st - 5th June, 1970. Makerere University, Kampala. Dep. of Forestry. 5 pp.

Report on Travel to Kenya. From 3rd - 12th November, 1970. Makerere University, Kampala. Dep. of Forestry. 19 pp.

Travel Report - Rowanda. From 22nd - 29th January, 1972. Makerere University, Kampala. Dep. of Forestry. 6 pp.

Report on travel to West Africa. Makerere University, Kampala. Dep. of Forestry. 1972, 32 pp.

#### c) Other publications

Recovery and conversion cost study at Nakawa Forest Station Sawmill. Technical Note - 1/1970. Makerere University, Kampala. Dep. of Forestry. 1970, 5 pp. + 8 fig.

The preservation of small round timber of eucalyptus and bamboos. Makerere University, Kampala. Dep. of Forestry. 1970, 4 pp.

Tree planting for the small farmer. Makerere University, Kampala. Dep. of Forestry. 1971, 2 pp.

Charcoal production in the Noluboga Forest Reserve. Makerere University, Kampala. Dep. of Forestry. 1970, 4 pp.

Kenya får sin første cellulosefabrikk i 1973. Norsk Skogindustri 1971, nr. 9, s. 263-64.

#### d) Uncompleted lecturer's notes (Not published)

The timbers. Wood Utilization I - Structure of wood, 1973.

Wood-based panels. Wood Utilization III - Woodbased panels. 1973.

Pulping processes. Wood Utilization III - Pulp and paper. 1973.

NORWEGIAN SCHOOL OF ECONOMICS  
AND BUSINESS ADMINISTRATION

Institute of Economics

Duration: 1971-74

Inquiries to: Gunnar Fløystad, NHH

TRADE AND ALLOCATION OF RESOURCES

Description:

The impact on allocation of resources and return to labour and capital of a reduction of customs duties in the developed countries when trading with less developed countries.

Cooperation/connection with developing Countries:

No information.

Resources applied:

1. Man-years 1974: Scientific personnel 0,5
2. Financing: Ordinary budget of institution

Publications:

- G. Fløystad: "The impact on allocation and return to labour and capital of a reduction of customs duties in the developed countries in the trade with less developed countries."  
Weltwirtschaftliches Archiv, Bd. 109, Heft 1, 1973, 59-69.
- G. Fløystad: "Trade and Allocation of Resources in a Distorted Economy". European Economic Review, Volume 5, no. 3, (October 1974), p. 275-301.

THE CHR. MICHELSEN INSTITUTE and  
NORWEGIAN SCHOOL OF ECONOMICS  
AND BUSINESS ADMINISTRATION (NHH)

Institute of Economics

Duration: 1962-1968

Inquiries to: Gunnar Fløystad, NHH

PROBLEMS OF GROWTH, CAPITAL AND LABOUR MARKET IN  
DEVELOPING COUNTRIES. EFFECTS OF DEVELOPMENT AID

Description:

Analysis of the growth problems of developing countries assuming foreign exchange and/or skilled labour to be important bottlenecks in economic development.

Cooperation/connection with developing Countries:

The Pakistan Institute of Development Economics

Resources applied:

- |                      |   |
|----------------------|---|
| 1. Man-years (total) | Scientific personnel 4  |
| 2. Financing:        | Ordinary budget of institution<br>Ford Foundation<br>Rockefeller Foundation |

Publications:

- G. Fløystad: "Noen synspunkter på vekstproblemene i utviklingslandene". Statsøkonomisk Tidsskrift nr. 4, 1965, s. 219-229.
- G. Fløystad: Foreign Trade, Aid and Economic Growth in Less Developed Countries (Universitetsforlaget, Oslo, 1968)
- G. Fløystad: "Foreign exchange and skilled labour constraynts in economic development". Pakistan Economic Journal no. 4, 1968-1969.
- G. Fløystad: The Labour Market and Training Programmes for Diploma Holders from the Polytechnic Institutes of Pakistan. (Pakistan Inst. of Dev. Econ., Pakistan 1969.)

NORWEGIAN SCHOOL OF ECONOMICS  
AND BUSINESS ADMINISTRATION

Institute of Geography

Duration: Concluded 1973

Inquiries to: Per-Christian Endsjø  
(now in the Ministry of  
the Environment, Oslo)

NATURAL RESOURCES PROJECTS FOR ECONOMIC DEVELOPMENT

Description:

The project deals with the utilization of resources in general and the development of forest industries in particular in Nigeria. The author discusses the organization of ownership and growing of forests, the implications this has for economic efficiency and the effects on the force of unskilled labour. He also considers investment in forest industries as a mean of providing the rural population with an opportunity to remain in the rural areas and not to have to migrate to the towns.

Cooperation/connection with developing Countries:

No information

Publications:

- P C. Endsjø: "Natural Resource Projects for Economic Development."  
(To be published by Universitetsforlaget, Oslo.)
- P.C. Endsjø: "Plantageskogsbruk og treforedlingsindustri i tropiske og  
og subtropiske strøk." (Inst. of Geography, Bergen 1968).

NORWEGIAN SCHOOL OF ECONOMICS  
AND BUSINESS ADMINISTRATION

Institute of Geography

Duration: 1971-1974

Inquiries to: Jan Lundqvist

INTERACTION IN A REGIONAL HIERARCHY - ITS ROLE IN  
REGIONAL DEVELOPMENT

Description:

An attempt is made to quantify various types of impulses which can be assumed to stimulate change. The study area is Morogoro District (Tanzania). In particular the intention is to relate those impulses which emanate from central/official sources (planned development) and stimulating factors linked with the local situation. The change is estimated for two sectors: Adult Education and Cash crop production in agriculture.

The relevance of this project for developing countries seems to focus on two issues:

1) How effective is planning from above in relation to planning done by the people themselves, and 2) what role do the centres play in the geographical spread of change.

Cooperation/connection with developing Countries:

See above. Mr. Lundqvist was associated to BRALUP (U. of Dar-es-Salaam). All reports distributed to BRALUP and relevant institutions in Morogoro.

Resources applied:

- |                         |   |
|-------------------------|---|
| 1. Man-years 1974:      | Scientific personnel 1/3  |
| 2. Financing:           | Ordinary budget of institution (salary)   |
| 1971-1973: 60.000 S.Kr. | (During stay in Tanzania) supplied by:<br>University of Gothenburg<br>SIDA (Swedish International Development<br>Authority) |
| 1974: 6.000 N.Kr.       | Nordiska Afrikainstitutet<br>Riksbankens Jubileumsfond<br>L. Meltzers Høyskolefond<br>U. of Bergen                          |

NORWEGIAN SCHOOL OF ECONOMICS  
AND BUSINESS ADMINISTRATION

Institute of Geography

Publications:

- Jan Lundqvist: Modernisering i u-länder: en regional diffusions- och utvecklingsprocess. Svensk Geografisk Årsbok, Lund 1969.
- Jan Lundqvist: Modernization and Development Planning. Some remarks on the study of societies in change. Geografiska Annaler. Ser. B, No 2. Stockholm 1972.
- Jan Lundqvist: Tillväxtproblem i Afrika kräver ny utvecklingsstrategi. Choros No 47. Kulturgeografiska instit. Göteborg. (Mimeographed) 1972.
- Jan Lundqvist et. al.: Geography and Development Planning. Choros No 52. (Mimeographed) Göteborg 1973.
- Jan Lundqvist: The Economic Structure of Morogoro town. Scandinavian Institute of African Studies, Uppsala, Research Report No 17, 1973.
- Wallenius, A-B & Plenge, V. (eds.): Litteratur om Afrika (Afrikas natur och geografi av Lundqvist). Nordiska Afrikainstitutet och Mellomfolkeligt Samvirke. Viborg 1973.
- Jan Lundqvist: Structure and process of Modernization. Some remarks on recurrent features in geographical studies of modernization. Norsk Geografisk Tidsskrift. Oslo 1974:1.
- Kuklinski, A. (ed.): Regional Information and Regional Planning (Regional Information and Regional planning in Tanzania by Lundqvist) Mouton & Co., The Hague 1974 (in print).

Consultants' report:

- Olle Rimer & Associates: Tanzania Rural Water Supply Development. SIDA, Stockholm, 10 April 1970.

NORWEGIAN SCHOOL OF ECONOMICS  
AND BUSINESS ADMINISTRATION

Institute of Geography

Duration: 1974-

Inquiries to: Oddvar Jacobsen

<p>THE ECONOMIC AND SOCIAL LINKS BETWEEN VILLAGES AND THEIR INTEGRATION IN THE NATIONAL ECONOMY</p>
---

Description:

The process of modernization is often regarded as a problem of economic and geographic integration. A modern society is characterized amongst other things by mobility of goods and ideas. The flow of goods is the focus of the economist's input-output analysis. A similar technique could be used to study the links between geographical areas. These links of flowing goods constitute vital information when regional development is to be planned.

A major focus is on the mobilization of local resources. The utilization of labour, capital and natural resources will be considered as well as the mobilization of the peasants.

Cooperation/connection with developing Countries:

Mr. Jacobsen will be associated to BRALUP, University of Dar-es-Salaam, and will be working with local authorities.

Resources applied:

- |                    |   |
|--------------------|---|
| 1. Man-years 1974: | Scientific personnel 1  |
| 2. Financing:      | University of Trondheim, scholarship<br>from July, 1974<br>NHH, Bergen 1974: kr. 10.000<br>(Travel grant) |

UNIVERSITY OF BERGEN  
Department of History

Duration: 1967-

Inquiries to: R.S. O'Fahey

PRE-COLONIAL HISTORY OF THE SUDAN

Description:

A continuing research project on the pre-colonial history of the Sudan-  
with special reference to Darfur Province.

Special areas of interest: Islamisation, History of land tenure, Political  
institutions.

A contribution towards our understanding of indigenous institutions in  
Sub-Saharan Africa.

Cooperation/connection with developing Countries:

Research in co-operation with the Institute of African and Asian Studies  
(University of Khartoum) and the Central Archives, the Sudan.

Resources applied:

- |                    |  |
|--------------------|--|
| 1. Man-years 1974: | Scientific personnel 1   |
| 2. Financing:      | Scholarship from the University of<br>Bergen since 1971<br>1974: NAVF kr. 14.000 |

Publications:

'Al-Tūnisī's travels in Darfur', Bulletin of the Centre of Arabic Documentation, University of Ibadan, V/1 & 2, 1969, 66-74.

(with Hasan Imam Hasan) 'Notes on the Mileri of Jabal Mun', Sudan Notes and Records, LI, 1970, 152-61.

'Religion and trade in the Kayra Sultanate of Dār Fūr', in (ed.) Yūsūf Fadl Ḥasan, Sudan in Africa, Khartoum 1971, 87-97.

Gustav Nachtigal, Sahara and Sudan, vol. IV (Wadai and Darfur), translated from the original German with new introduction and notes by A.G.B. & H.J. Fisher with R.S. O'Fahey, London 1971.

(with J. L. Spaulding) 'Hāshim and the Musabba<sup>c</sup>āt', Bulletin of the School of Oriental and African Studies, XXXV/2, 1972, 316-33.

(with Abdel Ghaffar Muhammad Ahmad) 'Documents from Dār Fūr', fascicle 1, skrift nr. 1. Utgitt av programmet for Midt-Østen og Afrika Studier, Universitetet i Bergen, 1972.

'Egypt, Saint-Simon and Muḥammad <sup>c</sup>Alī', The Exploration of Africa in the Eighteenth and Nineteenth Centuries, University of Edinburgh, 1972, 17-36.

'Slavery and the slave trade in Dār Fūr', Journal of African History, XIV/1, 1973, 29-43.

'Saints and sultāns: the role of Muslim holy men in the Keira Sultanate of Dār Fūr', in (ed.) M. Brett, Northern Africa: Islamisation and Modernisation, London 1973, 49-56.

(with Abdel Ghaffar Muhammad Ahmad) 'Documents from Dār Fūr', fascicle 2, skrift nr. 2. Utgitt av programmet for Midt-Østen og Afrika Studier, Universitetet i Bergen, 1973.

forthcoming this year.

(with J. L. Spaulding) Kingdoms of the Sudan, Methuen, London.

'Kurdufān in the Eighteenth Century: Cadalvene et Breuvery, L'Egypte et la Nubie, II, pp. 198-215', Sudan Notes and Records, LIV, 1973.

'The Sudan Papers of the Rev Dr A.J. Arkell', Sudan Notes and Records, LV, 1974.

'The Awlād <sup>c</sup>Alī: a Fulani Holy Family in Dār Fūr', Veröffentlichungen aus dem Übersee-Museum, Deutsche Geographische Blätter, vol. LI, 1974.

UNIVERSITY OF BERGEN

Institute of Social Anthropology

Duration: 1972-

Inquiries to: Reidar Grønhaug

THE MIDDLE EAST PROGRAM
-------------------------

Description:

The Middle East Program covers a set of general activities including research work carried on by graduate students and staff members. The geographical area includes the Middle East from Morocco to Pakistan; the research themes include topics from general social and cultural anthropology, while problems of development, change, regional organization, and micro-macro relations tend to dominate. Present personnel are doing field research in Turkey, Afghanistan, Iran, the Sudan, Algeria and Ethiopia and the work will be extended in these countries, and to other countries in the Middle East.

Current mag.art. degree project: "Changes in Regional Organization of Northeast Iran". This program is part of the development of Non-European studies in Norway.

Cooperation/connection with developing Countries:

Cooperation agreement with the University of Khartoum.

Resources applied:

- |                    |   |
|--------------------|---|
| 1. Man-years 1974: | Scientific personnel 1  |
| 2. Financing:      | Ordinary budget of institution<br>Graduate students: NAVF scholar-<br>ships |

See also projects reported by R. Grønhaug, G.M. Sørbo and G. Haaland of this institute.

UNIVERSITY OF BERGEN  
Institute of Social Anthropology

Duration: 1966-1974

Inquiries to: Reidar Grønhaug

MICRO-MACRO RELATIONS. SOCIAL ORGANIZATION IN  
ANTALYA, SOUTHERN TURKEY

Description:

A broad study of social change among villagers, nomads and urban people in the Antalya region from a perspective of 'macro-factors in local life'. Analysis of interdependence between multiple levels of social organization, e.g. domestic, local, network, ethnic, and regional organization in Antalya as they change under the impact of market, state and other large-scale factors. Description of local level and other small-scale phenomena in such a way as to facilitate the integration of data from macro-economical and other large-scale fields.

Cooperation/connection with developing Countries:

See above. Contact with colleagues at Turkish universities concerned with the development problems of their own country.

Resources applied:

- |                    |   |
|--------------------|---|
| 1. Man-years 1974: | Scientific personnel 0,25   |
| 2. Financing:      | Ordinary budget of institution<br>Several grants from private foundations |

Publications:

- R. Grønhaug: "Changing community structures and Intercommunity relations in Southern Turkey" (Folk, Copenhagen 1971).  
R. Grønhaug: (Title as above) Parts 1-3. Mimeo. Bergen 1974.  
R. Grønhaug: "En region i Sør-Tyrkia gjennom 150 år" i F. Barth (red.): "Mennesket som samfunnsborger" Oslo 1971.

UNIVERSITY OF BERGEN  
Institute of Social Anthropology

Duration: 1971-1975

Inquiries to: Reidar Grønhaug

REGIONAL AND OTHER LEVELS OF SOCIAL ORGANIZATION IN  
HERAT, NORTHWEST AFGHANISTAN

Description:

A continuation of my Turkish work, and like it, a broad study of social change among villagers, nomads and urban people in the Herat region from a perspective of 'macro-factors in local life'. Analysis of interdependence between multiple levels of social organization, e.g. domestic, local, network, ethnic, and regional organization in Herat as they change under the impact of market, state and other large scale factors. Description of local level and other small-scale phenomena in such a way as to facilitate the integration of data from macro-disciplines. Focus on ecology/economy under drought conditions.

Cooperation/connection with developing Countries:

Contact with colleagues in Afghanistan.

A Scandinavian research station is to be established in Kabul (CINA, Copenhagen) where our institute will participate in comparable projects.

Resources applied:

- |                    |  |
|--------------------|--|
| 1. Man-years 1974: | Scientific personnel 1/8   |
| 2. Financing:      | Ordinary budget of institution<br>Wenner-Green Foundation, New York<br>(1971-72 \$ 5300) |

Publications:

R. Grønhaug: "Scale as a variable in the analysis. Reflections based on field material from Herat, Northwest Afghanistan". (Wenner-Gren Foundation, N.Y. 1972)

UNIVERSITY OF BERGEN  
Institute of Social Anthropology

Duration: (planned 1975-77)

Inquiries to: Reidar Grønhaug

AFGHANISTAN 2: UNDER-DEVELOPMENT IN HERAT

Description:

Traditional irrigation and other aspects of traditional economic/ecological organization. Problems in the maintenance of one of the most poor and stagnant patterns of economic organization in Central and Southwest Asia. The project will be planned and carried out in co-ordination with other studies of a similar kind done in Mideastern countries by staff members and students of this department.

Cooperation/connection with developing Countries:

Project intended to be carried out through the planned research station (CINA) in Kabul.

UNIVERSITY OF BERGEN  
Institute of Social Anthropology

Duration: 1971-75

Inquiries to: Gunnar M. Sørbo

REGIONAL DYNAMICS OF EASTERN SUDAN

Description:

A study of Nubian resettlement after the building of the High Dam at Aswan, and a study of nomadic sedentarization. Both groups are tenants on the Khashm el Girba scheme, the second largest irrigation project in the Sudan. The aim is to find out what processes and factors cause the rather low yields, and to classify the relationship between the different categories of personnel within the area, so as to understand the dynamics of regional organization.

Cooperation/connection with developing Countries:

Contact with the irrigation Project Administration in the Sudan.

Resources applied:

- |                    |   |
|--------------------|---|
| 1. Man-years 1974: | Not indicated                                       |
| 2. Financing:      | Ordinary budget of institution<br>NAVF (field work) |

Publications:

- G.M. Sørbo: "Economic Adaptions in Khashm el Girba", Khartoum 1972.  
G.M. Sørbo: "Scheme and Off-scheme interests" (Thesis, University of Bergen 1973)

UNIVERSITY OF BERGEN  
Institute of Social Anthropology

Duration: 1965-1966

Inquiries to: Gunnar Haaland

SOCIAL AND CULTURAL FEATURES OF THE JEBEL MARRA  
PROJECT AREA

Description:

A description and analysis of the major features of social organization in Western Darfur.

This information was needed to formulate a plan for regional development, but the information was not used when the plan was implemented with the result that the development project failed.

The development plan is now being reformulated on the basis of advice given by this project in 1967.

Cooperation/connection with developing Countries:

Indicated above.

Resources applied:

Financing:

FAO

Publications:

Barth & Haaland: "Human Resources" (FAO 1968)

Haaland: "Economic Determinants in Ethnic Processes" in Barth (ed.) "Ethnic Groups and Boundaries" (Oslo-Bergen 1969)

UNIVERSITY OF BERGEN  
Institute of Social Anthropology

Duration: 1969

Inquiries to: Gunnar Haaland

THE CULTURE AND SOCIAL ORGANIZATION OF THE FUR TRIBE

Description:

Ethnographic field work among the Fur of Western Sudan.

Cooperation/connection with developing Countries:

The results of this work have been discussed with provincial and national authorities of Sudan.

All publications from this Institute are sent to the University of Khartoum.

Resources applied:

Financing:

NAVF

Publications:

Haaland, G.: "Nomadization as an Economic Career among Sedentaries in the Sudan Savanna" (in Gunnison & James, Sudan Ethnography, 1972)

UNIVERSITY OF BERGEN  
Institute of Social Anthropology

Duration: 1972

Inquiries to: Gunnar Haaland

SOCIAL ORGANIZATION OF NORTHERN DARFUR
--

Description:

Ethnographic field work in Northern Darfur (among the Fur, Tunjur and Zaghawa in the Jebel Si and Dar Furnunq area).

Cooperation/connection with developing Countries:

The results were presented in a seminar at the Afro-Asian Institute, University of Khartoum.

Resources applied:

Financing:

University of Khartoum

Publications:

G. Haaland: "Social Mechanisms and Planning for Economic Development" (to be published by the Afro-Asian Institute, University of Khartoum)

UNIVERSITY OF BERGEN  
Institute of Social Anthropology

Duration: 1973

Inquiries to: Gunnar Haaland

SOCIAL ORGANIZATION OF SOUTHERN DARFUR

Description:

A description and analysis of the major features of social organization of the project area (Southern Darfur).

The results of this project form the basis of a regional development plan for this area.

Cooperation/connection with developing Countries:

Indicated above.

Resources applied:

1. Man-years 1973: Scientific personnel 0,5
2. Financing: Hunting Technical Services  
(Consultants to the Govt. of Sudan)

Publications:

Haaland, G.: report to SIDA, Stockholm.

Haaland, G.: "Social Organizations" - report to Hunting Technical Services, 1974.

UNIVERSITY OF BERGEN  
Institute of Social Anthropology

Duration: planned 1975

Inquiries to: Gunnar Haaland

<p>EAST EQUATORIA PROJECT DEVELOPMENT AND SOCIO-CULTURAL INFRASTRUCTURE</p>
---

Description:

The research project has two related aims, a) to stimulate a broader development in social anthropological research relevant to project planning and implementation, b) to produce information relevant to the development programs which the Norwegian Church Relief Program now plans to initiate in East Equatoria.

Cooperation/connection with developing Countries:

The project is planned through the Norwegian Church Relief Program, which cooperates with the Government of the Sudan.

Resources applied:

Financing:

Application to NORAD

UNIVERSITY OF BERGEN  
Institute of Social Anthropology

Duration: 1969-1972

Inquiries to: H. Tambs-Lyche

INDIAN IMMIGRANTS IN GREAT BRITAIN

Description:

A study of the relationship between economic adaptation and ethnic identity of Patidar immigrants to London from Gujarat, India.

(Mag.art. degree project)

Cooperation/connection with developing Countries:

No information

Resources applied:

Financing:

Grant from NAVF

Publications:

- H. Tambs-Lyche: "London Patidars", thesis, Bergen 1972.
- H. Tambs-Lyche: "Draining the Brains, An Essay on Gujarati Migration to Britain" (Mimeo, Inst. of Social Anthropol. 1971.)
- H. Tambs-Lyche: "Kulturelle og religiøse problemer" (In Karlsen & Dalin (eds.) Fremmedarbeidere, Universitetsforlaget, Oslo 1973.)
- H. Tambs-Lyche: "Encompassed Communities" (Etnografisk Museums Årbok 1971, Oslo 1973.)
- H. Tambs-Lyche: "London Patidars" (Routledge & Kegan Paul, London (in press))
- H. Tambs-Lyche: "Immigranter fra Gujarat i Storbritannia" (Antropologiska Studier, No 5, 1972.)

