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ICRAF IN AFRICA
A SUMMARY OF
ACTIVITIES AND ACHIEVEMENTS

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1. GENERAL
 - 1.1. The International Council for Research in Agroforestry (ICRAF) is an autonomous, non-profit international council governed by an internationally constituted Board of Trustees with equal representation from developed and developing countries. ICRAF was chartered in 1978 and set up its headquarters in Nairobi under an agreement with the Government of Kenya.
 - 1.2. The objectives of ICRAF are "to improve the social, economic and nutritional well-being of the peoples of developing countries by the promotion of agroforestry systems designed to result in better land use without detriment to the environment; to encourage and support research and training relevant to agroforestry systems; to facilitate the collection and dissemination of information relevant to such systems; and to assist in the international coordination of agroforestry development.
 - 1.3. ICRAF fulfills its objectives through acting as an international catalyst in agroforestry research. As such ICRAF initiates, stimulates, promotes, and supports research for the development of appropriate agroforestry systems and technologies. It derives its financial support from voluntary contributions, from governments and international private and public organizations and agencies.

2. AGROFORESTRY PROMOTION AND INSTITUTIONAL COOPERATION

2.1. Since 1979, ICRAF has carried out several missions to African countries to promote the concepts of agroforestry and to identify the role agroforestry could play in various countries. The missions have also served to identify potential institutional partners and learn about their activities and interests in land use management. In some cases ICRAF staff have assisted, during these missions, in the preparation of draft project documents. In all, missions have been carried out to 22 African countries (see Fig. 1) and assistance in the preparation of project documents have been provided to Cameroun, Kenya, Malawi, Tanzania, Somalia, Sudan, Zambia, and Zimbabwe.

2.2 In order to utilize its limited resources effectively, ICRAF has taken the opportunity informally to cooperate with other international centres operating in Africa as follows:

- Resource inputs into two of CIMMYT's diagnostic survey and on-farm research training workshops in Harare, Zimbabwe.
- ILCA/ICRAF cooperation in a project on micro-filming of documents on livestock production and those dealing with agroforestry in Addis Ababa.
- Participation in ISNAR's seminar in Agricultural Research in Rwanda.
- Resource inputs into IITA's alley cropping course in Ibadan.

FIG 1 MAP OF ICRAF COUNTRY AND INSTITUTIONAL CONTACTS



- Participation in the CIMMYT/ILCA National Orientation Workshop on Farming Systems in Addis Ababa.

3. WORKSHOPS AND CONFERENCES

- 3.1. ICRAF has actively used workshops, conferences and seminars as effective tools in carrying out its role and in both disseminating and gathering information in Africa. In this context, ICRAF has sponsored and/or co-sponsored 9 workshops, conferences or seminars and provided invited inputs to 21 others in various parts of Africa (see Table 1).

4. FIELD ACTIVITIES

- 4.1. ICRAF operates a 40-hectares field station in Machakos