UNIVERSITY OF BERGEN  
Institute of Social Anthropology

Duration: 1972-1974

Inquiries to: Georg Henriksen

SOCIAL ANTHROPOLOGICAL ASSESSMENT OF THE LAKE RUDOLF FISHERIES
---

Description:

A study of the Turkana fishermen and the fisheries project in relation to the ecological, economic and cultural conditions of the whole Turkana district. Anthropological field work in Turkana in 1972.

Cooperation/connection with developing Countries:

Report submitted to the Kenyan government and NORAD. It is not known whether the results will be used in the Lake Rudolf Project.

Resources applied:

- |                    |  |
|--------------------|--|
| 1. Man-years 1974: | Scientific personnel 0,25  |
| 2. Financing:      | Ordinary budget of institution<br>(salary)<br>NORAD (field work etc. 1972) |

Publications:

- G. Henriksen: article in "Norkontakt" (NORAD) No. 4, 1973.  
G. Henriksen: "Some Social Anthropological Comments on a Large Scale Irrigation Scheme on the Turkswell River" (Nairobi, 1972).  
G. Henriksen: "Economic Growth and Ecological Balance. Problems of Development i Turkana" (Bergen 1974).

UNIVERSITY OF BERGEN

Institute of Social Anthropology

Duration: 1973- (see below)

Inquiries to: H. Tambs-Lyche

RELIGION, CASTE AND SECT IN A VILLAGE IN SAURASTHRA

Description:

A regional study of the social dimension of religion in Saurashtra, a region of the Indian State of Gujarat. The study is based mainly on second-hand data published in Gujarati but also based on and structured according to ideas resulting from a stay in the area 1973/74.

(The original project had to be abandoned as research permission was not granted.) The manuscript is in preparation.

Cooperation/connection with developing Countries:

Contact with several social scientists in Gujarat.

Resources applied:

1. Man-years 1974:

Scientific personnel 2/3

2. Financing:

Ordinary budget of institution  
NAVF (travel grant etc.)

UNIVERSITY OF BERGEN  
Institute of Social Anthropology

Duration: 1974-1975

Inquiries to: Asgeir Helle

MACRO-FACTORS IN A LOCAL COMMUNITY IN ALGERIA

Description:

An attempt to study how the ecological situation changes due to agricultural production (Souf, Algeria), and how the aggregate of changes feeds back to limit production.

The intention is to study the implications of these factors on the different levels of social organization.

(Mag. art. degree project)

Cooperation/connection with developing Countries:

A report will be submitted to the Direction de la Recherche Scientifique, Algeria.

Resources applied:

1. Man-years 1974: Scientific personnel 1
2. Financing: NAVF scholarship

UNIVERSITY OF BERGEN  
Institute of Social Anthropology

Duration: 1974-1975

Inquiries to: Johan Helland

REGIONAL PROCESSES IN SOUTHERN ETHIOPIA

Description:

No details given.

(Mag. art. degree project)

Cooperation/connection with developing Countries:

No information

Resources applied:

- |                    |                                    |
|--------------------|------------------------------------|
| 1. Man-years 1974: | Scientific personnel $\frac{1}{2}$ |
| 2. Financing:      | NAVF (1974-75) 25.500              |

UNIVERSITY OF BERGEN  
Institute of Social Anthropology

Duration: Planned 1975-1978

Inquiries to: H. Tambs-Lyche

ECONOMIC AND SOCIAL DETERMINANTS OF FAMILY SIZE IN  
GUJARAT, INDIA

Description:

A planned study of the determinants, particularly the economical, which influence decisions on family size in the area, and the strategies followed to realize these decisions.

Cooperation/connection with developing Countries:

No information

UNIVERSITY OF BERGEN  
The Marine Biological Station

Duration: 1967-

Inquiries to: Hans Brattstrøm

MARINE BIOLOGICAL INVESTIGATIONS IN THE BAHAMAS

Description:

Part of "Survey of the Bahamas" initiated by the Lerner Marine Laboratory, Bimini, Bahamas under The American Museum of Natural History, USA.

Main themes: Faunistic and ecological studies of littoral and shallow water organisms in the Bahamas.

Cooperation/connection with developing Countries:

Indicated above.

Resources applied:

- |                    |   |
|--------------------|---|
| 1. Man-years 1974: | Scientific personnel ca. 1/4  |
| 2. Financing:      | Ordinary budget of institution (salaries)<br>Lerner Marine Lab.<br>(through Office of Naval Research) |
|                    | 1967 85.000   |
|                    | 1968 85.000   |
|                    | NAVF 1967 17.000  |
|                    | 1968 20.000   |

UNIVERSITY OF BERGEN  
The Marine Biological Station

Publications:

1. Brattström, Hans: The cruise in 1967, General Report, Sarsia 32, 1968.
2. Brattegard, Torleiv: On an association between Acanthopleura granulata (Polyplacophora) and Dynamene spp. (Isopoda), Sarsia 32, 1968.
3. Geddes, D.C.: Harpacticoid copepods belonging to the family Tetragnipitidae Land, Sarsia 32, 1968.
4. Fosshagen, Audun: Pseudocyclopidae (Copepoda, Calanoida) from the Bahamas. Sarsia 32, 1968.
5. Geddes, D.C.: A new species of Zausodes (Copepoda, Harpacticoida), Sarsia 32, 1968.
6. Brattström, Hans: The cruise in 1968, General Report, Sarsia 35, 1968.
7. Geddes, D.C.: Harpacticoid copepods belonging to the families Porcellidiidae Sars, Peltidiidae Sars, and Tegastidae Sars, Sarsia 35, 1968.
8. Fosshagen, Audun: Bottom-living Arietellidae (Copepoda, Calanoida) from the Bahamas, Sarsia 35, 1968.
9. Geddes, D.C.: Harpacticoid copepods belonging to the family Thalestridae Sars, Sarsia 39, 1968.
10. Brattegard, Torleiv: Mysidacea from shallow water in the Bahamas and southern Florida. Part 1, Sarsia 39, 1969.
11. Brattegard, Torleiv: Mysidacea from shallow water in the Bahamas and southern Florida. Part 2, Sarsia 41, 1970.
12. Fosshagen, Audun: Stephidae (Copepoda, Calanoida) from the Bahamas, with remarks on Stephos sinuatus Willey and S. arcticus Sars, Sarsia 41, 1970.
13. Brattegard, Torleiv: Leptostraca from shallow water in the Bahamas and southern Florida, Sarsia 44, 1970.
14. Schram, Thomas A.: Cypris Y, a later developmental stage of Nauplius y Hansen, Sarsia 44, 1970.
15. Fosshagen, Audun: Ridgewayia (Copepoda, Calanoida) and two new genera of Calanoids from the Bahamas, Sarsia 44, 1970.
16. Kramp, P.L.: Some medusae from the Bahamas, Sarsia 44, 1970.
17. Fosshagen, Audun: Platycopiidae (Copepoda, Calanoida) from the Bahamas, Sarsia 48, 1972.
18. Owre, Harding B.: The genus Spadella and other Chaetognatha, Sarsia 49, 1972.

UNIVERSITY OF BERGEN  
The Marine Biological Station

Duration: 1971-1976 (?)

Inquiries to: Hans Brattstrøm

LITTORAL AND SHALLOW WATER ORGANISMS - CARIBBEAN

Description:

Faunistic and ecological studies of littoral and shallow water organisms on the Caribbean coasts of Colombia and Panama.

Basic research - marine biology and fishery biology. May be of interest in connection with the plans for a sea-level canal through the Panama isthmus.

Colombia: Instituto Colombo-Alemán de Investigaciones Científicas  
Panama: Smithsonian Tropical Research Institute, Balboa.

Cooperation/connection with developing Countries:

No information

Resources applied:

- |                    |  |
|--------------------|--|
| 1. Man-years 1974: | Scientific personnel ca. $\frac{1}{2}$ |
| 2. Financing:      | Ordinary budget of institution         |
|                    | NAVF: 1971 26.000                      |
|                    | 1973 27.000                            |

Publications:

- Fosshagen, A.: A new genus and species of bottom-living calanoid (Copepoda) from Florida and Colombia. Sarsia 52 (1973).
- Brattegard, T.: Mysidacea from shallow water on the Caribbean coast of Colombia. Sarsia 54 (1973).
- Brattegard, T.: Additional Mysidacea from shallow water on the Caribbean coast of Colombia. Sarsia 56 (1974).
- Brattegard, T.: Mysidacea from shallow water on the Caribbean coast of Panama. Sarsia 56 (1974).

UNIVERSITY OF BERGEN  
Museum of Social History  
(The Ethnographic Collection)

Duration: until 1976?

Inquiries to: Henning Siverts

HUMAN ECOLOGY AND LOCAL ORGANIZATION AMONG THE  
AGUARUNA INDIANS OF NORTHERN PERU

(A continuation of "Local Organization and Political Alliances  
Among the Jívaro Indians of the Montaña Region")

Description:

The tropical forest is characterized by a plurality of species and a sparsity of individuals, involving special problems of adaptation for a population with restricted, non-industrial technology.

Low carrying capacity - a salient feature of the Alto Marañón Region - affects settlement pattern, implying dispersed living, presenting likewise problems of communication and transport. In such an area it is of intrinsic importance to learn how the ecological balance is maintained, i. e. the mechanisms which govern the decision making about resources, and how social organization serves the great variety of activities and their timing which is required in this complex and many-sided ecology.

Cooperation/connection with developing Countries:

Sistema Nacional de Apoyo a la Movilización Social (SINAMOS), Oficina de Coordinación y Evaluación de Colonización Militar (OCECOMIL): Research permission, agreement on information (reports, publications)

In the most favourable case, we may exert a certain influence on the jungle colonization policy of Peru, in securing the Indians' right to their territory and the protection of their resources.

Resources applied:

- |                    |   |
|--------------------|---|
| 1. Man-years 1974: | Scientific personnel 2                                  |
| 2. Financing:      | Ordinary budget of institution                          |
|                    | NAVF (Travel and field work)                            |
|                    | 1970-71 kr. 21.000                                      |
|                    | 1973-74 kr. 37.500                                      |
|                    | Institute for Comparative Research<br>in Humane Culture |
|                    | 1973-74 kr. 11.000                                      |

Publications:

- H. Siverts: The Aguaruna Jívaro of Peru (Antropologiska Studier 6/7, 1973)  
H. Siverts: Tribal Survival in the Alto Marañón, the Aguaruna case (IWGIA Doc. No. 10, Copenhagen 1972).  
H. Siverts: Jívaro Head Hunters in a Headless Time. (Proc. IX Int. Congr. Anthropol. Ethnol. Sciences 1974, in press).

UNIVERSITY OF OSLO  
Aker Hospital  
Hormone & Isotope Laboratory

Duration: 1974-

Inquiries to: Nils Norman

FERTILITY CONTROL

Description:

We have been contacted by WHO about participation in a worldwide project on fertility control by various methods. We have agreed to partake in studies involving hormonal responses to various types of anti-conceptive agents (mostly of a hormonal nature). The first project is planned in cooperation with the Gynecological Dept., National Hospital (Oslo), and will probably start in the fall of 1974. It will involve a study of the effect of mesterolone in men.

Cooperation/connection with developing Countries:

Fertility control, by methods acceptable to the various countries and cultures, is of central importance to the world.

Resources applied: (Project under planning)

Financing:

Ordinary budget of institution

UNIVERSITY OF OSLO  
Botanical Garden

Duration: 1970-1975

Inquiries to: Anders Bjørnstad

A VEGETATION STUDY OF RUAHA NATIONAL PARK,  
TANZANIA

Description:

A phytosociological investigation of the different vegetation types within the National Park, their ecology and distribution. Measurement of primary production of selected, representative vegetation types. Vegetation changes in relation to animal (especially elephant) impact.

Cooperation/connection with developing Countries:

Results will be used by Tanzania National Parks to establish a "Wildlife management plan" for Ruaha.

Resources applied:

1. Man-years 1974: Scientific personnel 1
2. Financing: NORAD (1970-74) ca. 100.000  
NORAD (1970-74) scholarship for  
Mr. Bjørnstad

Publications:

- A. Bjørnstad: Serengeti Research Institute. Ann. Rep. 1972-73: 40-42.  
A. Bjørnstad: Norw. J. Bot. 21 (1974) in press.

UNIVERSITY OF OSLO

Botanical Garden

Duration: 1972-1973

Inquiries to: Per Sunding

BOTANICAL FIELD STUDIES ON THE CAPE VERDE ISLANDS

Description:

Studies of the vascular flora of the archipelago, especially of critical Macaronesian plant genera, in connection with botanical investigations in other parts of Macaronesia (esp. the Canary (Islands)).

Cooperation/connection with developing Countries:

Cooperation with Portuguese botanists (future political status of the archipelago is still uncertain).

Resources applied:

- |                    |   |
|--------------------|---|
| 1. Man-years 1973: | Scientific personnel 1/20                           |
| 2. Financing:      | Ordinary budget of institution<br>NAVF (1972) 6.900 |

Publications:

- Per Sunding: "Check-list of the vascular plants of the Cape Verde Islands" (U. of Oslo press, 1973, 36 pp.)
- Per Sunding: Monogr. Biol. Canar. 4, 112-117 (1973).
- Per Sunding: "Additions to the vascular flora of the Cape Verde Islands" (Garcia de Orta 2 (1974))

UNIVERSITY OF OSLO

Botanical Laboratory

Duration: 1970-

Inquiries to: Inger Nordal Bjørnstad

STUDIES IN AFRICAN FLORA FOR THE "FLORA OF TROPICAL EAST AFRICA" - PROJECT
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Description:

Taxonomical revisions of certain families of East African vascular plants including cytological, experimental and herbarium taxonomical methods. The following families are being studied at present: Amaryllidaceae, Hypoxidaceae, and Iridaceae.

Conclusions will be used for writing parts of "Flora of Tropical East Africa" (FTEA)

Cooperation/connection with developing Countries:

FTEA-project was started 1951 at the initiative of the Colonial Research Committee (UK). The Flora is distributed through the Government Printer in Nairobi, Dar-es-Salaam and Entebbe.

(See also sub-project at the Agricultural University, p. 29)

Resources applied:

- |                    |                                    |
|--------------------|------------------------------------|
| 1. Man-years 1974: | Scientific personnel $\frac{1}{2}$ |
| 2. Financing:      | Ordinary budget of institution     |
|                    | NORAD (1970) kr. 3.000             |
|                    | NAVF (1971-73) kr. 26.500          |

UNIVERSITY OF OSLO  
Botanical Laboratory

Publications:

- Bjørnstad, I. 1970: Botanikk og U-hjelp. Samtiden 79: 427 - 431.
- Bjørnstad, I., Friis, I. & Thulin, M. 1971: A revision of the *Stachys aculeolata* group (Labiatae) in tropical Africa. Norw. Journ. Botany 18: 121 - 137.
- Friis, I. & Bjørnstad, I. 1971: A new species of *Haemanthus* (Amaryllidaceae) from Southwest Ethiopia. Norw. Journ. Botany 18: 227 - 230.
- Bjørnstad, I. & Friis, I. 1972: Studies in the genus *Haemanthus* L. (Amaryllidaceae) I. The infrageneric taxonomy. Norw. Journ. Botany 19: 187 - 206.
- Bjørnstad, I. & Friis, I. 1972: Studies in the genus *Haemanthus* L. (Amaryllidaceae) II. A revision of the section *Demeusea*. Norw. J. Bot. 19: 207 - 222.
- Bjørnstad, I. 1973: A revision of the genus *Pancratium* in Africa south of the Sahara. Norw. Journ. Botany 20: 281 - 291.
- Bjørnstad, I. & Friis, I. 1974: Studies in the genus *Haemanthus* L. (Amaryllidaceae) III. A revision of the sections *Gyaxis* and *Nerissa*. Norw. Journ. Botany 21: 243 - 275.

UNIVERSITY OF OSLO

Botanical Laboratory

Duration: 1972-

Inquiries to: Leif Ryvardeen

STUDIES IN PHYTHOPATHOGENIC AND WOOD-INHABITING FUNGI OF AFRICA
--

Description:

The project includes systematic and taxonomic studies of basidiomycetes living on all kinds of wood in Africa. The fungi are described and illustrated and manuals written for their identification. Too many pathogenic organisms are not readily identifiable due to a lack of proper descriptions and good illustrated manuals. Without such proper means of determination, pathologists meet with great difficulties in finding the proper treatment for the infested trees and diseased wood.

Problems of attack and decay of all sorts of trees and woody material are far more serious in tropical countries than in temperate zones.

Cooperation/connection with developing Countries:

Forest Research Institute, Kumasi, Ghana  
East African Forest Res. Org., Mugugu, Nairobi, Kenya

Resources applied:

1. Man-years 1974:	Scientific personnel	$\frac{1}{2}$
2. Financing:	Ordinary budget of institution	
	NORAD 1970 (first visit)	4.500
	1971-74	55.000

Publications:

- L. Ryvardeen: A critical checklist of the Polyporaceae in tropical East Africa. *Norw. J. Bot.* 19: 229 - 238. 1972.
- L. Ryvardeen: Type-studies in the Polyporaceae 2. Species described from Congo by M. Beeli. *Bull. Jard. Bot. Nat. Belg.* 44: 65 - 76, 1974.
- L. Ryvardeen: Studies in the Aphyllophorales of Africa 2. Some new species from East Africa. *Norw. J. Bot.* 22, 1975 (in press).

UNIVERSITY OF OSLO  
Botanical Museum

Duration: 1972-1974

Inquiries to: Hildur Krog

PARMELIA, SUBGENUS AMPHIGYMNIA IN ETHIOPIA

Description:

A taxonomic and ecological study of the lichen genus Parmelia, subgenus Amphigymnia, in Ethiopia.  
(Master's Degree Thesis)

Cooperation/connection with developing Countries:

Teacher at Norwegian Mission school (High School and Teachers College) in Ethiopia.

Resources applied:

1. Man-years 1974: Scientific personnel 0,8
2. Financing: Private

Publications:

Winnem, B.: "Parmelia, subgenus Amphigymnia in Ethiopia" (Norw. J. Bot., in press)

UNIVERSITY OF OSLO

Botanical Museum

Duration: 1972-1976/77

Inquiries to: Hildur Krog

LICHENOLOGICAL STUDIES IN EAST AFRICA

Description:

A contribution to the mapping of East Africa's natural vegetation. Taxonomic and phytogeographic studies of the lichen flora in Ethiopia, Kenya, Tanzania and Uganda. Writing a lichen flora for East Africa in cooperation with dr. T.D.V. Swinscow, Great Britain.

Cooperation/connection with developing Countries:

The lichen flora for East Africa, in connection with reference material deposited at African institutions, will be a basis for further lichenological research at these institutions.

Resources applied:

- |                    |   |
|--------------------|---|
| 1. Man-years 1974: | Scientific personnel $\frac{1}{2}$        |
| 2. Financing:      | Ordinary budget of institution (salary)   |
|                    | NORAD (travel grant) 1972: 14.000 kr.     |
|                    | 1973: 11.000 kr.                          |
|                    | NAVF (travel grant) 1974: 15.200 kr.      |
|                    | NAVF Technical assistance 1974: 3.000 kr. |

Publications:

- Krog, H.: "On Umbilicaria pertusa" (Bryologist 1973)  
Krog & Swinscow: "Ramalina in East Africa" (Norw. J. Bot. 1974)  
Swinscow & Krog: "Usnea in East Africa" (Norw. J. Bot. 1974)  
Swinscow & Krog: "The genus Pyxine in East Africa" (Norw. J. Bot. in press)

UNIVERSITY OF OSLO  
Department of Geography

Duration: - 1975

Inquiries to: Aadel Brun Tschudi

COFFEE PRODUCTION IN KENYA

Description:

Coffee production in Kenya - its multiplier effects and contribution to economic development.

The main thesis is that the income flows from coffee-production represent a significant potential for creating jobs in the rural areas in non-farming sectors.

Cooperation/connection with developing Countries:

Department of Geography, University of Nairobi Institute of Development Research, Copenhagen.

Resources applied:

- |                    |                        |
|--------------------|------------------------|
| 1. Man-years 1974: | Scientific personnel 1 |
| 2. Financing:      | NAVF (scholarship)     |

Publications:

Results to be published spring 1975.

UNIVERSITY OF OSLO  
Department of Geography

Duration: 1974-1975

Inquiries to: Aadel Brun Tschudi

REGIONAL GEOGRAPHY IN THE STUDY OF DEVELOPMENT

Description:

Regional geography placed in the framework of general system theory would produce knowledge of a wider perspective. This knowledge of a place, before the agent for change has become active, should help to predict the negative consequences of development projects. This hypothesis will be tested on three evaluated projects - CADU (Ethiopia), CEY-NOR (Sri Lanka) and another not yet decided.

Cooperation/connection with developing Countries:

(See above)

Resources applied:

1. Man-years 1974: Scientific personnel ca. 1
2. Financing: Ordinary budget of institution  
(Graduate student project)

UNIVERSITY OF OSLO  
Department of Geography

Duration: 1975-1977  
(if funds provided)

Inquiries to: Reidar Dale

THE TRANSITION FROM A SUBSISTENCE ECONOMY  
(Planned research project)

Description:

A study of the integration process and its spatial effects during the period of take off from a subsistence economy to a more differentiated economy.

Cooperation/connection with developing Countries:

Information to be collected from Norwegian firms that have started production in developing countries.

Resources applied:

Financing:

Application to NAVF

UNIVERSITY OF OSLO  
Institute of Educational Research

Duration: 1970-1976

Inquiries to: Bjarne Bjørndal/  
Sigm. Lieberg

ENVIRONMENTAL EDUCATION IN ELEMENTARY SCHOOLS
---

Description:

The Environmental Education project aims to renew the teaching of sciences in the elementary school (1st - 6th grades). A group of educational researchers, natural scientists and teachers participate in the project.

The main issues are:

- 1) To convey to the pupils an insight of our bio-physical and socio-cultural environment.
- 2) To give the pupils an understanding of environmental problems and the consequences these problems should have for our attitudes and behaviour.
- 3) To teach the pupils to participate actively in solving these problems.

Questions related to developing countries are very important in this context. Environmental education will illuminate problems concerning food, population, and the use and distribution of resources. Developed material will be used both in the elementary school and teacher training colleges.

Cooperation/connection with developing Countries:

No information

Resources applied:

- |                    |  |
|--------------------|--|
| 1. Man-years 1974: | Scientific personnel 1-2   |
| 2. Financing:      | Ordinary budget of institution<br>Ministry of Church and Education<br>(1974) kr. 220.000 |

Publications:

Reports published by the Educational Research Institute.

UNIVERSITY OF OSLO  
Institute of Educational Research  
Inquiries to: Karl S. Schei

MASTER'S DEGREE THESES CONCERNING DEVELOPING  
COUNTRIES

- T. Vigtil: "Skolesystem og skoleproblemer i et U-land. Det kenyanske samfunn i forandring."  
(Educational System and Problems in a Developing Country. The Kenyan Society in Change. Oslo, 1973.)
- P. Eidhammer: "Norsk støtte til skoleutviklingen i Øst-Afrika og Zambia."  
(Norwegian Support to the Development of Schools in Eastern Africa and Zambia. Oslo, 1973.)
- B. Meling: "Education for Socialism and Self-Reliance. A Study of Education and Political Socialization in Tanzania after Independence."  
(Oslo, 1973.)
- A.H. Utgaard: "Peru og Cuba. Et komparativt studium av læreplaner i lys av sosiale forhold."  
(Peru and Cuba. A Comparative Study of Teaching Plans in view of Social Conditions. In progress.)
- L.R. Kerr: "To afrikanske samfunns møte med de holdninger og metoder som europeiske misjonærer representerte, drøftet spesielt ut fra misjonærenes undervisningsvirksomhet i de to samfunn. En deskriptiv komparativ studie."  
(The encounter between the attitudes and methods of European missionaries and two African societies. Special reference is made to the educational activities of missionaries in the two societies. A descriptive - comparative study. Oslo, 1973.)

UNIVERSITY OF OSLO

Institute for Experimental Medical  
Research

Duration: 1974-1978

Inquiries to: Morten Harboe

A VACCINE AGAINST LEPROSY

Description:

The project aims at developing a vaccine against leprosy. The problem will be approached in two ways:

1. Use of a non-virulent mycobacterium with high degree of cross-reactivity to M. leprae.
2. Use of killed M. leprae in an appropriate adjuvant.
3. Since the relationship between M. leprae and other mycobacteria is unknown, a major part of the initial work will be centered on studying the relationship between M. leprae and other mycobacteria, and on studying the mechanisms of resistance to mycobacterial infections in experimental models involving murine leprosy.

Cooperation/connection with developing Countries:

The number of leprosy cases in developing countries does not decrease, in spite of the existence of effective chemotherapeutical drugs.

The project is a continuation of research performed at the Armauer Hansen Research Institute (Addis Abeba, Ethiopia).

The project is a part of the work of IMMLEP, the "Immunology of Leprosy Prosjekt Group" established by WHO to stimulate research in leprosy, particularly with the aim of improving diagnostic methods, and prophylactic measures including development of a vaccine.

Resources applied:

1. Man-years 1973/1974: Scientific personnel 2-3 full time
2. Financing: Ordinary budget of institution  
NAVF (Scholarships)  
Anders Jahres fond til vitenskapens fremme  
Carl Sembs fond  
NORAD  
WHO

UNIVERSITY OF OSLO

Institute for Experimental Medical  
Research

Duration: 1973-1976

Inquiries to: Morten Harboe

ANTIBODIES IN PATIENTS WITH LEPROSY

Description:

The purpose of the work is to study antibodies against Mycobacteria in sera of patients with various clinical forms of leprosy. The newly developed technique of crossed immunoelectrophoresis with intermediate gel is applied. It is more sensitive and permits more detailed study of complex systems than conventional techniques.

It has been found that the antibodies in lepromatous sera are directed against a large number of different constituents of Mycobacteria. In patients with tuberculoid leprosy, the number of antibodies found is far less and they are present in smaller amounts. Further development is aimed at a characterization of the constituents of Mycobacteria that are particularly important inducers of an antibody response, and its clinical importance.

Cooperation/connection with developing countries:

Leprosy is still an important infectious disease in developing countries. Current knowledge on leprosy is far less developed than that on infectious diseases important in industrialized countries.

Sera from patients with various clinical forms of leprosy are provided by the Armauer Hansen Research Institute, Addis Abeba, Ethiopia.

Resources applied:

- |                    |   |
|--------------------|---|
| 1. Man-years 1973: | Scientific personnel, 1/4   |
| 1975-76:           | The same.   |
| 2. Financing:      | Ordinary budget of institution<br>NAVF (part time of scholarship) |

Publications:

Axelsen, N.H., Harboe, M., Closs, O. & Godal, T.:  
BCG antibody profiles in tuberculoid and lepromatous  
leprosy. *Infection and Immunity* 9: 952-958, 1974.

UNIVERSITY OF OSLO

Institute for Experimental Medical  
Research

Duration: 1974-1977

Inquiries to: Otto Closs

CROSS-REACTIONS BETWEEN MYCOBACTERIA

Description:

A vaccine against leprosy may be based on immunization with a closely related Mycobacterium. More information is needed to select the optimal cross-reacting bacterium capable of inducing protective immunity against a certain mycobacterial infection. Some of these studies will be carried out using murine leprosy as a model. The first step is to characterize the antigens on the murine leprosy bacillus and to detect cross-reactions with antigens on other Mycobacteria.

Cooperation/connection with developing countries:

These are experimental studies closely related to an important infectious disease in developing countries.

Resources applied:

- |                    |  |
|--------------------|--|
| 1. Man-years 1974: | Scientific personnel 1/3<br>Supporting personnel 1/3                         |
| 2. Financing:      | Ordinary budget of institution<br>Anders Jahres fond til vitenskapens fremme |

Publications:

Closs, O., Harboe, M. & Wassum, A.M.: Cross-reactions between Mycobacteria I. Crossed immunoelectrophoresis of soluble antigens of Mycobacterium lepraemurium and comparison with BCG.

UNIVERSITY OF OSLO

Institute for Experimental Medical  
Research

Duration: 1973-1975

Inquiries to: Otto Closs

IN VITRO STIMULATION OF LYMPHOCYTES WITH VARIOUS  
MYCOBACTERIAL ANTIGENS INCLUDING M. leprae

Description:

BCG vaccination has in different investigations been shown to confer a certain degree of protection against leprosy. This indicates that antigen cross-reactivity exists between BCG and M. leprae. Protection against mycobacterial infection is thought to depend mainly on cell mediated immunity. Cross-reactivity should therefore be studied in a system measuring this type of immunity. The lymphocyte transformation test was used to compare the reaction to BCG and M. leprae in a group of healthy Norwegians not exposed to leprosy.

Cooperation/connection with developing countries:

The problem has previously been studied at the Armauer Hansen Research Institute, Addis Abeba, Ethiopia. This project was a logical extension, as a similar study in a population where leprosy is non-endemic was required. Leprosy bacilli for the work was obtained from Ethiopia.

Resources applied:

- |                    |   |
|--------------------|---|
| 1. Man years 1973: | Scientific personnel 1/2<br>Supporting personnel 2/3  |
| 2. Financing:      | Ordinary budget of institution<br>Anders Jahres fond til vitenskapens fremme<br>NAVF (Scholarships) |

Publications:

Closs, O.: The in vitro lymphocyte response to PPD, BCG and M. leprae in a population not exposed to leprosy. Infection and Immunity: In press.

UNIVERSITY OF OSLO

Institute for Experimental Medical Research

Duration: 1974-1977

Inquiries to: Morten Harboe

ISOLATION OF ANTIGENS FROM MYCOBACTERIA

Description:

It is well established that Mycobacteria contain many different antigenic components. Nothing is known, however, which of these are important in protective immunity after infection with M. leprae. Isolation of antigens from M. leprae and related mycobacteria is required to understand the mechanisms of immunity in leprosy. Relatively large amounts of M. leprae are now available since the bacterium grows in infected Armadillos. We will be furnished with M. leprae from Armadillos by IMMLEP for the fractionation work.

Cooperation/connection with developing countries:

Isolation of antigens from Mycobacteria are essential for development of skin test reagents and certain types of vaccines against leprosy. Both are important measures in the prophylaxis of leprosy.

Resources applied:

- |    |                 |  |              |
|----|-----------------|--|--------------|
| 1. | Man years 1974: | Scientific personnel                       | 1/4          |
|    | 1975:           | " "  | 1            |
|    |                 | Supporting personnel                       | 1/4 for 1974 |
|    |                 | " "  | 1 " 1975     |
| 2. | Financing:      | Ordinary budget of institution             |              |
|    |                 | Anders Jahres fond til vitenskapens fremme |              |
|    |                 | NAVF (Scholarship, technical assistance)   |              |
|    |                 | World Health Organization (Scholarship)    |              |
|    |                 | IMMLEP (technical assistance)              |              |

Publications: None so far.

UNIVERSITY OF OSLO

Institute for Experimental Medical  
Research

Duration: 1974-1975

Inquiries to: Morten Harboe

CHARACTERIZATION OF ANTIGENS OF MYCOBACTERIUM LEPRAE: ESTABLISHMENT OF A REFERENCE SYSTEM BY CROSSED IMMUNOELECTROPHORESIS
--

Description:

The relationship between M. leprae and other mycobacteria is virtually un-known. The antigenic structure of M. leprae itself must be defined, in order to establish its relationship to other mycobacteria. Knowledge of this relationship is essential for development of skin test reagents for leprosy, and for development of a vaccine based on the use of a cross-reacting mycobacterium. The project is a part of the work of IMMLEP (WHO project group).

Cooperation/connection with developing countries:

Both development of skin test reagents for leprosy and a vaccine are important measures in the prophylaxis of leprosy.

Resources applied:

- |                    |  |
|--------------------|--|
| 1. Man years 1975: | Scientific personnel 1/3<br>Supporting personnel 2/3   |
| 2. Financing:      | Ordinary budget of institution<br>Anders Jahres fond til vitenskapens fremme<br>NAVF (technical assistance)<br>Nasjonalforeningen for folkehelsen<br>a/s Dakopatts, Copenhagen |

Publications: None so far.

UNIVERSITY OF OSLO

Institute for Experimental Medical  
Research

Duration: 1974-1978

Inquiries to: Bjørn Myrvang

IMMUNE RESPONSE TO IMMUNIZATION WITH MYCOBACTERIAL ANTIGENS IN MAN: SKIN TESTING AND IN VITRO TESTS FOR CELL MEDIATED IMMUNITY
--

Description:

Development of reliable techniques for quantitation of cell mediated immunity against mycobacterial antigens are essential for evaluation of the effect of different immunization procedures. They are thus essential both for evaluation and development of various vaccine products. Before expensive field tests can be performed, it is mandatory to obtain reliable techniques for selection between a few procedures used in pilot immunization studies.

The project is part of the work of IMMLEP (WHO "Immunology of Leprosy Project Group").

Cooperation/connection with developing countries:

This project is essential for the development of better prophylactic measures against leprosy, which is an important infectious disease in developing countries. This work must, however, be performed in a country where leprosy does not exist.

Resources applied:

- |                    |  |
|--------------------|--|
| 1. Man years 1974: | Scientific personnel 1/3. 1975 1           |
|                    | Supporting personnel 1/2                   |
| 2. Financing:      | Ordinary budget of institution             |
|                    | Anders Jahres fond til vitenskapens fremme |
|                    | NAVF (Scholarship)                         |
|                    | IMMLEP (Technical assistance)              |
|                    | Carl Sembs fond                            |

Publications: None so far.

UNIVERSITY OF OSLO

Institute for Experimental Medical  
Research and Department of  
Pathology, Ullevål Hospital

Duration: 1972-1975

Inquiries to: Otto Closs/  
Olav A. Haugen

EXPERIMENTAL MURINE LEPROSY

Description:

Human leprosy is characterized by great variation in the intensity of host reaction against the infection. The aim of the project is to establish an experimental model for the study of variation in host resistance in mycobacterial infections. The work has been concentrated on studying the infection caused by the murine leprosy bacillus in various inbred strains of mice.

Cooperation/connection with developing countries:

These are experimental studies closely related to an important infectious disease in developing countries.

Resources applied:

1. Man-years 1974:  
Scientific personnel 1  
Supporting personnel ca. 1
2. Financing:  
Ordinary budget of institutions  
Anders Jahres fond til vitenskapens fremme  
NAVF (Scholarship)  
Carl Sembs fond  
Jacob Aall og hustrus legat

UNIVERSITY OF OSLO

Institute for Experimental Medical  
Research

Publications:

1. Closs, O. & Haugen, O.A.: Experimental murine leprosy.  
1. Clinical and histological evidence for varying susceptibility of mice to infection with *Mycobacterium lepraemurium*. Acta path. microbiol. scand. Section A. 81: 401-410, 1973.
2. Closs, O. & Haugen, O.A.: Experimental murine leprosy.  
2. Further evidence for varying susceptibility of outbred mice and evaluation of the response of 5 inbred mice strains to infection with *Mycobacterium lepraemurium*. Acta path. microbiol. scand. Section A. 82: 459-474, 1974.
3. Closs, O. & Haugen, O.A.: Experimental murine leprosy.  
3. Early local reaction to *Mycobacterium lepraemurium* in C3H and C57/BL mice. Acta path. microbiol. scand. Section A. In press.
4. Closs, O. & Haugen, O.A.: Experimental murine leprosy.  
4. The gross appearance and microscopical features of the local infection after subcutaneous inoculation of C3H and C57/BL mice with *Mycobacterium lepraemurium*. Acta path. microbiol. scand. Section A. In press.
5. Closs, O.: Experimental murine leprosy: The growth of *M. lepraemurium* in the foot-pads of C3H and C57/BL mice. In preparation.
6. Closs, O.: Experimental murine leprosy: The immunity to murine leprosy studies by reinfection of C57/BL mice with *M. lepraemurium*. In preparation.
7. Closs, O.: Experimental murine leprosy: Antibodies to *M. lepraemurium* during experimental infection in C3H and C57/BL mice. In preparation.
8. Haugen, O.A. & Closs, O.: Experimental murine leprosy.  
5. Cellular reaction in the draining lymph nodes of mice inoculated with *Mycobacterium lepraemurium*. In preparation.
9. Haugen, O.A., Skjørten, F. & Closs, O.: Experimental murine leprosy.  
6. Ultrastructural features of the inflammatory exudate in C3H and C57/BL mice infected with *Mycobacterium lepraemurium*. In preparation.

10. Haugen, O.A. & Closs, O.: Histological determination of the variation in host resistance in murine leprosy. Tenth International Leprosy Congress - Bergen 1973. Abstract. Int. J. Leprosy, 41: 513, 1973.
11. Closs, O., Bjune, G., Harboe, M. & Haugen, O.A.: M. lepraemurium infection in mice as a model for the study of resistance to mycobacterial infection. Tenth International Leprosy Congress - Bergen 1973. Abstract. Int. J. Leprosy, 41: 513, 1973.
12. Closs, O. & Haugen, O.A.: Different susceptibility of mice to infection with M. lepraemurium. Tenth International Leprosy Congress - Bergen 1973. Abstract. Int. J. Leprosy, 41: 515, 1973.
13. Closs, O., Haugen, O.A. & Harboe, M.: Experimental murine leprosy as a model for the immunological spectrum of human leprosy. Abstract. Scand. J. Immunol. 2: 442, 1973.

UNIVERSITY OF OSLO  
Institute of General Literature

Duration: 1968-1970

Inquiries to: Helge Rønning

MODERN NIGERIAN NOVELS AS AN EXPRESSION OF SOCIAL  
CHANGE

Description:

An analysis of the way social change in Nigeria is treated in Nigerian novels. Themes dealt with: The role of myth, the role of religion, conflict between modern and traditional cultural patterns, conflict between country and city, conflict between African and colonial society, social and class antagonisms.

Cooperation/connection with developing countries:

No information

Resources applied:

Financing:

Ordinary budget of institution

NAVF 1968/69 (travel grant to studies  
at the London School of  
Oriental and African  
Studies)

Publications:

Mag.art. degree thesis.

UNIVERSITY OF OSLO  
Institute of General Literature

Duration: 1972-1976/77

Inquiries to: Helge Rønning

MODERN NIGERIAN LITERATURE IN THE LIGHT OF SOCIAL CONFLICTS
--

Description:

An attempt to correlate the development of modern Nigerian literature to the development of various social structures. The rise of the Nigerian novel seen as an expression of the rise of the new elite and its problems. The change from a collective poetry to individual poetry viewed in relation to the development of individualistic ideological structures. The study will include both broad descriptions of literary and social change and detailed analyses of individual authors' works.

Cooperation/connection with developing Countries:

Nigeria is of special interest because of the rapid growth in its literature.

It is of considerable interest to literary sociology to try to explain the causes of this growth.

Resources applied:

- |                    |   |
|--------------------|---|
| 1. Man-years 1974: | Scientific personnel 0,25   |
| 2. Financing:      | Ordinary budget of institution<br>NAVF (travel grant) 1974 kr. 13.395 |

UNIVERSITY OF OSLO

Institute of Geology

Duration: 1969-1973

Inquiries to: S.B. Manum

BIO-STRATIGRAPHICAL INVESTIGATIONS IN THE KARROO  
OF EAST AFRICA

Description:

A contribution towards the relative dating and correlation of the scattered Karroo sediments (Permian) of Eastern Africa by means of plant fossils.

These are the only sediments which are coal-bearing (Tanzania).

Cooperation/connection with developing Countries:

Local institutions, esp. Geological Survey of Tanzania.

Resources applied:

- |                    |   |
|--------------------|---|
| 1. Man-years 1973: | Scientific personnel ca. 1              |
| 2. Financing:      | Ordinary budget of institution<br>NORAD |

Publications:

S.B. Manum & N.D. Tien: Palyno-stratigraphy of the Ketewaka Coal-field (Lower Permian), Tanzania. (Geol. Surv. Tanzania, Bull. no. 39, 1974.)

UNIVERSITY OF OSLO

Institute of Geology

Duration: 1969-1974

Inquiries to: Knut Bjørlykke

REGIONAL GEOLOGICAL INVESTIGATIONS AND STUDIES OF  
WEATHERING AND SOIL FORMATION IN UGANDA

Description:

The project has consisted of two parts:

1. Geological mapping of late precambrian rocks in Western Uganda.
2. A study of mineralogical and chemical changes during weathering of rocks as a part of a soil forming process.

Cooperation/connection with developing Countries:

Project started when Dr. Bjørlykke was working at the Makerere University, Kampala (1969-71).

Publications:

1. Report on Research project no. 6. (National Research Council, Uganda, 1971.) Department of Geology, Clay mineralogy of the western Rift in Uganda, by Knut Bjørlykke. (Makerere research gramme no. 496.)  
Research project no. 7. Department of Geology. Weathering profiles in Uganda, by K. Bjørlykke.  
Research project no. 8. Department of Geology. Markere University Stratigraphic problems in Bunyoro.
2. K. Bjørlykke, 1972: Trekk fra Øst-Afrikas geologi. Naturen 1972, 350-368.
3. K. Bjørlykke, 1973: Glacial Conglomerates of Late Precambrian age from the Bunyoro Series, W. Uganda. Geologischer Rundschau, Volume no. 62, page 938-946.
4. K. Bjørlykke, 1975: Mineralogical and chemical changes during weathering of acid and basic rocks in Uganda. Norsk Geologisk Tidsskrift. In press.

UNIVERSITY OF OSLO  
Institute for Nutrition Research

Duration: 1971- (see below)

Inquiries to: Halvor Holm

PROTEASE INHIBITORY ACTIVITY IN SOY BEANS AND SOY PRODUCTS
--

Description:

- I. Evaluation of protein quality in locally produced soybean flour from Tanzanian villages. (1971-1973)

The project was undertaken in cooperation with the Ministry of Agriculture, Tanzania, and UNICEF/EARO, in order to determine whether trypsin inhibitory activity and protein quality were affected during local processing of full fat soybean flour from three Tanzanian villages.

- II. A study of the content of proteins, fat and protease in 27 varieties of soybeans (1973 - )

A screening of protease inhibitors in various soybean varieties is carried out and will be used, together with protein and fat data, to evaluate the nutritive value of soybean varieties. Studies of heat stability of inhibitors are included.

- III. The effects of soybean protease inhibitors in human nutrition (1973 - )

Essay methods for determination of inhibitor effects on the function of pancreas in rats and humans are being developed.

Cooperation/connection with developing Countries:

Indicated above. The project is followed with interest by the Tanzanian agricultural authorities, and may be important when deciding on varieties of soybeans and processing technology.

Resources applied:

1. Man-years 1974: Scientific personnel 2,2
2. Financing: Ordinary budget of institution

UNIVERSITY OF OSLO

Institute for Nutrition Research

Duration: 1973- see below

Inquiries to: Wenche Barth Eide

DEVELOPMENT OF AV-AID IN NUTRITION

Description:

In cooperation with the National Film Board of Norway, a film strip with accompanying manuscript has been developed for use in nutrition training in the first place, teachers in Kenya. While Kenya is a pilot or "model" country, the intention is to extend the project to other countries, provided continued financing is ensured. The project has included a workshop in Kenya where Kenyan experts in nutrition, pedagogy and home economics have participated along with representatives of a Scandinavian working group.

The filmstrip and draft manuscript will be evaluated by the Kenyan participants in the workshop, commented and revised. The material will be finalized in Norway and Kenya during the autumn of 1974, winter 1975, and is to be submitted to UNESCO in February 1975. It will then be tested in a more long term evaluation in teacher training colleges in Kenya, with the participation of educational researchers.

Cooperation/connection with developing Countries:

Kenyan authorities and experts.

Resources applied:

Financing:

Ordinary budget of institution (salary)  
UNESCO (1973-74) \$ 5.800  
Norwegian Film Board, N.kr. 10.000,-  
+ ordinary budget of institution  
Norwegian Broadcasting Corporation  
Scandinavian Airlines System  
Dept. of Nutrition Studies, Uppsala  
University

Publications:

Report to be published by UNESCO in 1975.

UNIVERSITY OF OSLO  
Institute for Nutrition Research

Duration: 1973- (see below)

Inquiries to: Wenche Barth Eide

THE NUTRITION SITUATION IN RELATION TO ECONOMIC  
DEVELOPMENT IN A VILLAGE SOCIETY - SRI LANKA

Description:

The project was started to study the nutrition situation in a village which is in a transitional stage, from being very poor to gradually having increased employment and income. The idea was to start by establishing a "base-line", and continue with regular assessments as time went on so as to examine possible influences of the development scheme (boat factory, shrimp processing factory) on the nutrition situation in selected groups and individuals. The project presented particularly interesting problems related to caste differences among the population.

The project was planned as a long term program. At present, however, it has come to a standstill due to lack of interest in a continuation from various parties involved.

(See project "Cey-Nor" on page 112)

Cooperation/connection with developing Countries:

Contact with Medical Research Institute, Nutrition Department, Colombo.

Resources applied:

1. Man-years 1974: Scientific personnel 0,5
2. Financing: NGU (Norwegian Order of Good Templars, Youth Organization)  
NAVF (Scholarship)

Publications:

- B. and A. Skåra: Report (mimeographed)  
E. Skjønberg: Report (mimeographed)

UNIVERSITY OF OSLO  
Institute for Nutrition Research  
Wenche Barth Eide

OTHER ACTIVITIES THAN THOSE DESCRIBED AS RESEARCH PROJECTS:

1. A Radio Series on Nutrition Problems in Developing Countries (1971)

Information about nutrition problems as they relate to development, illustrated by recordings from developing countries, interviews with leading world authorities on nutrition, and general description and discussions - 6 programs in all.

2. Special Issue on Nutrition of "Norkontakt" (NORAD periodical) (1974)

Co-planning and -execution of practical work in relation to the collection and preparation of material for a special issue on nutrition. Contact with nutrition authorities in other parts of the world for articles and special interviews.

3. A Correspondence Course on Nutrition for Field Health Personnel in Developing Countries

See information next page.

UNIVERSITY OF OSLO  
Institute for Nutrition Research

Duration: 1973-1976

Inquiries to: Wenche Barth Eide

CORRESPONDENCE COURSE IN NUTRITION
------------------------------------

Description:

The project aims at improving the knowledge, attitudes and skills of field health personnel in developing countries (doctors, nurses, mid-wives etc.) in relation to nutrition problems and work at the local level. The selected participants for this first correspondence course are all missionary personnel as these constitute a homogeneous group working at the grass-root level. The idea may be extended to other groups later. The course consists of 15 letters with answers from the participants and replies to these from the individual teacher. Duration of course approx. 18 months. Teachers are Scandinavian professionals in nutrition, pediatry, and related subjects who all contribute on a voluntary basis.

Cooperation/connection with developing Countries:

See above.

Resources applied:

Financing:

The Norwegian Medical Association  
Swedish Missionary Union  
The Scandinavian Federation for  
Medical Education  
Various local nurse organizations  
etc.

Publications:

G.H. Mathismoen, article in "Norkontakt" no. 5, 1974.

UNIVERSITY OF OSLO  
Institute of Pathology

Duration: 1966-1967

Inquiries to: Finn Devik

RADIATION PROTECTION IN NIGERIA

Description:

Terms of reference: to advise and assist the national health authorities in developing a programme of radiation protection measures, with legislation for the control of the use of ionizing radiation and the provision of codes of practice suited to Nigerian conditions.

The document Radiation Protection in Nigeria was produced in the period Dec. 1966 - Feb. 1967 (see below).

Cooperation/connection with developing Countries:

Federal Radiation Protection Service, Nigeria.

Resources applied:

Financing:

Ordinary budget of institution  
WHO Travel expenses, short  
term consultant's fee

Publications:

WHO document, Radiation Protection in Nigeria (11 September 1967, AFR/RAD/2 Project Nigeria 63) 64 pp.

UNIVERSITY OF OSLO

Institute of Pathology

Duration: 1969-1972

Inquiries to: Olav Hilmar Iversen

A STUDY OF MATERIAL ON SKIN CANCER IN UGANDA  
FOR A PERIOD OF FIVE YEARS

Description:

Based on the material of the Cancer Registry of Uganda, and the Dept. of Pathology, Makerere University Medical School (Kampala, Uganda), a study was made of type, degree, localization, previous diseases and spread of cancers of the skin in Uganda.

Cooperation/connection with developing Countries:

Indicated above.

Skin cancer of the leg is specific for many tropical countries as it arises from the tropical ulcer.

Resources applied:

Financing:

Ordinary budget of institution  
Makerere University (Visiting  
NORAD professor's  
salary)

Publications:

Iversen, U. & Iversen, O.H.: "Tumours of the skin", Recent Results in Cancer Research, vol. 41 (Springer Verlag 1973).

UNIVERSITY OF OSLO

Institute of Pathology

Duration: 1969-1973

Inquiries to: Olav Hilmar Iversen

STUDY OF THE CELL KINETICS IN BURKITT LYMPHOMA

Description:

An investigation of the growth rate of a form of cancer, a lymphosarcoma of childhood which is very frequent in Africa.

The birth rate of cells, and the loss of cells in the tumour may give an indication as to the rapid shrinking of these tumours after cytostatic treatment.

Cooperation/connection with developing Countries:

This tumour exists mainly in tropical Africa and a few other developing countries. The Uganda Cancer Institute has concentrated on diagnosis and treatment of this tumour. Interest also exists at the Universities of Nairobi and Dar-es-Salaam and in some West African countries.

Resources applied:

1. Man-years 1973: Scientific personnel 0,3  
Supporting personnel
2. Financing: Ordinary budget of institution  
Makerere University  
NORAD  
National Institute of Health (USA)

Publications:

Iversen, O.H., Iversen, U., Ziegler, J.L., & Bluming, A.Z.:  
"Cell Kinetics in Burkitt Lymphoma" (Eur. J. Cancer, 10 (1974)  
155-163).

UNIVERSITY OF OSLO  
Institute of Pathology

Duration: 1969-1974

Inquiries to: Olav Hilmar Iversen

REGENERATION AND GROWTH OF THE SKIN

Description:

A study of the growth control and the regeneration of the superficial part of the skin after wounding in the African fruit bat, *Eidolon Helvum Kerr.*

Cooperation/connection with developing Countries:

Department of Anatomy, Makerere University, Kampala, Uganda  
Department of Pathology, " " , " , "

Resources applied:

1. Man-years 1973: Scientific personnel 0,6  
Supporting personnel 0,5
2. Financing: Ordinary budget of institution  
NORAD

Publications:

Iversen, O.H., Bhangoo, K.S. & Hansen, K.: "Epidermal cell renewal in the fruit bat web." (Virchow's Archiv B Cellular Pathology 16 (1974) 157-180)

UNIVERSITY OF OSLO  
Institute of Political Science

Duration: 1972-1974

Inquiries to: Torill Sjaastad

INVISIBLE EMPIRES - MYTH OR REALITY?

Description:

Master's Degree project.

The thesis is based on Lenin's theory of imperialism, which the author employs in a analysis of the relations between developing and industrialized countries today.

Three hypotheses are studied empirically:

1. The industrialized countries have divided the developing countries between them in economic spheres of interest.
2. The export of goods follows the export of capital, but is to a greater extent characterized by the element of competition in world trade.
3. The economic and political spheres of interest of the industrialized countries are identical.

107 developing countries are studied, and the following industrialized countries: Belgium, France, Italy, Japan, The Netherlands, UK, Western Germany and USA.

Cooperation/connection with developing Countries:

No information

Resources applied:

Man-years 1974:

Scientific personnel ca. 1

Publications:

Thesis (to be published)

UNIVERSITY OF OSLO  
Institute of Political Science

Duration: 1973-1975

Inquiries to: Kjell Halvorsen

FOREIGN WORKERS AND DOMINANCE
-------------------------------

Description:

Master's Degree project.

The aim is to study the movement of labour from developing to industrialized countries in relation to other interaction relations.

The importance of migration, and its character in relation to an appraisal of certain consequences of this migration of labour for the solution of development problems.

The relationship France/North Africa is emphasised.

Cooperation/connection with developing Countries:

No information

Resources applied:

- |                    |                                |
|--------------------|--------------------------------|
| 1. Man-years 1974: | Scientific personnel 1         |
| 2. Financing:      | Ordinary budget of institution |

UNIVERSITY OF OSLO  
Institute of Political Science

Duration: 1973-1975

Inquiries to: Olav Knudsen

POLITICAL DIMENSIONS OF INTERNATIONAL SHIPPING

Description:

This is a three-part project:

Part 1 is a comparative study of the foreign policies of 166 nation-pairs (dyads) in the shipping area.

Part 2 is an analysis and description of patterns of conflict and cooperation between all nations engaged in shipping problems.

Part 3 is an analysis of patterns of power and influence in shipping.

Cooperation/connection with developing Countries:

Relevant for the activities of developing countries in UNCTAD and the UN General Assembly concerning shipping and natural resources.

Resources applied:

1. Man-years 1974: Scientific personnel 1/4
2. Financing: Ordinary budget of institution  
NAVF (scholarship) 1973-1974

Publications:

- O. Knudsen: A Code of Conduct for Liner Conferences (Internasj. Politikk 2, 1974).
- O. Knudsen: European Shipping Policies in a Changing Political Environment (Report to the Committee on Economic Affairs and Development of the Consultative Assembly, Council of Europe, June 1974.)

UNIVERSITY OF OSLO  
Institute of Political Science

Duration: 1973-1975/76

Inquiries to: Tor Chr. Hildan

THE UNCTAD NEGOTIATIONS ON A SHIPPING LINE CONFERENCE CODE
---

Description:

A study of the unusual coalitions that developed during these negotiations, and how the demands and points of view of the developing countries gained weight through these coalitions.

Cooperation/connection with developing Countries:

No information

Resources applied:

- |                    |                                |
|--------------------|--------------------------------|
| 1. Man-years 1974: | Scientific personnel ca. 1     |
| 2. Financing:      | Ordinary budget of institution |

UNIVERSITY OF OSLO  
Institute of Political Science

Duration: 1974-1976

Inquiries to: Øyvind Østerud

AGRARIAN POLITICS AND AGRARIAN DEVELOPMENT IN ALGIERS
--

Description:

An analysis of the social consequences - at a macro-level - of the Algerian strategy for agrarian development.

Cooperation/connection with developing Countries:

No information

Resources applied:

1. Man-years:

Planned project

2. Financing:

Ordinary budget of institution (salary)  
Application to the Nordic  
Institute of African Studies

UNIVERSITY OF OSLO  
Institute of Political Science

MASTER'S DEGREE THESES CONCERNING DEVELOPING COUNTRIES

- K. Ohm: Mandatsystemet under Folkeforbundet. Tilsynssystemet under De Forente Nasjoner.  
(The Mandatory System of the League of Nations. The Supervision System of the United Nations) 1956.
- E. Fossum: Patterns of Military Intervention. 1967.
- A. Kielland: Sosialistrørsla i Nigeria.  
(The Socialist Movement in Nigeria) 1967.
- P.O. Reinton: Sør-amerikansk integrasjon. Elitestudie.  
(South American Integration. An Elite Study) 1967.
- J. E. Kolberg: Teorier om utvikling: En studie av utviklingstenkningens struktur, basert på en intervjuundersøkelse.  
(Theories on Development: A Study of the Structure of Development Thought, Based on an Interview Survey) 1968.
- H. Munthe-Kaas: The Chinese Communist Party and United Front in China 1924-27. 1968.
- K. Sogstad: Utviklingen av militære i de nye afrikanske statene - en eksplorerende undersøkelse.  
(The development of the Military in the New African States - an Exploratory Survey) 1970.
- A. Kjølberg: Sovjetisk utviklingshjelp. En studie av utviklingshjelp som politisk og økonomisk virkemiddel.  
(Soviet Development Aid. A Study of Development Aid as a Political and Economical Agent) 1971.
- O.K. Holthe: Domination externe et development peripherique, le cas du Senegal.  
(See description under PRIO, page 193)
- Ø. Josefsen: International Business: En studie i interaksjon og preferanse.  
(A Study of Interaction and Preferences) 1972.

UNIVERSITY OF OSLO

Institute of Political Science

MASTER'S DEGREE (cont'd)

- C.B. Kielland: The Southern African Conflicts: The Question of UN Actions. 1972.
- S. Ringen: Fordeling av U-hjelp som går gjennom FN.  
(The Distribution of Development Aid through the UN) 1972.
- T. Nyberg: Interstate Structure and Interstate Interaction: A Case Study of the Arab States. 1972.
- T. Simonsen: Norsk utviklingshjelps ideologi.  
(The Ideology of Norwegian Development Aid) 1973.
- H.B. Henriksen: Norsk industri og utviklingslandene.  
(Norwegian Industry and the Developing Countries) 1973.
- P. Repstad: Misjonen ser på U-landa. En innholdsanalyse av norske misjonsblader.  
(The Mission Looks at the Developing Countries. An Analysis of the Contents of Norwegian Missionary Magazines) 1973.
- (See also: Norsk Tidsskrift for Misjon, Årg. 28, No. 1-2, 1974.)

Current projects are described on the previous pages and under PRIO, page 188.

UNIVERSITY OF OSLO  
Institute of Social Anthropology

Duration: 1958-1975

Inquiries to: Axel Sommerfelt

SOCIAL AND POLITICAL ORGANIZATION AMONG THE KONZO OF UGANDA
--

Description:

An anthropological study of social and political organization among the Konzo, Uganda, with special reference to organizational aspects of the Konzo minority situation in the Toro Kingdom until 1960.

Cooperation/connection with developing Countries:

As basic research, the project is relevant to the understanding of the relations between ethnic groups in developing countries.

Resources applied:

- |                         |               |
|-------------------------|---------------|
| 1. Man-years 1973/1974: | Not indicated |
| 2. Financing:           | Not indicated |

UNIVERSITY OF OSLO  
Institute of Social Anthropology

Duration: 1960-1968

Inquiries to: A. M. Klausen

KERALA FISHERMEN AND THE INDO-NORWEGIAN PILOT PROJECT
--

Description:

The project aimed at an analysis of the impact of the techno-economic activity initiated by the Norwegian fishing project on the socio-cultural aspects of village life. The main focus was on different reactions and lines of development in the two villages selected as the pilot area.

Cooperation/connection with developing Countries:

Indicated above.

This project was the first analysis by a neutral observer of a Norwegian aid program.

(See also project "Local attitudes to a Technical Assistance Project" page 188 and "Indo-Norwegian fisheries project" page 176.)

Resources applied:

- |               |   |
|---------------|---|
| 1. Man-years: | Scientific personnel ca. 4  |
| 2. Financing: | Ordinary budget of institution (salaries)<br>NAVF (travel expenses) 1960-62<br>kr. 15.000 |

Publications:

- A. M. Klausen: "Technical assistance and social conflict." (J. of Peace Res. (Oslo) No. 1, 1965)
- A. M. Klausen: "Kerala Fishermen and the Indo-Norwegian Pilot Project" (Oslo, 1968)

UNIVERSITY OF OSLO  
Institute of Social Anthropology

Duration: 1971-1974

Inquiries to: Aud Talle

BARABAIG - ECONOMICAL DILEMMAS IN THE COMBINATION  
OF CATTLE BREEDING AND AGRICULTURE

Description:

A study of the Barabaig, a cattle breeding people in Arusha Region, Northern Tanzania, with special reference to economic and ecological factors. The study tries to show how decreasing grazing resources influence the dispositions and decisions of pastoral households. The cultivation of maize has increased, a fact which must be considered in this connection. Central points in the study are the dilemmas caused by a combination of the two forms of life, and the consequence in a regional connection, e. g. as regards the disposition of land.

Cooperation/connection with developing Countries:

Indicated above.

The study illuminates certain processes in the local society, above all personal preferences and decisions. Knowledge of this kind is of particular value for those who help in the planning of projects for developing countries.

Resources applied:

1. Man-years 1974: Scientific personnel 1
2. Financing: NAVF 1971-72 kr. 19.250

Publications:

Aud Talle: "BARABAIG - Økonomiske dilemmaer i kombinasjonen av buskapshald og jordbruk." (Master's Degree Thesis, 1974)

UNIVERSITY OF OSLO  
Institute of Social Anthropology

Duration: 1972-1973

Inquiries to: A. M. Klausen

CEY-NOR DEVELOPMENT PROJECT
-----------------------------

Description:

With reference to my experiences in studying fishing communities in Southern India, I was asked by the Norwegian Board of the Cey-Nor Development Project to visit the project area in Sri Lanka and help to develop new strategies for the project.

The work was intended to be followed up by two students, one of sociology and one of social anthropology, who have now returned and are preparing their reports.

(See also project "The Nutrition Situation in Relation to Economic Development in a Village Society, Sri Lanka" page 95) and projects on page 119 (Inst. of Sociology).)

Cooperation/connection with developing Countries:

Indicated above.

Resources applied:

1. Man-years:	Scientific personnel	3
2. Financing:	NAVF (scholarships) Cey-Nor Project	1972-1974 kr. 40.000

Publications:

A. M. Klausen: "Cey-Nor Development Project" (Oslo, 1973, mimeographed)

UNIVERSITY OF OSLO  
Institute of Social Anthropology

Duration: 1974

Inquiries to: Ingrid Rudie

SOCIAL AND CULTURAL ASPECTS OF PLANNED CHANGE

Part of project "Negeri Sembilan Timur Regional and Urban Development Study"

Description:

The total project concerns a plan for economic development of the Eastern Negeri Sembilan, Malaysia. The project includes studies by economists, engineers, architects/urban planners, sociologists and anthropologists.

The present anthropological sub-project focuses on the problems and needs of the different groups of the population in a society with ethnic complexity, considerable class differences, and the contrast between highly industrialized and underdeveloped ("periphery") areas.

One of the aims of this sub-project is to show the necessity for large-scale social planning, and to show that planning based on technical and economical expertise only is insufficient.

Cooperation/connection with developing Countries:

Main project is a cooperation between:

SEFREM (The Society for Studies of the Future)  
Norconsult A.S (Consultants)  
Anderson & Skjånes (Urban Planners)

Resources applied:

1. Man-years 1974:

Scientific personnel ca.  $\frac{1}{2}$

UNIVERSITY OF OSLO

Institute of Sociology

Duration: 1967-1974/75

Inquiries to: M. Vaa/A. Nypan

DIFFUSION OF INNOVATIONS AND ECONOMIC DEVELOPMENT
---

Description:

A study of social and economic change in two rural communities in Meru, Tanzania. Relates the diffusion of agricultural innovations in the villages over an 8 year period to aspects of social structure: leadership patterns, production and ownership, organization and communication networks.

Cooperation/connection with developing Countries:

Project started when Ms. Nypan was working as a Research Advisor at the University of Dar es Salaam. (1966-68)

Resources applied:

- |                    |  |
|--------------------|--|
| 1. Man-years 1974: | Scientific personnel ca. 1             |
| 2. Financing:      | Ordinary budget of institution<br>NAVF |

UNIVERSITY OF OSLO  
Institute of Sociology

Publications:

- Nypan, Astrid: Diffusion of Innovation on Community Leadership in East Africa, 1970, 25 pp.
- Nypan, Astrid and Vaa, Mariken: Leadership, Organization Structure and Development, - Two Meru villages, 1970, 58 pp.
- Andersen, A.S.: Lokalt lederskap under endring. Lederskap og sosial struktur i to Meru-landsbyer.  
(Local leadership under change. Leadership and social structure in two Meru villages.) Oslo 1972.
- Nypan, Astrid and Vaa, Mariken: Extension Theory and Local Theory-  
some problems on planned Change. 1974, 129 pp.
- Pape, Arne: Økonomisk ulikhet og samfunnsstruktur.  
M.A. thesis. Oslo 1975.

UNIVERSITY OF OSLO  
Institute of Sociology

Duration: 1967-1975

Inquiries to: A. Nypan

YOUTH SURVEY OF TANZANIA

Description:

A survey of Tanzanian youth (14-24 years) - (Quote sample 900 respondents, questionnaire, interviews) - on educational and occupational experience in relation to occupational preferences, prestige evaluations of occupations, political and social participation, rural/urban and class origin. Special emphasis on experience in and attitudes towards farming.

Cooperation/connection with developing Countries:

The project is used when training students in research methods at the Dept. of Sociology, University of Dar es Salaam.

Resources applied:

1. Man-years 1974: Scientific personnel 0,1
2. Financing: Ordinary budget of institution  
Data Collection supported by  
Research & Publication Committee,  
U. of Dar-es-Salaam.  
Support from NAVF.

Publications:

- A. Nypan: "Utdanningsrekruttering og samfunnsbygging i Tanzania I/II". TFS 1972, nr. 2 og 4.
- A. Nypan: Occupational Orientation of Tanzanian Youth. Mimeo (restrict.)  
Institute of Sociology, U. of Oslo, 1971, 139 pp.

UNIVERSITY OF OSLO  
Institute of Sociology/PRIO

Duration: 1970-1974

Inquiries to: R.O. Jørgensen

SOCIAL MOBILIZATION AND THE CATHOLIC CHURCH IN ARGENTINA 1966-71
---

Description:

Social mobilization from below is considered as the anti-domination struggle of the popular classes in order to obtain positions as active subjects in the different spheres of social life. The research concerns how this process of mobilization influences the Catholic Church in Argentina, and how the Church in its turn may influence the process of social mobilization.

(Master's degree thesis in sociology)

Cooperation/connection with developing countries:

No information

Resources applied:

- |                    |   |
|--------------------|---|
| 1. Man-years 1974: | Scientific personnel 1                          |
| 2. Financing:      | Ordinary budget of institution<br>NAVF 1970-71) |

Publications:

- R.O. Jørgensen: "Social Mobilization, Class Alliances and Class Conflicts in Latin America". (IPRA V Gen. Conf. Proceedings)
- R.O. Jørgensen: M.A. thesis, Oslo 1974.

UNIVERSITY OF OSLO  
Institute of Sociology

Duration: 1972-1974

Inquiries to: M. Vaa

LOCAL COMMUNITY - NATIONAL SOCIETY (TANZANIA)

Description:

Integration problems in the new states. A study of recent Social Science literature with special reference to Tanzania.

Cooperation/connection with developing Countries:

A report is planned to be published jointly by a Tanzanian research institution and this institute.

Resources applied:

- |                    |   |
|--------------------|---|
| 1. Man-years 1974: | Scientific personnel 0,6                        |
| 2. Financing:      | Ordinary budget of institution<br>NORAD<br>NAVF |

Publications:

- Høivik, Helge og Vaa, Mariken: Planlegging i utviklingsland. En bibliografi, 1972, 17 pp.
- Høivik, Helge og Vaa, Mariken: Øst-Afrika i samfunnsvitenskapelige tidsskrifter, en bibliografi, 45 pp. 1973.

UNIVERSITY OF OSLO

Institute of Sociology

Duration: 1973-1975

Inquiries to: E. Skjønberg

THE LOCAL IMPACT OF A DEVELOPMENT PROJECT - SRI LANKA
--

Description:

A small shipyard was started in 1967 in a small village on the northern coast of Sri Lanka, and was extended in 1973 to include a prawn-processing section. The analysis takes as its point of departure the socio-economic conditions of the area, and seems to understand and explain the impact of the project on economic growth, promotion of equality and improvement in the local standard of living.

Cooperation/connection with developing Countries:

(See also project "Cey-Nor" page 112.)

Resources applied:

- |                    |                         |
|--------------------|-------------------------|
| 1. Man-years 1974: | Scientific personnel 1  |
| 2. Financing:      | NAVF 1973/74 kr. 15.000 |

UNIVERSITY OF OSLO  
Institute of Sociology / PRIO

Duration: 1974-1976

Inquiries to: A. Løvbræk

MODELS FOR INDUSTRIALIZATION AND STRATEGIES FOR DEVELOPMENT
--

Description:

The project will compare the models for industrialization applied in the Soviet Union, China and India with emphasis on the process of capital accumulation, investment allocation and the organization of production on the micro level. The interaction with foreign economics and the relations between industrial policy and total development strategy are also included in the analysis.

Cooperation/connection with developing countries:

No information

Resources applied:

1. Man-years 1974: Scientific personnel 0,25

UNIVERSITY OF OSLO

Institute of Sociology

The Department of Development Sociology of this Institute publishes a series of publications ("The Red Series")

Seierstad, Ståle: Politiske vilkår og økonomisk vekst i U-landa, 24 pp.

Nypan, Astrid: Social factors affecting Labour Stability in Uganda, 1970, 30 pp.

Nypan, Astrid: Sociological aspects of agricultural development. A case study of two areas in Uganda, 1971, 58 pp.

Gulbrandsen, Evelyn og Tostensen, Arne: Utvikling eller imperialisme. EEC og de atten assosierte statene i Afrika. 1971, 43 pp.

Extra Issue:

Nypan, Astrid: Market Trade. A Sample survey of Market Traders in Accra. 1970, 78 pp.

A complete list of publications by all members of the institute staff may be obtained from the institute.

UNIVERSITY OF OSLO  
Institute of Sociology

MASTER'S DEGREE  
THESES CONCERNING DEVELOPING COUNTRIES

- Seierstad, S. 1966 Sosio-politiske forhold og økonomisk vekst i utviklings-landa.  
(Socio-political conditions and economic growth in the developing countries)
- Thomesen, I. 1973 Familieplanlegging. Løsningen på u-landenes problemer?  
(Family Planning. The solution to developing countries' problems?)
- Thorkildsen, F. Politikk og metode i opinionsforskningen.  
En case studie. (Om undersøkelse av holdninger til u-hjelp i Norge.)  
(Politics and Method in Public Opinion Research. A Case Study.) (On the study of Norwegian public opinion on development aid.)  
  
Se also PRIO project "Public Opinion .." page 199.
- Tornes, K. 1971 Human Resources and Socio-Economic Development.  
The Case of Venezuela.
- Vaa, M. 1967 Vest-afrikanske perspektiver. Presseforhold og utenriks-politisk orientering i Elfenbenskysten, Guinea, Mali og Senegal.  
(West African Perspectives. Mass media and presentation of foreign affairs in The Ivory Coast, Guinea, Mali and Senegal.)

UNIVERSITY OF OSLO  
National Hospital, Dept. of  
Ophtalmology

Duration: 1967-1970

Inquiries to: Martin Davanger

CAUSES OF ENUCLEATION IN UGANDA
---------------------------------

Description:

Causes of removal of eyes are analysed. The results are compared with similar figures from industrialized countries and different periods of time.

The results may elucidate differences in the spectrum of eye diseases in underdeveloped and developed countries, and may indicate unsolved problems in eye health.

The material was collected during Mr. Davanger's appointment as professor at Makerere University (Kampala, Uganda). The project has stimulated similar analyses in Israel, Nigeria and Norway.

Cooperation/connection with developing Countries:

(See above)

Resources applied:

Financing:

Prof. Davanger recruited by NORAD

Publications:

M. Davanger: "Causes of enucleation in Uganda" (Brit. J. Ophtalmology, 54 (1970) 252)

UNIVERSITY OF OSLO

National Hospital, Institute of  
Immunology and Rheumatology

Duration: 1970-

Inquiries to: Jacob B. Natvig

IMMUNOLOGICAL AND BIOCHEMICAL STUDIES ON AMYLOID

Description:

The purpose of the project is to characterize, immunologically and biochemically, various forms of amyloid, and its relation to immunoglobulins and other serum proteins.

Cooperation/connection with developing Countries:

Amyloid occurs frequently in some developing countries, probably as a complication in connection with chronic infections. Cooperation with the Institute of Medical Research and University Papua - New Guinea. One of their previous research workers (Dr. R. Anders) is now working at the institute in Oslo.

Resources applied:

- |                    |                                |
|--------------------|--------------------------------|
| 1. Man-years 1974: | Scientific personnel 2,0       |
| 2. Financing:      | Ordinary budget of institution |

Publications:

- Thesis: G. Husby: "Studies on human amyloid fibrils and structurally related serum proteins" (Universitetsforlaget, Oslo 1974).  
R. Anders: "Protein AA in Papua - New Guinean amyloid".  
In press.

UNIVERSITY OF OSLO

National Hospital, Institute of  
Immunology and Rheumatology

Duration: 1971-

Inquiries to: Stig S. Frøland

CLINICAL AND IMMUNOLOGICAL EFFECTS OF TRANSFER FACTOR THERAPY
--

Description:

Transfer factor is isolated from normal human lymphocytes and given to patients with various diseases with reduced cellular immunity. The clinical and immunological effects are studied.

Cooperation/connection with developing Countries:

Several diseases occurring frequently in developing countries (e.g. leprosy) seem to be partially conditioned by reduced cellular immunity. Cooperation with Arm. Hansen Research Institute, Addis Abeba.

In addition a trial with transfer factor in Kuru is being carried out in collaboration with the Institute of Medical Research in Papua - New Guinea.

Resources applied:

- |                    |                                |
|--------------------|--------------------------------|
| 1. Man-years 1974: | Scientific personnel 1,6       |
| 2. Financing:      | Ordinary budget of institution |

Publications:

- Godal et al., Scand. J. Immunology 1, 311 (1972)  
Frøland et al., Scand. J. Immunology 3, 223 (1974)

UNIVERSITY OF TROMSØ  
Institute of Social Sciences

Duration: 1970-1975

Inquiries to: Randi Rønning Balsvik

THE RISE OF SOCIAL AND POLITICAL AWARENESS IN THE  
ETHIOPIAN STUDENT BODY 1951-1973

Description:

Method of research: historical. Source material: Student newspapers, pamphlets, poetry - content analysis - actions - confrontations students vs. government and university administration. Papers produced by the Student Affairs' Committee, and circulars from the Haile Sellassie I University Administration extensively used. Interviews - personal participation, diary notes.

The results may indicate the impossibility of establishing a Western-type university in a society with an authoritarian political structure. They may also indicate how important it is that the Government of a developing country makes use of its students in improving society.

Cooperation/connection with developing Countries:

Indicated above.

Resources applied:

- |                    |   |
|--------------------|---|
| 1. Man-years 1974: | Scientific personnel 1  |
| 2. Financing:      | NAVF (Research scholarship)<br>1970-73 (Aug.)<br>1974 (Jan. - Apr.) |

UNIVERSITY OF TRONDHEIM

Institute of History

Duration: 1971-1974

Inquiries to: Jarle Simensen

THE ROLE OF COMMONERS IN RURAL LOCAL POLITICS IN SOUTHERN GHANA IN THE COLONIAL PERIOD
---

Description:

The role of commoners in rural local politics in Southern Ghana in the colonial period. An analysis of the mass factor in local politics.

Cooperation/connection with developing Countries:

Exchange of manuscripts with Department of History, University of Ghana.

Resources applied:

- |                      |                        |
|----------------------|------------------------|
| 1. Man-years (total) | Scientific personnel 1 |
| 2. Financing:        | NAVF (scholarship)     |

Publications:

- J. Simensen: "Rural Mass Protest", Canadian J. Afr. Studies No 1, 1974.  
J. Simensen: "Nationalism from below", Historical Transactions, Ghana, Des. 1974.  
J. Simensen: "A Mass Movement for Local Democratic Reform", Int. J. African History, primo 1975.

UNIVERSITY OF TRONDHEIM  
Institute of History

Duration: 1971-1975

Inquiries to: Jarle Simensen

COLONIAL ADMINISTRATION AND LOCAL POLITICS IN AKIM ABUAKWA, GHANA
--

Description:

Publications indicated below.

Cooperation/connection with developing Countries:

Department of History, University of Ghana.

Resources applied:

- |                       |   |
|-----------------------|---|
| 1. Man-years totally: | Scientific personnel 3  |
| 2. Financing:         | Ordinary budget of institution (salary)<br>NAVF scholarship 1969-1972 |

Publications:

- J. Simensen: "Colonial Administration and Local Politics in Akim  
Abuakwa, Ghana" (300 pp.)  
J. Simensen: "Crisis in Akim, 1932" (Historical Transactions, Ghana,  
Dec. 1974)  
J. Simensen: "En høvdingslekt i Ghana" (Syn og Segn, juni 1973)

UNIVERSITY OF TRONDHEIM  
Institute of History

Inquiries to: Jarle Simensen

PUBLICATIONS CONCERNING DEVELOPING COUNTRIES

J. Simensen: "Lord Lugard and Indirect Rule. The Development of Local Administration in Northern Nigeria".  
(Master's Degree Thesis, University of Oslo, 1966.  
200 pp. mimeographed)  
1,5 man-years.

J. Simensen: "A Survey of African History."  
(A Volume in the Scandinavian World History Series.  
Menneskenes liv og historie. 400 pp.)  
2 man-years.

Edv. Bull: "Østafrikansk bakgrunn. Kenya, Tanzania og Uganda i fortid og nåtid." (A Survey of East African History)  
(Oslo, 1973)  
1,5 man-years.  
Financed by NAVF (Salary and travel grant)

Edv. Bull: "Swahilikulturens opphav" (The Origins of Swahili Society)  
(Trondheim, 1969)  
0,2 man-years.

UNIVERSITY OF TRONDHEIM  
Institute of History

Inquiries to: Jarle Simensen

MASTER'S DEGREE THESES CONCERNING DEVELOPING COUNTRIES

- E. Sønstabø: Norwegian Missionaries in Zululand, 1850-1880.  
(Trondheim, 1973)
- A. M. Gjestland: Ideology and History. The Authorship of Margery Perham.  
(Trondheim, 1974)
- M. Fintoft: Social Groups in Hova Society, Madagascar, 1870-1890,  
with particular attention to Slavery.  
(In progress)
- T. M. Børhaug: Norwegian Missionaries in Zululand, 1877-1890.  
(In progress)
- T. Aarsand: Poul Isert's Plan for a Danish Settlement in Akwapim,  
Ghana, in the 1780.  
(In progress)
- M. Berggren: The Norwegian Peace Corps in East Africa.  
(In progress)
- E. Berg: The Debate on the Robinson and Gallagher Theses on  
Imperialism.  
(In progress)
- E. Scarborough: The Educational Policy of the Norwegian Mission in  
Madagascar 1870-1900.  
(In progress)

Resources applied:

1,5 man-years per project (approximately)

UNIVERSITY OF TRONDHEIM

The Royal Norwegian Society of Sciences,  
The Museum (Zoological section)

Duration: 1970-1971

Inquiries to: Steinar Tjomlid

FOOD PREFERENCES AND FEEDING HABITS OF THE PIED  
KINGFISHER (CERYLE RUDIS)

Description:

An investigation of the food preferences and feeding habits of the Pied Kingfisher on the Karfue Flats, Zambia.

The study of the food preferences of Kingfishers may be of some relevance for the planning and improvement of fresh water fisheries in Africa.

Cooperation/connection with developing Countries:

Indicated above.

Publications:

S. Tjomlid: Ornis Scandinavica Vol. 4 No. 2 1973.

UNIVERSITY OF TRONDHEIM

The Royal Norwegian Society of Sciences,  
The Museum (Zoological section)

Duration: 1973-1975

Inquiries to: Steinar Tjomlid

FEEDING HABITS OF SOME AFRICAN CAVE-DWELLING BATS

(Provisional title)

Description:

The feeding periods of the bats are studied by registering the movement of bats in and out of their cave-dwelling during the night. Samples of bats are collected at certain intervals during the night throughout the year, and the stomach contents analysed.

Cooperation/connection with developing Countries:

Study of Africana bats.

May be of some significance in the work to reduce undesirable insects.

Resources applied:

1. Man-years 1973/1974:

Not indicated

2. Financing:

Mr. Tjomlid is engaged by NORAD as a lecturer in Tanzania. Project work is carried out in his spare time.

UNIVERSITY OF TRONDHEIM

The Royal Norwegian Society of Sciences,  
The Museum (Zoological Section)

Duration: 1974-1975

Inquiries to: Tor Strømngren

GROWTH OF CORALS AND CORAL ASSOCIATES, MAINLY BIVALVES, IN RELATION TO ENVIRONMENTAL CONDITIONS
--

Description:

Growth of calciferous corals and coral associates, mainly bivalves, is measured in relation to light conditions, temperatures and nutrition. The project also includes diurnal rhythms of growth.

Information on the growth of the most important components of coral reefs will contribute to a better understanding of the geological pre-history of land and/or seabed consisting of coral reefs or material from reefs.

Cooperation/connection with developing Countries:

Cooperation with University of the West Indies, Discovery Bay Marine Laboratory (Discovery Bay, Jamaica).

Resources applied:

- |                    |   |
|--------------------|---|
| 1. Man-years 1974: | Scientific personnel 1/4  |
| 2. Financing:      | Ordinary budget of institution (salary)<br>NAVF (Travel grant) 1974<br>kr. 20.000 |

UNIVERSITY OF TRONDHEIM  
THE NORWEGIAN INSTITUTE OF  
TECHNOLOGY

Institute for Architecture II

Duration: 1969-1970

Inquiries to: Edvard Hiorthøy

METHOD FOR LOW-COST HOUSING CONSTRUCTION  
(IDEA PROJECT)

Description:

Prized entry in architectural competition on "Housing in Developing Countries" sponsored by Dansk Betonforening, Denmark (Published by sponsor 1970, see below). Idea project relevant for housing on "self-help" basis for the lowest income groups in relatively dry areas with lack of conventional building materials.

As of today no ideas of realistic application exist outside principles and calculations presented in the idea project.

Cooperation/connection with developing Countries:

No information

Publications:

Idea Competition on Ideas for Housing in Developing Countries.  
(Dansk Betonforening, Copenhagen 1970)

UNIVERSITY OF TRONDHEIM  
THE NORWEGIAN INSTITUTE OF  
TECHNOLOGY

Institute of Cellulose Technology

Inquiries to: H.W. Giertz

1. A feasibility study on the Indonesian Pine and Agatis Wood Species

The study was performed for the production of different grades of paper based on the high-yield bisulfite process.

(This feasibility study took place in 1970. The real project was cancelled for economic reasons.)

2. A laboratory study on the suitability of certain North Vietnam wood raw materials for the production of pulp and paper.

(Project financed by SIDA, Sweden. Duration: 1973, 6 months.)

3. Chemimechanical pulping of hardwoods

The new production process offers opportunities for producing at a low level of investment a cellulose from hardwood for use in stationary and printing paper.

Publication: H.W. Giertz, "Chemimechanical pulping of hardwoods"  
(Int. Symp. on New forest Resources for the Paper  
Industry, Madrid 1974.)

4. Newsprint from bagasse

A study of the prospects of producing a mechanical pulp from bagasse in order to replace ground wood pulp in newsprint manufacturing.

UNIVERSITY OF TRONDHEIM  
THE NORWEGIAN INSTITUTE OF  
TECHNOLOGY

Institute of Harbour Engineering

Duration: 1970-1973

Inquiries to: P. Bruun

SEDIMENT TRANSPORT. DIFFUSION FROM WATER JETS

Description:

A thorough review of laws governing settling.  
Laboratory research on settling from water jets.

Cooperation/connection with developing Countries:

Investigator lic.techn. Mohan Rao (India).  
This project is of major importance to India. Application of results:  
River control, sedimentary pollution.

Resources applied:

2. Financing: NTH 1970-1973 ca. kr. 40.000

Publications:

Mohan Rao: "Settling from Buyant Jets" (Intern. Ass. Hydraulic Research.  
Proceedings conference Paris)

UNIVERSITY OF TRONDHEIM  
THE NORWEGIAN INSTITUTE OF  
TECHNOLOGY

Institute of Harbour Engineering

Duration: 1973-1975

Inquiries to: P. Bruun

HYDRAULICS AND STABILITY OF SLOPES AND RUBBLE MOUNDS UNDER WAVE ACTION
---

Description:

The aim of this project is to investigate the nature of waves downrush on impermeable and permeable slopes to measure forces and relate them to the stability of slopes and mounds.

Cooperation/connection with developing Countries:

Research performed by stud. lic. techn. Ali Riza Günbak (Turkey).  
Practical application of results: Design of breakwaters and coastal protection.

Resources applied:

- |                    |   |
|--------------------|---|
| 1. Man-years 1974: | Scientific personnel 1,2                                  |
| 2. Financing:      | NORAD (1973-75) kr. 20.000<br>NTH (1973-75) kr. 15-20.000 |

UNIVERSITY OF TRONDHEIM  
THE NORWEGIAN INSTITUTE OF  
TECHNOLOGY

Institute of Hydraulic Construction

Duration: Continuous

Inquiries to: R. Heggstad

WATER RESOURCES MANAGEMENT

Description:

Regulation and control of watercourses.  
(Flood control, adjustment of flow of water during periods of drought.  
Irrigation, water supply, hydroelectric powerplants.)

Cooperation/connection with developing Countries:

The hydrological and hydrotechnical results from several Norwegian rivers may be of considerable interest for water resources management in developing countries.

Resources applied:

Financing:

Participation of personnel from  
developing countries financed by  
NORAD

Publications:

P. Pupanov: "Floods, Prognoses" (NTH 1972)  
S. Ethembabaoglu: "Flow Characteristics by Gate Slots" (NTH 1973)  
R. Sharma: "High Head Gates" (NTH 1974)

**RESEARCH  
COUNCIL  
INSTITUTES**

NORWEGIAN BUILDING RESEARCH  
INSTITUTE (NBI)

Duration: 1970-

Inquiries to: Øivind Birkeland

NATIONAL HOUSING AND BUILDING RESEARCH UNIT - TANZANIA

Description:

A "twinning" arrangement is established between the Unit in Tanzania and NBI. Our Institute gives advice in various fields to the Tanzanian Unit. Staff from NBI work with the Unit, and staff members from Tanzania are given fellowships to visit NBI.

Cooperation/connection with developing Countries:

See above.

Resources applied:

1. Man-years: Scientific personnel 1/3 yearly  
(NBI-staff in Tanzania not included)
2. Financing: Ordinary budget of institution  
NORAD 35.000 Kr. per year  
(in addition there is a grant for  
each staff member working in  
Tanzania)

NORWEGIAN BUILDING RESEARCH  
INSTITUTE (NBI)

Duration: 1973-1974

Inquiries to: Harry Tobiassen

LABORATORY EQUIPMENT FOR NATIONAL HOUSING & BUILDING  
RESEARCH UNIT - TANZANIA

Description:

Within a stated economic limit, the laboratory equipment is specified, makes are selected and tenders collected. Recommendations are sent to the Tanzanian authorities, who order the equipment.

Cooperation/connection with developing Countries:

See above.

Resources applied:

- |               |   |
|---------------|---|
| 1. Man-years: | Scientific personnel 0,2                                |
| 2. Financing: | Ordinary budget of institution<br>NORAD 1974 kr. 18.000 |

NORWEGIAN BUILDING RESEARCH  
INSTITUTE (NBI)

Duration: 1973-

Inquiries to: Øivind Birkeland

POSSIBILITIES FOR STABILIZING LATERITIC SOIL FROM  
TANZANIA WITH LIME

Description:

The stabilization of soil with lime in road building is well known. For construction work, a higher strength is necessary. There are indications that there may be a reaction between lime and lateritic soil, resulting in a higher strength.

Raw materials are found in most places in Tanzania. Used in housing, the method has advantages as it turns temporary materials into permanent ones.

Cooperation/connection with developing Countries:

Sub-project under project carried out by the National Housing and Building Research Unit, Tanzania.

Resources applied:

- |                    |  |
|--------------------|--|
| 1. Man-years 1974: | Scientific personnel 0,25                                |
| 2. Financing:      | Ordinary budget of institution<br>NORAD 1974: Kr. 30.000 |

NORWEGIAN COMPUTING CENTRE

Duration: 1973 (March-July)

Inquiries to: Peter Håndlykken

COMPUTER PROGRAMMES FOR TRANSPORT ANALYSIS -  
MOMBASA, KENYA

Description:

Programming and running of computer models used in the Mombasa Transport Study. Design of models and transport study performed by Norconsult A.S. (Oslo) and Wilbur Smith & Assoc. (London).

Cooperation/connection with developing Countries:

Request from Kenya Ministry of Works.

Resources applied:

- |                    |   |
|--------------------|---|
| 1. Man-years 1973: | Scientific personnel 1/8  |
| 2. Financing:      | Ordinary budget of institution<br>Norconsult A.S, 1973,<br>ca. kr. 50.000 |

Publications:

- Norconsult A.S: "Mombasa Transport Study" (1974)  
I: Long Range Plan  
II: Short Term Improvements

NORWEGIAN INSTITUTE FOR URBAN  
AND REGIONAL RESEARCH (NIBR)

Duration: 1973-1974

Inquiries to: Egil Tombre

SHORT AND LONG RANGE DEVELOPMENT PLANNING - CUBA

Description:

Evaluation of Norwegian technical assistance in industrial planning, harbour planning, planning of new towns and (land) transportation facilities in eastern Cuba (Nipe Bay Area, Province of Oriente) as basis for NORAD recommendations to Norwegian Parliament concerning program proposal for 1974, 1975 og 1976.

Cooperation/connection with developing Countries:

Indicated above.

Resources applied:

- |                    |                              |
|--------------------|------------------------------|
| 1. Man-years 1974: | Scientific personnel 0,4     |
| 2. Financing:      | NORAD 1973-74 ca. kr. 50.000 |

Publications:

N. Haugstveit, F. Rafn & E. Tombre: Report concerning technical assistance in short and long range development planning in Nipe Bay Area, Prov. Oriente, Rep. of Cuba. (Oslo, Jan. 1974)

INSTITUTE OF TRANSPORT  
ECONOMY  
(TOI)

Duration: 1967-1968

Inquiries to: Rolv Slettemark

BRAZIL TRANSPORTATION SURVEY, PHASE II

Description:

Development of a communication system for Brazil.

Cooperation/connection with developing Countries:

No information

Resources applied:

Financing:

International Bank for Reconstruc-  
tion and Development

Publications:

A very great number of reports in connection with the survey.  
Published 1968, Rio de Janeiro.

INSTITUTE OF TRANSPORT  
ECONOMY  
(TØI)

Duration: 1968-1974

Inquiries to: Odd Gulbrandsen

UNCTAD PORT DEVELOPMENT PROJECT

Description:

A quantitative method is worked out for long term port development planning.

Cooperation/connection with developing Countries:

UNCTAD is working on a proposal from TØI to:

- arrange courses for port administration in developing countries
- work out a port planning handbook

Resources applied:

- |               |                                  |
|---------------|----------------------------------|
| 1. Man-years: | Scientific personnel 10          |
| 2. Financing: | - Ordinary budget of institution |
|               | - NORAD                          |
|               | - UNCTAD                         |
|               | total ca. N.kr. 1.000.000        |

Publications:

Several reports, published by TØI 1968 and 1974, UNCTAD 1969.

INSTITUTE OF TRANSPORT  
ECONOMY  
(TØI)

Duration: 1969

Inquiries to: Otto Chr. Hiorth

COASTAL SHIPPING SERVICE - TANZANIA

Description:

A feasibility report of a proposed scheduled shipping service along the Tanzanian coast between Dar-es-Salaam and Mtwara.

The shipping service has now been established. Traffic has become larger than anticipated in the report and the economic result better.

Cooperation/connection with developing Countries:

Ministry of Communications and Works, Tanzania.

Resources applied:

- |               |                      |               |
|---------------|----------------------|---------------|
| 1. Man-years: | Scientific personnel | $\frac{2}{3}$ |
| 2. Financing: | NORAD                |               |

Publications:

Foss, B. & Hiorth, O.C.: "Coastal Shipping Service Dar-Es-Salaam - Mtwara" TØI 1969.

INSTITUTE OF TRANSPORT  
ECONOMY  
(TØI)

Duration: 1969-1970

Inquiries to: Odd Gulbrandsen

WEST PAKISTAN TRANSPORT COORDINATION STUDY

Description:

A coordinated long term plan was worked out for road, rail, air and sea transport for West Pakistan.

Cooperation/connection with developing Countries:

Request from the World Bank (IBRD)

Resources applied:

1. Man-years: Scientific personnel 4
2. Financing: IBRD

Publications:

10 reports, total ca. 1000 pp.

INSTITUTE OF TRANSPORT  
ECONOMY  
(TOI)

Duration: 1971-1972

Inquiries to: Per Helge Virum

UNITED NATIONS CONTAINER SYSTEM

Description:

A manual was prepared on transport and handling of large freight containers. The book covers technical and economic aspects of the transport of such units. It is particularly intended for those using containers in developing countries.

Cooperation/connection with developing Countries:

The manual is distributed by the United Nations (Versions in English, French and Spanish).

Resources applied:

- |               |   |
|---------------|---|
| 1. Man-years: | Scientific personnel 1,8  |
| 2. Financing: | Ordinary budget of institution 60.000 kr.<br>United Nations 140.000 kr. |

Publications:

"Physical requirements of transport systems for large freight containers"  
(UN, New York 1973).

INSTITUTE OF TRANSPORT  
ECONOMY  
(TOI)

Duration: 1971-1972

Inquiries to: Per Munkerud

PORT DEVELOPMENT IN NIGERIA

Description:

On the basis of a request from the Federal Ministry of Finance (Nigeria) a Norwegian grant of up to N Kr 40 million will be allocated to port development. A mission from Norway went to Nigeria to make a closer study of the projects requested, and of other possible essential projects.

Cooperation/connection with developing Countries:

Indicated above

Resources applied:

Financing:

Ordinary budget of institution  
NORAD 1971/72 kr. 25.000

**PUBLIC  
RESEARCH  
INSTITUTES**

CENTRAL BUREAU OF STATISTICS

Duration: See below

Inquiries to: Leif Skaug

EXTERNAL TRADE
----------------

Description:

- a) The external trade statistics of Nepal (1965-66 and 1971).  
To improve the official statistics of a developing country, so as to provide a basis for decisions.
- b) Statistics on GSP (General System of Preferences). (1971- ).  
The effect of customs preferences of industrialized countries on developing countries.
- c) More satisfactory tabulations on the whole of Norwegian trade with developing countries.

Cooperation/connection with developing Countries:

See above. Results of project b to be channelled through UNCTAD.  
Cooperation with the Ministry of Foreign Affairs, the Ministry of Trade and UNCTAD.

Resources applied:

1. Man-years 1974: Scientific personnel 0,2
2. Financing: Ordinary budget of institution

CENTRAL BUREAU OF STATISTICS

Inquiries to: Kristi Haugland

UNITED NATIONS PROJECTS

Personnel from the Central Bureau of Statistics have been engaged as experts in the following United Nations projects:

1. Development of National Accounts - Malaysia. (1962-1964)
2. Census of Establishments 1967 in Chile. (1967-1968)  
Advising in connection with the census, especially concerning compilation of data for small establishments, and computer control of census data. Several publications from the Direccion de Estadistica y Censos (DEC).
3. Computer Treatment of National Accounts - Puerto Rico. (1968)
4. Statistics on Foreign Trade - East Africa. (1967-1969)  
Improving the general scope of external trade statistics for East Africa (Kenya, Tanzania and Uganda) and construction of a new set of trade indices.  
Publications: H.G.K. Ofstad, East African Trade Indices (Econ. Stat. Rev. No. 28, Sep. 1968, Nairobi)
5. UN Industrial Statistics Expert in Thailand. (1969-1970)
  1. Organization of National Industrial Classification System.
  2. Advise the Ministry of Industry, Department of Labour and the National Statistical Office of the substantive and administrative requirements to develop and keep up to date a national system of industrial statistics conforming to the definitions of ISBIS, ISIC and in relation to ISCO.
6. Special Fund Project - Dept. of Statistics, Malaysia. (1971-1973)  
Member of a team of UN advisers, attached to the Department of Statistics. My duties were connected with price statistics.
7. Expert in Tourism Statistics - Iran. (1971)  
The expert was expected to design an efficient framework for the collection, processing and presentation of tourism statistics.
8. Input-Output Matrix of Nicaragua. (1974)  
Developing a system of an input-output table integrated with national accounts.

NORAD PROJECT

Deputy Chief Economist in the Common Market and Economic Affairs Secretariat, East African Community, Arusha, Tanzania. (1969-1971)  
Head of Common Market Division (Director of Operations). The duties of the Division were to see to it that the member states did not act in contravention with the rules for operating the common market as laid down in the Treaty of the EAC.

INSTITUTE OF MARINE RESEARCH  
(DIRECTORATE OF FISHERIES)

Duration: 1971-1975

Inquiries to: Rolf Sælen

PELAGIC FISH SURVEY - SOUTH-EAST COST OF INDIA

Description:

The purpose of the project is to assist, through resources surveys, in the development of sardine and mackerel fisheries on the SW coast of India, and in particular to assess the abundance of stocks and their fluctuations.

A study is made of the life history of the species including migration, reproduction, growth and mortality, and fishing experiments conducted to find efficient methods and gear.

Cooperation/connection with developing Countries:

Government of India requested UNDP/FAO to take up the project.

Resources applied:

1. Man-years 1974: Scientific personnel 4
2. Financing: UNDP and NORAD

Publications:

Progress reports published by the Institute.

INSTITUTE OF MARINE RESEARCH  
(DIRECTORATE OF FISHERIES)

Inquiries to: Rolf Sælen

PLANNED RESEARCH PROJECTS:

1. Pelagic Fish Assessment Survey in the Arabian Sea - Indian Ocean  
FAO project. Preliminary stage 1975.
2. "Dr. Fridtjof Nansen"  
Operation of FAO/NORAD Fisheries Research Vessel  
"Dr. Fridtjof Nansen" to be disposed by FAO for future fisheries  
projects.  
FAO project. Financing by NORAD (60%) and FAO (40%).  
Expected duration 1975-1977.
3. Fisheries Development - North Vietnam.  
Development of fisheries research vessel.  
NORAD project.

NATIONAL INSTITUTE OF PUBLIC  
HEALTH

Inquiries to: Magne Flikke  
(Work performed for NORAD on leave  
of absence from the institute)

Duration: 1971-1972

PROTEIN LABORATORY - UNIVERSITY OF KAMPALA, UGANDA

Description:

Evaluation of various forms of plant protein in relation to nourishment.  
The aim was to encourage the cultivation and use of plants with a favourable composition of amino acids, at the expense of those with an unfavourable composition.

Cooperation/connection with developing Countries:

Indicated above.

IBP project, see also "Influence of Growth Factors .." page 28.

Results distributed through the University of Kampala, UNICEF, FAO, OXFAM and Catholic assistance organizations.

NATIONAL INSTITUTE OF PUBLIC  
HEALTH

Duration: 1972

Inquiries to: Jan A. Myhrstad

WATER LABORATORY ACTIVITIES WITHIN WATER  
DEPARTMENT, KENYA

Description:

The project included six main objects of study: Four of these were concerned with laboratory questions: The need for a laboratory, a program to be undertaken, equipment and instruments needed, and staff necessary to carry out the program. Other objects of study were preliminary water quality standards and the question of a water quality program in Kenya.

Cooperation/connection with developing Countries:

Ministry of Finance and Planning, Kenya.

Resource applied:

- |               |                          |
|---------------|--------------------------|
| 1. Man-years: | Scientific personnel 0,5 |
| 2. Financing: | NORAD                    |

Publications:

J.A. Myhrstad: Water Laboratory Activities - Appraisal Report (Oslo 1973).

NATIONAL INSTITUTE OF PUBLIC  
HEALTH

Duration: 1972-

Inquiries to: Chr. Lerche, Director

ESTABLISHMENT OF A PUBLIC HEALTH INSTITUTE  
IN TANZANIA

Description:

Preliminary investigations concerning the need for a Public Health Institute in Tanzania. Formulation of the targets for its future work. Assistance in drawing up a suitable institutional structure with emphasis on organization and staffing.

Cooperation/connection with developing Countries:

Ministry of Health, Tanzania.

Resources applied:

1. Man-years: Not indicated.
2. Financing: NORAD

Publications:

Lerche, Chr.: Public Health Institute in Tanzania. (Report to NORAD, Dec. 1972)

Skogland, A. & Østgaard, H.R.: Public Health Institute in Tanzania. (Report to NORAD, Jan. 1974)



IAMFE  
Norwegian Institute of Agricultural  
Engineering

Duration: 1968- (continuous)

Inquiries to: Egil Øyjord (President  
of IAMFE)

THE INTERNATIONAL HANDBOOK ON MECHANIZATION OF  
FIELD EXPERIMENTS

International Association on Mechanization of Field Experiments  
(IAMFE)

Description:

Agricultural and horticultural scientists in the developing countries are in great need of information about efficient equipment suitable for their research projects. The IAMFE Handbook contains 20 groups of research equipment described in a loose leaf system which enables it to be kept up to date continuously.

Cooperation/connection with developing Countries:

Indicated above. Scientists in developing countries can multiply the efficiency of their research programmes by increasing the capacity and decreasing the experimental error and the costs by using efficient research equipment. At present the IAMFE-handbook is in use by IAMFE-members in 38 developing countries.

Resources applied:

1. Man-years 1974: Scientific personnel 0,1
2. Financing: Funds collected by membership fees from the members of IAMFE and other funds, 1968-74 apprx. US \$ 20.000. Up to now it has not been possible to obtain financial support of the project from NORAD or other organizations.

Publications:

- E. Øyjord (managing editor for 1971-72 edition Graeme: R. Quick)  
The International Handbook on Mechanization of Field  
Experiments.

NORWEGIAN INSTITUTE OF  
INTERNATIONAL AFFAIRS

Duration: 1962-1967

Inquiries to: Olav Stokke

AFRICAN POLITICAL ATTITUDES

Description:

A contents analysis of African political perceptions and attitudes as expressed in the general interest press of Ghana, Nigeria, Guinea, Ivory Coast, Mali and Senegal.

Cooperation/connection with developing Countries:

No information

Resources applied:

Financing:

Ordinary budget of institution  
NAVF (scholarship)  
The Scandinavian Institute for  
African Studies  
The Comitee for Peace and Con-  
flict Research

Publications:

1. Olav Stokke og Mariken Vaa: Presentasjon av et tentativt opplegg til en innholdsanalyse av vest-afrikansk presse.  
NUPI, Oslo, 1963. Stensil, 16 pp.
2. Olav Stokke: Ikke-engasjement i "The Ghanaian Times".  
NUPI, Oslo, 1963. Offset, 68 pp.
3. Olav Stokke: Holdninger til et sett problemfelter, slik de kommer til uttrykk i et utvalg vest-afrikanske aviser.  
NUPI, Oslo, 1965. Stensil, 21 pp.
4. Mariken Vaa: Presse- og informasjonsforhold i fire vest-afrikanske republikker.  
Til Orientering, Nr. 5  
NUPI, Oslo, 1965. Stensil, 89 pp.
5. Olav Stokke: Political Perceptions in Two West African Countries. A Study of Attentions and Attitudes of the General Interest Press in Ghana and Nigeria Towards Own Institutions and the Outside World. Instructions for coding. Appendix 1.  
NUPI, Oslo, 1966. Offset, 223 pp.
6. Mariken Vaa: Vest-afrikanske perspektiver. Presseforhold og utenrikspolitisk orientering i Elfenbenskysten, Guinea, Mali og Senegal.  
Oslo, 1967, stensil. Flere pag. (132 pp.)  
M.A. thesis, Institute of Sociology, University of Oslo.

NORWEGIAN INSTITUTE OF  
INTERNATIONAL AFFAIRS

Duration: 1964-1976

MASS MEDIA AND INFORMATION SERVICES IN GHANA AND  
NIGERIA

Description:

A description and analysis of the structure of the mass media and information services in Ghana and Nigeria, and the prevalent attitudes towards the role and the functions of the mass media within the professional milieu as well as within the political and administrative milieu. Based on survey data (interviews at intervals, first time in 1964).

A continuation of the project "African Political Attitudes".

Cooperation/connection with developing Countries:

See above.

A draft manuscript will be discussed with mass media personnel and researchers from the two countries.

Resources applied:

- |                    |                                 |
|--------------------|---------------------------------|
| 1. Man-years 1974: | Scientific personnel negligible |
| 2. Financing:      | Ordinary budget of institution  |

NORWEGIAN INSTITUTE OF  
INTERNATIONAL AFFAIRS (NUPI)

Duration: 1969-1975/76

Inquiries to: Olav Stokke

THE FEDERATION OF NIGERIA. A STUDY OF SYSTEMS  
TRANSFORMATION

Description:

A description and analysis of political integration and disintegration in the Federation of Nigeria up to 1967.

Cooperation/connection with developing Countries:

(See above)

Resources applied:

- |                   |                                |
|-------------------|--------------------------------|
| 1. Man-years 1974 | Scientific personnel 0,1       |
| 2. Financing:     | Ordinary budget of institution |

Publications:

1. Olav Stokke: Nigeriansk bakgrunn.  
(NUPI 1969, 56 pp.)
2. Olav Stokke: Spenninger i det politiske system i Nigeria fram til borgerkrigen.  
Internasjonal Politikk, nr. 3, 1969, pp. 313-51.
3. Olav Stokke: Nigeria - Biafra i konflikt.  
Verden i Fokus, nr. 2, 1969.
4. Olav Stokke: Varför bröt sig Biafra ut.  
Världspolitikkens Dagsfrågor, 1969, nr. 7, pp. 3-16.
5. Olav Stokke: Hvorfor Biafra brøt ut.  
Samtiden, 1969, pp. 433-43.
6. Olav Stokke: 250 folkegrupper, 3 regioner, 12 stater.  
Kontakt, nr. 5, 1969/70, pp. 17-21.
7. Olav Stokke: Nigeria. An Introduction to the Politics, Economy and Social Setting of Modern Nigeria.  
The Scandinavian Institute of African Studies, Uppsala, 1970, 142 pp.
8. Olav Stokke: Integration and Disintegration: The Case of the Nigerian Federation up to June 1967.  
The Scandinavian Institute of African Studies, Uppsala, 1970. Offset, 32 pp.
9. Olav Stokke: System Transformation in Nigeria.  
Cooperation and Conflict, 3-4, 1971, pp. 147-71.

NORWEGIAN INSTITUTE OF  
INTERNATIONAL AFFAIRS

Duration: 1970-1972

Inquiries to: Olav Stokke

NIGERIA/BIAFRA - CONFLICT AND NEGOTIATIONS

Description:

A study of the negotiations between Nigeria and Biafra in Kampala, May 1968, based on theories of negotiations.

Cooperation/connection with developing Countries:

Relevance for conflict solution in non-western societies.

Resources applied:

- |               |                                |
|---------------|--------------------------------|
| 1. Man-years: | Scientific personnel 0,3       |
| 2. Financing: | Ordinary budget of institution |

Publications:

N. A. Butenschøn: Nigeria/Biafra - konflikt og forhandlinger.  
(Report NUPI/R 12, December 1972, from the  
institute.)

NORWEGIAN INSTITUTE OF  
INTERNATIONAL AFFAIRS (NUPI)

Duration: 1970-1974

Inquiries to: D. Heradstveit

THE EEC AND THE MEDITERRANEAN

Description:

An analysis of the relations between the Common Market and the developing countries surrounding the Mediterranean, in terms of political and economic spheres.

Cooperation/connection with developing Countries:

No information

Resources applied:

1. Man-years: Scientific personnel ca. 15 (during the whole project)

Publications: from the Institute:

1972: NUPI/R. No. 9, 10, 11, 15. NUPI/N. No. 40, 42.  
1973: NUPI/N. No. 57. NUPI/RR. No. 61, 62.

NORWEGIAN INSTITUTE OF  
INTERNATIONAL AFFAIRS

Duration: 1971-1974

Inquiries to: Olav Stokke

DEVELOPMENT ASSISTANCE AND POLICIES OF ASSISTANCE  
IN DENMARK, NORWAY AND SWEDEN

Description:

A description and analysis of the aims, principles and allocation structure of the development assistance of Denmark, Norway and Sweden.

Cooperation/connection with developing Countries:

Specialized information for NORAD, SIDA, DANIDA.  
Discussion of the assistance policy.

Resources applied:

1. Man-years 1974: Scientific personnel 0,6
2. Financing: Ordinary budget of institution

Publications:

- Olav Stokke: Nordisk bistand og bistandspolitikk (900 pp. in press).  
Olav Stokke: Valg av hovedsamarbeidsland. Internasjonal Politikk,  
Nr. 4, 1970, pp. 375-97.  
Olav Stokke: Utviklingsbistand og frigjøringsbevegelser. Internasjonal  
Politikk, Nr. 4, 1970, pp. 398-422.  
Olav Stokke: Nordisk Utviklingshjelp. Nordiska Afrikainstitutet, Uppsala,  
1971. Offset, 23 pp. Paper, Nordisk Statsvetarkonferens  
1971, Göteborg.

NORWEGIAN INSTITUTE OF  
INTERNATIONAL AFFAIRS (NUPI)

Duration: 1972-1973

Inquiries to: Olav Stokke

THE SOUTH AFRICAN DIALOGUE POLICY

Description:

A description and analysis of the policy of South Africa towards the independent African nations (the dialogue policy).

Cooperation/connection with developing Countries:

No information

Resources applied:

1. Man-years 1973: Scientific personnel 0,2
2. Financing: Ordinary budget of institution

Publications:

- Olav Stokke: Sør-Afrikas utadrettede strategi (Internasjonal politikk, Nr. 4, 1972, pp. 619-57).
- Olav Stokke: Sør-Afrikas dialogpolitikk: Ekspansjon mot nord. (Nordiska Afrikainstitutet, Uppsala, 1973, 54 pp.)

NORWEGIAN INSTITUTE OF  
INTERNATIONAL AFFAIRS

Duration: 1972-1974

Inquiries to: Valter Angell

INTERNASJONAL ØKONOMI - EN INNFØRING  
(INTERNATIONAL ECONOMICS - AN INTRODUCTION)

Description:

The first part of this book is a description of world-wide economic relations. The second part discusses the tools of the nation state in dealing with international economic problems, and the third part deals with major global organizations.

Several aspects of the position of the developing countries in the world economy are discussed, e.g. in trade, economic development, resources.

Cooperation/connection with developing Countries:

No information

Resources applied:

1. Man-years 1974/1974: Scientific personnel 1,5
2. Financing: Ordinary budget of institution

Publications:

V. Angell: "Internasjonal økonomi" (draft title) to be published by Universitetsforlaget, Oslo, 1974-75.

NORWEGIAN INSTITUTE OF  
INTERNATIONAL AFFAIRS

Duration: 1973

Inquiries to: Olav Stokke

LIBERATION OF SOUTHERN AFRICA

Description:

Editing of the proceedings of the UN/OAU Oslo conference (April, 1973) of the victims of colonialism and apartheid in Southern Africa.

Cooperation/connection with developing Countries:

Indicated above. The publications have been distributed to the UN delegations, to the OAU, and to the Algeria conference of non-alliant States.

Resources applied:

1. Man-years 1973: Scientific personnel 0,3
2. Financing: Ordinary budget of institution  
Scandinavian Institute of African  
Studies, Uppsala  
NORAD/Royal Ministry of Foreign  
Affairs

Publications:

- O. Stokke & C. Widstrand (eds.), Southern Africa, Vol. 1-2.  
(Scandinavian Inst. of Afr. Studies, 1973. 275 and 346 pp.)

NORWEGIAN INSTITUTE OF  
INTERNATIONAL AFFAIRS (NUPI)

Duration: 1973-1974

Inquiries to: Olav Stokke

NORWEGIAN ASSISTANCE TO AFRICAN LIBERATION MOVEMENTS

Description:

A description and discussion of the Norwegian policy towards and development assistance to the liberation movements of Southern Africa and Guinea-Bissau.

Cooperation/connection with developing Countries:

No information

Resources applied:

- |                    |                                |
|--------------------|--------------------------------|
| 1. Man-years 1974: | Scientific personnel 0,1       |
| 2. Financing:      | Ordinary budget of institution |

Publications:

Olav Stokke: Norsk støtte til frigjøringsbevegelser. (Norsk Utenriks-politisk Årbok 1973, NUPI, Oslo 1974, pp. 52-63).

NORWEGIAN INSTITUTE OF  
INTERNATIONAL AFFAIRS

Duration: 1974-

Inquiries to: Helge Ø. Pharo

THE INDO-NORWEGIAN FISHERIES PROJECT 1953-1972

Description:

In this history of the Indo-Norwegian fisheries project, emphasis will be given to an analysis of the relations between the main administrative and planning centers of the project - i.e. the Indian Government, the local government in Kerala, the Board of the Foundation in Norway and the project headquarters in the project area.

Cooperation/connection with developing Countries:

See above.

A contribution towards the understanding of administrative problems and relations during assistance projects.

See also "Local attitudes" p. 188 and "Kerala fishermen" p. 110.

Resources applied:

1. Man-years 1974: Scientific personnel 0,3
2. Financing: NORAD (scholarship)

NORWEGIAN INSTITUTE OF  
INTERNATIONAL AFFAIRS (NUPI)

Duration: 1974-

Inquiries to: M. Sæter/V. Angell

NATURAL RESOURCES AND INTERNATIONAL POLITICS

Description:

An analysis of the implications of North Sea oil and gas, globally, regionally and locally (national decision-making) with the aim of showing the mutual interdependence between different levels and different sectors of politics.

The project will deal with the problem of resources in general, with the problem of global distribution, and with the influence of world trade and the world's monetary and currency system.

Cooperation/connection with developing Countries:

No information

Resources applied:

1. Man-years 1974: Scientific personnel ca. 2
2. Financing: Ordinary budget of institution

NORWEGIAN INSTITUTE OF  
INTERNATIONAL AFFAIRS (NUPI)

Duration: 1974-

Inquiries to: Olav Stokke

FORUM FOR UTVIKLINGSSTUDIER  
(FORUM FOR DEVELOPMENT STUDIES)

Description:

A publication series, 10-12 issues a year, aimed at stimulating the Norwegian public and academic debate on questions related to development assistance, development and third world countries, and which will provide specialized information and communicate current research in this field.

Cooperation/connection with developing Countries:

No information

Resources applied:

1. Man-years 1974: Scientific personnel 0,1
2. Financing: Ordinary budget of institution

Publications:

Three issues published at the time of the survey:

- No. 1, 1974: E. Jensen, "Evaluering av norsk bistand."  
(Evaluation of Norwegian assistance)
- No. 2, 1974: C. G. Widstrand, "Är u-landsexperterna nödvändiga?"  
(Are the development experts necessary?)
- No. 3, 1974: H. H. Engebriksen, "Næringslivets engasjement i utviklingsland."  
(Industrial interests in developing countries)

NORWEGIAN INSTITUTE OF  
INTERNATIONAL AFFAIRS (NUPI)

Duration: 1974

Inquiries to: Olav Stokke

PRIORITY: RURAL DEVELOPMENT

Description:

Editing and publishing an anthology concentrating on social development and development planning, particularly within the field of rural development, in some of the major recipient countries of Norwegian development assistance, viz. in East Africa and Botswana.

Cooperation/connection with developing Countries:

See above. The project will illustrate the conditions and problems of developing countries and the problems of assistance.

Resources applied:

- |                    |                                |
|--------------------|--------------------------------|
| 1. Man-years 1974: | Scientific personnel 0,1       |
| 2. Financing:      | Ordinary budget of institution |

THE NORWEGIAN INSTITUTE OF  
INTERNATIONAL AFFAIRS (NUPI)

Duration: 1973-

Inquiries to: Olav Stokke

A SEMINAR SERIES ON DEVELOPMENT PROBLEMS

Description:

In an effort to create a national milieu for the discussion of such themes, this institute has established a post-graduate seminar composed of researchers and civil servants dealing with development problems and development aid. Both national and international top experts are used as lecturers.

Cooperation/connection with developing Countries:

No information

THE NORWEGIAN METEOROLOGICAL  
INSTITUTE

Duration: 1974-1976/77

Inquiries to: Odd Haug

VAP PROJECT TE/5/1  
(METEOROLOGICAL COMPUTER SYSTEM - ALGIERS)

Description:

Installation of a computer system in Alger, for meteorological application including telecommunications.

Training of Algerian meteorologists in connection with operational use of the computer system for numerical weather prediction, climatology etc.

Cooperation/connection with developing Countries:

(See above)

Project is administered by WMO

Resources applied:

Financing:

Ordinary budget of institution

NORAD \$ 1.425.890

Algerian contribution \$ 1.595.000

**PRIVATE OR  
SEMI-GOVERNMENTAL  
INSTITUTES  
AND INSTITUTIONS**

THE CHR. MICHELSEN INSTITUTE  
FOR SCIENCE AND INTELLECTUAL  
FREEDOM

Duration: -1975

Inquiries to: Arne Gabrielsen

DERAP - HEALTH PROJECT

(DERAP: Development Economics Research and Advisory Project)

Description:

Development of quantitatively oriented methods for planning and administration of the health sector.

Due to limited resources, efficient planning and management of the health sector is very important in developing countries.

Cooperation/connection with developing Countries:

Initiation and advice: WHO sponsor, prof. Wassily Leontief,  
Harvard University.

Resources applied:

1. Man-years: Scientific personnel 6
2. Financing: Ordinary budget of institution  
WHO 1974: \$ 10.000  
Norw. Ministry of Social Affairs  
1974: Kr. 150.000

Publications:

1. A. Gabrielsen: A Note on Least Squares and Errors in Variables.  
Bergen, February 1973.  
(Antatt i Journal of Econometrics)
2. A. Gabrielsen: Skisse til prosjektet. Planleggingsmodeller for helse-  
sektoren.  
Bergen, mars 1973.
3. A. Gabrielsen: Planlegging under usikkerhet.  
Bergen, mai 1973.
4. A. Gabrielsen: Statistikken og makromodellene.  
Bergen, juli 1973.  
(Trykt i Sosialøkonomen)
5. A. Gabrielsen: The New System of Financing Norwegian Hospitals.  
Read at The Econometric Society, Oslo 29. - 31. aug.  
1973.
6. A. Gabrielsen: Estimering av "effisiente" produktfunksjoner. Eksogene  
produksjonsfaktorer.  
Bergen, november 1973.
7. A. Gabrielsen og B.S. Brochmann: Prognosemodeller for leger og  
tannleger.  
Bergen, desember 1973.
8. A. Gabrielsen: Helse eller økonomi?  
Foredrag holdt i Statsøkonomisk Forening, mars 1973.
9. A. Gabrielsen: The Theoretical Basis for A Quantitative Approach to  
Planning in the Health Sector.

THE FRIDTJOF NANSEN  
FOUNDATION AT POLHØGDA

Duration: 1973-

Inquiries to: Finn Sollie

DEVELOPING COUNTRIES AND THE NEW TERRITORIES

Description:

Project for analysing the effects of resource exploitation in New Territories (Arctic/Antarctic/Seabed) in a global context, including effects on the interrelationships between industrial societies and the underdeveloped countries, and the questions of international measures of regulation and control, in order to secure a balanced resource extraction, and limit pollution and undesired changes in ecological environments.

Cooperation/connection with developing Countries:

No information

Resource applied:

- |                    |                                |
|--------------------|--------------------------------|
| 1. Man-years 1973: | Scientific personnel 0,50      |
| 2. Financing:      | Ordinary budget of institution |

Publications:

Articles in "The Challenge of New Territories" Finn Sollie ed.  
(Universitetsforlaget, Oslo 1974).

INTERNATIONAL PEACE  
RESEARCH INSTITUTE, OSLO (PRIO)

Duration: 1962-1971

Inquiries to: Johan Galtung

LOCAL ATTITUDES TO A TECHNICAL ASSISTANCE PROJECT  
(KERALA, INDIA)

Description:

The project was based on data from interviews at a development project in Kerala, India.

The main goal was to map patterns of acceptance and rejection of the project, and more fundamentally to develop an understanding of the impact of technical assistance on local social structure.

We have reason to believe that the results of this project have had a certain impact on the future development of Norwegian assistance activities.

Cooperation/connection with developing Countries:

See also project "Kerala Fishermen .." page 110 and "Indo-Norwegian fisheries project" page 176.

Resource applied:

Financing:

Ordinary budget of institution  
Norsk Utviklingshjelp (later NORAD)  
NAVF

Publications:

J. Galtung: "Blue Revolution" The case of Kerala  
(in Holthe, Reinton & Sivertsen, Betting on the Strong:  
Anthology on the Green Revolution, forthcoming fall 1974)

INTERNATIONAL PEACE  
RESEARCH INSTITUTE, OSLO (PRIO)

Duration: 1969-1972

Inquiries to: Helge Hveem

AFRICA AS AN INTERNATIONAL SYSTEM
-----------------------------------

Description:

A case study in inter-state interaction with emphasis on integration and conflict.

On the basis of data on interaction between African states, the project has emphasized two problem areas in the development of African relations,

- a. problems and prospects of African regional integration and cooperation,
- b. the relationship of African states to the international system with particular stress on relations of dominance.

Cooperation/connection with developing Countries:

Peter Willetts, Makerere University College, Uganda  
Institute of Political Science, Makerere University College, Uganda

Resources applied:

Financing:

Ordinary budget of institution  
NAVF  
Scandinavian Committee on Inter-  
national Politics

INTERNATIONAL PEACE  
RESEARCH INSTITUTE, OSLO (PRIO)

Duration: 1972-1975/76

Inquiries to: Helge Hveem

THE INTERNATIONAL DOMINANCE SYSTEM AND GLOBAL POLITICAL ECONOMY
--

Description:

Work has been and is oriented towards the theoretical approach to international dominance in general, and illustrated in particular with empirical work on:

- a) the development and potential functions of UNCTAD
- b) the political economy of raw materials and their utilization in a radical world-market strategy
- c) the multinational corporations and their relations to development problems.

Cooperation/connection with developing Countries:

Institut African pour la Développement Economique et la Planification,  
Dakar.

Institut de Recherche Economique et la Planification, Algérie dept.

Institut de Recherche Economique et la Planification, Grenoble

UNCTAD secretariat, Geneve

Resources applied:

- |                         |  |
|-------------------------|--|
| 1. Man-years 1973/1974: | Scientific personnel 1                 |
| 2. Financing:           | Ordinary budget of institution<br>NAVF |

Publications:

Scott Williamson: Multinational Enterprise. A review (PRIO, mimeographed)

- Helge Hveem: "Nigeria - Pourquoi la paix est possible", *Jeune Afrique* no. 454, pp. 62 - 67, 1969.
- Helge Hveem: "Images of Stratification: The Ranking of African States." Paper presented at the East African Social Science Conference, Nairobi, 8th - 13th December, 1969, PRIO publication nr. 21-21.
- Helge Hveem: "Pan-Africanism versus Mini-Africanism: The Evidence of African Interaction Trends", in Ali A. Mazrui and Hasu S. Patel (eds.), Towards the Year 2000: Identity and Africa's Future, East African Publishing House, 1972. PRIO publication no. 22-16.
- Helge Hveem (with Peter Willetts): "The Practice of non-Alignment. On the Present and Future of an International Movement", in Africa International, Vol. I: Horizon of African Diplomacy, The East African Literature Bureau, Kampala.
- Helge Hveem: Uganda - en politisk översikt ('Uganda - A Political Review'). Nordiska Afrika-institutet, Uppsala. 92 pp.
- Helge Hveem: "EEC-samarbeidet og utviklingslandene", i Susan Høivik, red. 10 innlegg om EEC, Universitetsforlaget, Oslo, s. 46-74.
- Helge Hveem (with Ole Kristian Holthe): "The European Community and the Underdeveloped Countries". Instant Research on Peace and Violence, no. 2, 1972.
- Helge Hveem: "UNCTAD III: The Need for a New Approach", in Bulletin of Peace Proposals no. 3, 1972. Also published in Irans-Aktie (Dutch translation).
- Helge Hveem: The Global 'Technocapital' Structure. On a cumulative International Division of Labour, mimeo, April, PRIO Publ. 27-16, 77 pp + App.
- Helge Hveem: Dependency, Interdependency, and Independence in a Dominance System. mimeo, April, PRIO publ. 27-17, 56 pp. + App.

- Helge Hveem: "The Global Dominance System. Notes on a Theory of Global Political Economy", Journal of Peace Research, no. 4, 1973, pp. 319-340, PRIO Publ. 1-21.
- Helge Hveem: Anti-Domination Strategies: A Problem Inventor, Proceedings of the 5th IPRA General Conference, Varanasi, India, 1974 PRIO Publ. 27-25.
- Helge Hveem: "Investeringer i u-land og underutviklingen", Norkontakt nr. 8, 1973 og nr. 2, 1974, PRIO Publ. p. 28.
- Helge Hveem: The Technocapital Structure and the Global Dominance System, paper presented at the ECPR Workshop on Multinational corporation as political actors, Strasbourg 28 March - 2 April, 1974, mimeo, 20 pp. PRIO Publ. 27-28.
- Helge Hveem: International Anti-domination Strategies and the 'Opecization' of Raw Materials, First draft February 1974, mimeo 27 pp + Tables, PRIO Publ. 27-27.
- Helge Hveem (with Evelyn Gulbrandsen, Knut Lillefjære and Torill Sjaastad): The International Oil Industry. A Data Collection. (Parts 1, 2 and 3.)
- Helge Hveem (with Evelyn Gulbrandsen, Knut Lillefjære and Torill Sjaastad): The International Bauxite and Aluminum Industries. A Data Collection. (Part 1: Bauxite and concentrates of aluminum. Part 2: Aluminum. Part 3: Alumina and Alumina Hydrates.)
- Helge Hveem (with Knut Lillefjære and Asbjørn Løvbræk): Changes in Power relations and contradictions in the Oil Industry, paper presented at a symposium on Middle East, Oil and the Multinational Companies, Gothenburg 24-25 May, 1974.
- Helge Hveem: The Extent and Type of Direct Investment in Africa. Paper presented at the conference on Multinational Corporations in Africa, UN Institute of Economic Development and Planning, Dakar, 25 September - 5 October, 1974, mimeo, 29 pp + Tables, PRIO Publ. no. 27-30.

INTERNATIONAL PEACE  
RESEARCH INSTITUTE, OSLO (PRIO)

Duration: 1970-1972

Inquiries to: Ole K. Holthe

PERIPHERY DEVELOPMENT AND EXTERNAL DOMINATION, THE CASE OF SENEGAL
---

Description:

(Master's degree Thesis (in French) in political science, Univ. of Oslo)

The thesis concerns the relationship between problems and prospects of development in Senegal, and the changing aspects of foreign dominance and control. External dominance is illustrated particularly by data on foreign investments, foreign aid and technical assistance. Trends in development are grasped through indicators on social, economic and political conditions from the time of colonization in the 1860's.

Cooperation/connection with developing Countries:

Institut Fundamental de l'Afrique Noire, Dakar  
Institut Africain pour le Developement Economique et la Planification,  
Dakar  
Centre d'Etude de l'Afrique Noire, Bordeaux

Resources applied:

Financing:

Ordinary budget of institution  
Scandinavian Institute of African  
Studies  
Uppsala (Travel grant)

Publications:

O.K. Holthe: Periphery development and external dominance,  
(IPRA proceedings, Varanasi 1974)

INTERNATIONAL PEACE  
RESEARCH INSTITUTE, OSLO (PRIO)

Duration: 1970-1974

Inquiries to: Inge Samdal

THEORIES OF INVESTMENTS AS ILLUSTRATED BY NORWEGIAN  
INVESTMENTS IN PRODUCTION ABROAD

Description:

(A thesis submitted for the Master's degree in political science.)

The thesis concerned with structural characteristics and orientation of Norwegian investments abroad. The data collection is the most comprehensive one on this subject. The aim is to develop a better understanding of investments both in view of theory, and with regard to consequences to the economies of home and host (including developing) countries.

Cooperation/connection with developing Countries:

Indicated above.

Resources applied:

- |                    |                                |
|--------------------|--------------------------------|
| 1. May-years 1974: | Scientific personnel 1         |
| 2. Financing:      | Ordinary budget of institution |

INTERNATIONAL PEACE  
RESEARCH INSTITUTE, OSLO (PRIO)

Duration: 1972-1975

Inquiries to: Asbjørn Eide

THE PROCESS OF CONFLICT IN SOUTHERN AFRICA AND INTERNATIONAL RESPONSE
--

Description:

This project is part of a long term study on development alternatives and repressive violence. The goal is a triple one:

1. to map the different dimensions of conflict in this area
2. to evaluate actual international response to the conflict, esp. through the UN system
3. to develop and propose alternative constructive peace alternatives, both internal and international.

Cooperation/connection with developing Countries:

The results of the project will be directed towards the liberation movements in the area and the UN system.

Channels: The Anti-Apartheid movement (London)  
The Zimbabwe Movement of Southern Africa  
The IPRA Summer School 1975

Cooperation also with the UN High Commissioner for Namibia

Resources applied:

1. Man-years 1974: Scientific personnel 4/3
2. Financing: Ordinary budget of institution

Publications:

- A. Eide: International Law, Dominance and the Use of Force  
(J. Peace Research, No. 1, 1974)

INTERNATIONAL PEACE  
RESEARCH INSTITUTE, OSLO (PRIO)  
UNIVERSITY OF OSLO -  
THE CHAIR OF PEACE AND CONFLICT  
RESEARCH

Duration: 1973-

Inquiries to: N. P. Gleditsch/J. Galtung

WORLD INDICATORS PROGRAM

Description:

The general aim of the program is to develop a world system of social indicators that is able to perform various functions,

- a) to reflect central problems on development/underdevelopment equity/poverty and socio-economic conditions of the world population,
- b) to link these indicators to a set of intercultural values on individual and collective freedom and development,
- c) to construct these indicators not only with states as units but also with organizations, regions and other collectivities.

The project is a response to the present unsatisfactory statistics and means of quantitative expression of the development of world society.

Cooperation on project:

Center for Study of Developing Countries, New Delhi  
Fundação Getulio Vargas, Rio de Janeiro  
Gandhian Institute of Studies, Varanasi, India  
Institute of Political Science, Ohio State University  
Center for Economic Research, Zurich  
Union of International Associations, Bruxelles  
Institute for World Order, New York  
UNITAR, New York

Resources applied:

1. Man-years 1974: Scientific personnel ca. 3,5
2. Financing: Ordinary budget of institution  
NAVF (research fellowships)  
Ministry of Foreign Affairs

Publications:

- J. Galtung: World Indicators Program (Bull. Peace Proposals, No. 4, 1973)
- J. Galtung et al., Measuring World Development (PRIO, 1974, xeroxed).

INTERNATIONAL PEACE  
RESEARCH INSTITUTE, OSLO (PRIO)

Duration: 1973-1975

Inquiries to: E. Rosenberg/  
N.P. Gleditsch

CIVIL AVIATION IN AFRICA
--------------------------

Description:

(Master's Degree project in political science, University of Oslo)

The thesis will describe the historical development of civil aviation in Africa, discuss the relevance of aviation for development programs, and assess the progress towards cooperative, regional arrangements in African aviation.

Transportation facilities are an important part of the infrastructure in developing countries. In Africa, with surface transport poorly developed, aviation might play an important role very early in the development process. The project studies the political and economic obstacles confronting African aviation.

Cooperation/connection with developing Countries:

Indicated above.

Resources applied:

- |                    |                                |     |
|--------------------|--------------------------------|-----|
| 1. Man-years 1974: | Scientific personnel           | 1/2 |
|                    | Supporting personnel           | 1/3 |
| 2. Financing:      | Ordinary budget of institution |     |

INTERNATIONAL PEACE  
RESEARCH INSTITUTE, OSLO (PRIO)

Duration: 1974-1976

Inquiries to: Kjell Skjelsbæk

THE UN AS A CONTROL INSTANCE TOWARDS MULTINATIONAL  
CORPORATIONS

Description:

The aim of this project is two-fold:

1. to map the consequences of the investments and strategies of multinational corporations in the world economy, with particular reference to problems of the Third World,
2. to develop policy proposals as to efficient functioning of the UN system as a control instance.

Cooperation/connection with developing Countries:

No information

Resources applied:

- |                    |  |
|--------------------|--|
| 1. Man-years 1974: | Scientific personnel 1,7                                     |
| 2. Financing:      | Ordinary budget of institution<br>NAVF (research fellowship) |

INTERNATIONAL PEACE  
RESEARCH INSTITUTE, OSLO (PRIO)

Duration: 1974-1977

Inquiries to: Kristen Ringdal

PUBLIC OPINION IN NORWAY ON DEVELOPMENT AID

Description:

This project studies the relationship between different models of development and public opinion in donor countries, with the Norwegian scene as a case. Various polls have presented a confusing picture of Norwegian public opinion. One aim of the project is to clear up some unnecessary confusion, then to link various reactions of the public to different models of development (such as aid by financial transfer, restructured trade patterns etc.). The project will also attempt to look at the relationship between personal contact with developing countries and attitudes to aid.

Cooperation/connection with developing Countries:

Indicated above.

We hope to cooperate with NORAD and with the Central Bureau of Statistics on their investigations on attitudes towards development aid.

Resources applied:

1. Man-years 1974: Scientific personnel 0,25
2. Financing: Ordinary budget of institution  
NAVF (acquisition of data)

See also Thesis from the Institute of Sociology, Univ. i Oslo, page 122.

NORWEGIAN HERRING OIL AND  
MEAL INDUSTRY RESEARCH  
INSTITUTE

Duration: See below

Inquiries to: Gudmund Sand

FISH PROTEIN AS A HUMAN NUTRITIVE

Description:

I: Cochin, India (1972-1975)

A study of acceptability, food and eating habits and the clinical effects of concentrated fish protein in areas of protein deficit.

II: FAO/World Food Program (Planned 1975-1976)

A study of food and eating habits, nutritional problems and the use of this product in developing countries with protein deficit.

Cooperating with FAO/WFP the SSF and Norsildmel (Sales Organization of the herring industry) will assist in projects in Indonesia, Liberia, Mali, Niger and Senegal. The project will be financed by NORAD, and is scheduled to commence in January, 1975.

When these test projects are concluded, the WFP will add Concentrated Fish Protein, type B to the list of protein nutritives being used in the programmes of this organization (if the results of the projects confirm our previous experience with the product).

Cooperation/connection with developing Countries:

In populations feeding largely on bland staple diet food supplements with a strong taste are especially appreciated. The actual fish protein concentrate has a flavour reminding of dried fishery product and is most likely the cheapest animal protein available. Norway has a great surplus of this protein source.

If natural resources exist, developing countries may produce the fish protein concentrate themselves.

Resources applied:

- |                         |  |
|-------------------------|--|
| 1. Man-years 1973/1974: | Not indicated  |
| 2. Financing:           | I: UNDP/FAO/NORAD/Norsildmel<br>II: NORAD 1974-1976 240.000 US\$ |

THE NORWEGIAN MISSIONARY  
SOCIETY

Duration: 1974

Inquiries to: J. Skjortnes

COLLECTION OF ARCHIVES, MADAGASCAR

Description:

The plan is to collect the archives of the Lutheran mission and church on Madagascar from the 1860's up to 1970.

The archives contain church correspondence, protocols, reports from visitations with analyses of population numbers, and religious, social, political and economical factors. The idea was to register and copy the archives in Norway, but as the Government of Malgasy will not agree to this, the possibility of registering the archives on Madagascar are being examined.

Cooperation/connection with developing Countries:

No information

Resources applied:

Financing:

NAVF ca. 170.000 kr.  
The Norw. Missionary Society  
145.000 kr.

SINTEF<sup>x)</sup>  
Division Anti-Pollution Technology

Duration: 1974-

Inquiries to: T. Halmø

SOLID WASTE DISPOSAL - MOMBASA, KENYA

<sup>x)</sup>The Engineering Research Foundation at the Norwegian Institute of Technology

Description:

As a part of the "Mombasa Water Pollution and Waste Disposal study" which is being carried out by Norconsult A.S., SINTEF has been assigned on a subcontract to cover the solid waste disposal study.

The project is a joint effort between the Municipality of Mombasa and the Government of Kenya.

The Municipality of Mombasa will be subject to a very rapid growth from now on and up to year 2000. This leads to extensive development on the three mainlands surrounding the island of Mombasa where the city was founded and where major development has taken place.

This development leads to a total reconstruction of the water supply, waste-water treatment and solid waste disposal as well as of the transportation system of the area.

This study will result in suggestions for alternative solutions, recommendations and a master-plan of actions needed to bring about the necessary changes.

(No information on Resources given)

SINTEF<sup>x)</sup>  
River and Harbour Laboratory

Duration: 1974-1975

Inquiries to: D.K. Lysne

BINTULU DEEP WATER PORT STUDY

<sup>x)</sup>The Engineering Research Foundation at the Norwegian Institute of Technology

Description:

Feasibility and pre-design study for deep water port at Bintulu, Sarawak. Forecast of traffic volume, shipping traffic study, data collection, analysis of hydraulic conditions, model study and lay out of port, economic and financial feasibility analysis.

Cooperation/connection with developing Countries:

Government of Malaysia, State of Sarawak, State Planning Unit.  
Part of project contracted between Malaysia and Norconsult A.S.

Resources applied:

1. Man-years 1974: Scientific personnel 2,2
2. Financing: Government of Malaysia:  
1974/75 ca. kr. 700.000

SINTE F<sup>x)</sup>

River and Harbour Laboratory

Duration: 1972-1975

Inquiries to: D.K. Lysne

CALABAR PORT DEVELOPMENT - NIGERIA

<sup>x)</sup>The Engineering Research Foundation at the Norwegian Institute of Technology

Description:

Investigation of the port and the approach to Calabar port, 30 miles upstream Calabar River. Data collection and analysis of sediment transport and sailing conditions for design of sailing canal.

Cooperation/connection with developing Countries:

Nigerian Port Authorities.

The project is financed and administered by NORAD, and carried out on contract by Norconsult A.S.

Resources applied:

- |                    |                          |
|--------------------|--------------------------|
| 1. Man-years 1974: | Scientific personnel 2,3 |
| 2. Financing:      | NORAD apprx. Kr. 930.000 |

SINTEF  
(The Engineering Research  
Foundation at the Norwegian  
Institute of Technology)

Inquiries to: Eiliv Sødahl

THE CARIBBEAN INDUSTRIAL RESEARCH INSTITUTE (CARIRI)  
TRINIDAD & TOBAGO

The CARIRI, where Mr. Sødahl served as Project Manager 1972-1973, was established by the Government of Trinidad and Tobago with the assistance of the UNDP and with the UNIDO as Executive Agency. The purpose of CARIRI is to promote industry in the country by offering testing and analysing facilities and by undertaking trouble-shooting, feasibility studies and process and product development.

Publication:

- E. Sødahl: "End of assignment report on special fund project for the the period 15 March 1972 - 15 September 1973, project no. TRI-69-505"  
(UNIDO, August 1973)

**NORAD/NTNF  
FELLOWSHIP HOLDERS'  
PROJECTS**

UNIVERSITY OF BERGEN

Haukeland Hospital, Hormone Laboratory

RADIOIMMUNOLOGICAL HORMONE DETERMINATIONS (1972-73)

Project I: Development of a method for radioimmunological assay of testosterone in plasma. Project ended.

Project II: Experimental production of a specific antibody against triiodothyronine in rabbits. Partly fulfilled.

Both projects of great significance to clinical medicine. This field of research is poorly developed in Thailand.

NORAD research fellow (Thailand) participating.

UNIVERSITY OF OSLO

Department of Periodontics

1. Plaque formation and microbial composition in partially edentulous subjects with and without removable dentures. (1971-73)

NORAD research fellow participating. (Egypt)

Publication: E.A. El Ghamrawy, title as above,  
Oslo 1972.

2. A study of tooth surface in the pathological pocket. (1973-75)

Lic.odont. degree project.

NORAD research fellow participating.

Publications: R. Saglie, I.R. Johansen, L. Fløtra,  
Scand. J. dent. research (in press).

3. The gingival fluid. (1974-76)

Lic.odont. degree project.

NORAD research fellow participating.

Thesis in press.

4. A system to determine the periodontal therapeutic needs of a population - time evaluation and planning of treatment delivery.

Lic.odont. degree project.

NORAD fellowship holder participating. Thesis (title as above) published 1973.

Other publications:

H.T. Bellini, P. Germa, I.R. Johansen: Community Dent. Oral Epidemiol. 1973, 1, 22-29.

H.T. Bellini, Johansen I.R.: Acta Odont. Scand. 31, Odont. Scand. 31, 297-305, 1973.

### Institute of Geology

#### CALEDONIAN PYRITES

Knowledge of the occurrence of copper, zinc and lead ore is important for the development of the mineral resources of any Country.

Two Indian NORAD scholarship holders have participated in this project which is supported by NTNf.

- Publications: 1. Norsk Geol. Tidsskr. 52, 151-192 (1972)  
2. Ibid., p. 319-329  
3. Norges Geol. Undersøkelse No. 300, p. 21-25 (1973)

### UNIVERSITY OF TRONDHEIM

### NORWEGIAN INSTITUTE OF TECHNOLOGY

### Institute of Applied Physics

#### NUCLEAR RESONANCES (1973-75)

NMR in fluorsilicates.

NORAD fellowship holder participating. Basic research in which he wanted to participate.

Institute of Building Materials

INFLUENCE OF ALKALIS AND GYPSUM ON THE PROPERTIES OF  
PORTLAND CEMENT (Current)

This projects is important for the cement industry (of all countries) in connection with smoke gas cleaning.

NORAD fellowship holder (Kenya) participating.  
Lic.techn. degree project.

A STUDY OF THE ELECTROCHEMICAL BEHAVIOUR OF STEEL IN  
CONCRETE (Current)

The aim is to develop methods of measuring of e.g. the diffusion velocity oxygen in various concrete qualities by means of the measurable electrochemical effects arising when the oxygen reaches the steel.

Results will be important in all places where reinforced concrete buildings are constructed in an aggressive environment (in Norway e.g. offshore constructions in the North Sea).

NORAD fellowship holder (Kenya) participating.  
Lic.techn. degree project.

Institute of Cellulose Technology

1. An analysis of the effect of yield and refining on fibre and paper properties of chemimechanical spruce pulp. (1968-69)

NORAD scholarship holder participating.

Publications: M. B. Jauhari, (title as above), Trondheim 1968.

2. An analysis of the relationship between paper making, fibre characteristics of some tropical hardwoods, and paper properties. (1970-72)

NORAD scholarship holder participating.

Publications: P. V. Bawagan, "The Analysis of some Fundamental Fiber-Paper Relationships" (Trondheim 1972)

Institute of Metallurgy

THERMODYNAMICS OF COPPER SMELTING (1970-72)

Equilibrium relations between liquid copper, iron-copper matte and liquid slag.

NORAD fellowship holder (Turkey)

Ph.D. (Ankara) project. Project of general scientific interest.

Publications: A. Geveci & T. Rosenqvist:

Trans. Instn. Min. Met. 82 (1973) C 1973-202.

THE EFFECT OF POWDER INJECTION ON STEEL DEOXIDIZATION  
(1972-74)

The development of a technique to produce purer steel. A refining powder is injected into the steel bath through a nozzle or lance. The method is expected to be used both in industrialized and developing countries.

NTNF-fellowship holder participating.

Publications: Saxena, Engh, Pednekar:

To be published in Scand. J. Metallurgy.

A SLAG CRUST USED AS PACKING (1972-75)

In the slag process where the slag attacks the packing, it may be possible to cool the wall to make a frozen crust of slag on the wall. This crust will protect the wall from being attacked.

NORAD fellowship holder participating.

Institute of Petroleum Technology and Applied Geophysics

THE PETROPHYSICAL PROPERTIES OF SAND STONE SAMPLES FROM SPITSBERGEN (1973-74)

The project aims at a detailed study of the physical properties of some sandstone samples from Spitsbergen, such as porosity, permeability, water saturation, density, capillary pressure and electrical resistivity, which help in an evaluation of the hydrocarbon accumulation possibilities of this formation. The results of this study can be generalized, and made applicable to all similar formations existing in many other places.

NORAD fellowship holder participating.

Laboratories of Industrial Electrochemistry

ELECTRODEPOSITION OF ZINC (1971-73)

Kinetics and overvoltage of the electrodeposition of Zn from sulfate solution in the presence of Na, Ca, Mg and Mn ions of a rotating disc electrode.

NORAD fellowship holder participating.

Publications: M. Saloma & H. Holtan:  
Acta Chem. A 28 (1974) p. 86 and p. 93.

THERMOCELLS (1971-73)

Investigations of thermocells containing aqueous solutions.

NORAD fellowship holder participating.

Publications: A. Supawan, Lic.techn. degree thesis 1973.

PITTING CORROSION OF METALS (1973- )

A theoretical and experimental study of the effect of mass transfer and ohmic potential drop on the pitting corrosion of metals.

NTNF research fellow participating.

Laboratory of Thermodynamics, Heat Engineering Institute

INVESTIGATIONS OF HEAT TRANSFER IN TWO-PHASE FLOW (1972-75)

Investigations of two-phase flow in a double tube, vertical construction. Various principles of void measurements.

Lic.techn. degree project.  
NORAD research fellow (Egypt).

VETERINARY COLLEGE OF NORWAY

Institute of pathology

PENICILLIUM VIRIDICATUM TOXICOSIS IN RATS (1968-73)

Lic.med.vet. project.  
NORAD research fellow (Bangladesh).

**INSTITUTE FOR STUDIES  
IN RESEARCH AND HIGHER EDUCATION**  
THE NORWEGIAN RESEARCH COUNCIL FOR SCIENCE AND THE HUMANITIES  
WORGELANDSVEIEN 15, OSLO 1, NORWAY - TELEPHONE \* 20 65 35

Oslo, August 1974  
154/74

**EFFORTS OF NORWEGIAN RESEARCH INSTITUTIONS ON THE PROBLEMS  
OF DEVELOPING COUNTRIES**

The Norwegian Agency for International Development (NORAD) has commissioned the Institute for Studies in Research and Higher Education to do a survey of research relevant to developing countries at Norwegian research institutions. This study is part of extensive efforts at the international level (by UNESCO and the OECD) with the long-term aim of ensuring the best possible use of expertise and knowledge in affluent countries for the benefit of poor countries.

In this connection we ask you to help us by completing the enclosed questionnaires. Form A should be completed in one copy only, as this applies to the institutes in general. Please fill in one copy of Form B for each relevant project, whether completed/current/or in the planning stage. Guidelines for filling in the forms are given on the back of this sheet. We attach great weight to your own evaluation of the importance of your institution's activities in relation to developing countries.

Developing a questionnaire which satisfies everyone concerned both as regards the questions and the space allotted to replies is a difficult task. We greatly appreciate further comments, which may be submitted in a separate letter accompanying the questionnaire or by personal contact. Inquiries and comments should be directed to Mr. Ivar Rusdal, tel. (02) 20 65 35. Additional copies of the forms will be sent on request.

We hope that you will take the trouble of completing the forms as requested, and thank you in advance for your help. Please return them within two weeks. A stamped and addressed envelope is enclosed.

Yours faithfully,

## GUIDELINES FOR FILLING IN THE FORMS

1. What is "research on problems of developing countries"?

Establishing an unambiguous definition of this term has proved difficult. We therefore ask you to evaluate which sectors of your institution's activity are, or may be, relevant to developing countries or development problems, and indicate on Form B why a particular project is included as research of this type.

We would point out that all research which is part of a cooperative effort between Norway and a developing country, takes up a theme from a developing country, is concerned with the relationship between developing countries or between these and the industrial countries, should be considered as relevant.

2. Please also include efforts which are not purely research activity

We would emphasize that, in addition to research projects, we are also interested in examination reports or the application of research results to conditions in developing countries.

3. Project

The term "project" is intended to cover all activity which has called for more than approx. 1/10 man-years (1-2 months' work). It is also intended to cover Master's degree theses.

4. Developing country

In this connection the term "developing country" covers all countries of Africa (except South Africa), Asia (except Japan), Latin America and the Caribbean region, Oceania (except Australia and New Zealand). This is the Unesco definition from a recent international survey analogous to the present one.

5. Please describe the project in English

We would prefer a description of the project in English, as the information obtained will be used in an international context.

Institute for Studies in Research  
and Higher Education

FORM A

Norwegian Research on the Problems of Developing Countries

1. Name of Institution:

Person to whom inquiries may be directed:

2. Are research projects on problems of developing countries carried out at this institution?

(Including examination reports and application of research results to local conditions in developing countries.)

yes                       no

If yes, please fill in a copy of questionnaire B for each project.

3. Have any of your staff members done research (examination reports, application of research results) on developing countries previously?

yes                       no

If yes, please fill in a copy of Form B for each activity.  
(Cf. question 4.)

4. Is there at present any interest at your institution for taking up research in the future on the problems of developing countries? If so, please indicate subject, field of interest, and what initiatives you consider necessary to start such research.

5. Is your institution engaged in other activities related to the developing countries? (Tick off.)

- Receiving scholarship-holders:
- Consultant assistance - please give a brief account:
- Information and educational activities - please give a brief account:
- Other activities - please specify:

6. Have any of your institution staff experience from developing countries?

Name:	Which country:	Year:	Duration of stay:	Type of work:

7. We are grateful for possible points of view on work on the problems of developing countries at Norwegian research establishments, for instance: experience, what problems should be given priority, and the application of research results.

QUESTIONNAIRE ON INDIVIDUAL PROJECTS

FORM B

1. Name of Institution:

Person to whom inquiries may be directed

Project Title:

2. An outline of the project (see guidelines):

3. A brief description of the relevance of the project to the problems of developing countries, i.e. why this particular project is included here. (See also question 1.)

4. a) In what way do you think the results of this project can be applied in developing countries?

b) Have arrangements been made for applying the results?

5. How was the project initiated?

at the request of an institution/public authority in a developing country, if so, which .....

at the request of NORAD

at the request of another Norwegian agency, if so, which .....

at the request of an international agency, if so, which .....

at your own initiative

any other reason, please specify

6. Approximate indication of the time spent/expected to be spent on the project:

Which year was the project started .....

Present status: Already completed (year) ...../current/at the planning stage (delete what does not apply)

Expected year of completion .....

7. Personnel working on the project:

Name:	Status:	Paid by:	Man years <sup>1)</sup>

1) Please indicate in this column the approx. total working time the person is expected to use on the project in 1974 (or used in 1973) e.g. 1/1, 1/2, 1/10.

8. Special allocations for this project:

Source:	Year:	Amount

9. A. Is the project carried out in cooperation with a colleague or institution in a developing country?

If so, whom, and what form the cooperation takes.

B. Other forms of cooperation in connection with the project.  
(NORAD, FN, WHO etc.) Please describe:

10. Publications, if any, connected with the project:

Author:	Title:	Where published and when:

Please use another page if necessary.

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LIST OF ADDRESSES

Aker Hospital, Hormone & Isotope Laboratory, Oslo 5

Botanical Garden, Trondheimsveien 23 B, Oslo 5

Botanical Laboratory, University of Oslo, PB 1045 Blindern, Oslo 3

Botanical Museum, Trondheimsveien 23 B, Oslo 5

Central Bureau of Statistics, Dronningensgate 16, Oslo 1

The Chr. Michelsen Institute for Science and Intellectual Freedom,  
Nygaardsgaten 114, 5000 Bergen

Department of Agricultural Hydrotechnics, The Agricultural University of  
Norway, 1432 Ås-NLH

Department of Botany, The Agricultural University of Norway, 1432 Ås-NLH

Department of Farm Management and Agricultural Economics, The Agri-  
cultural University of Norway, 1432 Ås-NLH

Department of Forest Mensuration and Management, The Agricultural  
University of Norway, 1432 Ås-NLH

Department of Genetics and Plant Breeding, The Agricultural University of  
Norway, 1432 Ås-NLH

Department of Geography, University of Oslo, PB 1042 Blindern, Oslo 3

Department of History, University of Bergen, HF-bygget, Sydnes plass 9,  
5000 Bergen

Department of Horticulture and Greenhouse Crops, The Agricultural University  
of Norway, 1432 Ås-NLH

Department of Ophthalmology, National Hospital, Pilestredet 32, Oslo 1

Department of Pathology, Ullevål Hospital, Kirkeveien 166, Oslo 1

Department of Wood Technology, The Agricultural University of Norway,  
1432 Ås-NLH

The Fridtjof Nansen Foundation at Polhøgda, Fridtjof Nansens vei 17,  
1342 Lysaker

- Institute for Architecture II, NTH, University of Trondheim, 7034 Trondheim
- Institute of Cellulose Technology, NTH, University of Trondheim, 7034 Trondheim
- Institute of Economics, Norwegian School of Economics and Business Administration, Helleveien 30, 5000 Bergen
- Institute of Educational Research, University of Oslo, PB 1092 Blindern, Oslo 3
- Institute for Experimental Medical Research, Ullevål Hospital, Kirkeveien 166, Oslo 1
- Institute of General Literature, University of Oslo, Gydas vei 4, Oslo 3
- Institute of Geography, Norwegian School of Economics and Business Administration, Helleveien 30, 5000 Bergen
- Institute of Geology, University of Oslo, PB 1047 Blindern, Oslo 3
- Institute of Harbour Engineering, NTH, University of Trondheim, 7034 Trondheim
- Institute of History, University of Trondheim, Håkon Magnussons gate 1 B, 7000 Trondheim
- Institute of Hydraulic Construction, NTH, University of Trondheim, 7034 Trondheim
- Institute of Immunology and Rheumatology, National Hospital, Pilestredet 32, Oslo 1
- Institute of Marine Research, Nordnesparken 2, 5000 Bergen
- Institute for Nutrition Research, University of Oslo, PB 1046 Blindern, Oslo 3
- Institute of Pathology, National Hospital, Pilestredet 32, Oslo 1
- Institute of Political Science, University of Oslo, PB 1097 Blindern, Oslo 3
- Institute of Social Anthropology, University of Bergen, Christies gate 5-7, 5000 Bergen
- Institute of Social Anthropology, University of Oslo, PB 1091 Blindern, Oslo 3
- Institute of Social Sciences, University of Tromsø, PB 635, 9001 Tromsø

Institute of Sociology, University of Oslo, PB 1096 Blindern, Oslo 3

Institute of Transport Economy, Stasjonsveien 4, Oslo 3

International Peace Research Institute, Tiedemandsgate 28, Oslo 2

The Marine Biological Station, Espegrend, 5065 Blomsterdalen

Museum of Social History, J. Frieles gate 3, 5000 Bergen

National Institute of Public Health, Geitmyrsveien 75, Oslo 4

Norad, PB 8142 Oslo-Dep., Oslo 1

Norwegian Building Research Institute, Forskningsveien 3 b, Oslo 3

Norwegian Computing Centre, Forskningsveien 1 B, Oslo 3

Norwegian Herring Oil and Meal Industry Research Institute, 5033 Fyllingsdalen

Norwegian Institute of Agricultural Engineering, The Agricultural University of Norway, 1432 Ås-NLH

Norwegian Institute of International Affairs, Bygdø Allé 3, Oslo 2

Norwegian Institute for Urban and Regional Research, Kjelsåsveien 160, Oslo 4

The Norwegian Meteorological Institute, Nils Henrik Abels vei 40, Oslo 3

The Norwegian Missionary Society, Klubbgaten, 4000 Stavanger

The Royal Norwegian Society of Sciences, Museet, Kalvskinnet, 7000 Trondheim

SINTEF, NTH, University of Trondheim, 7034 Trondheim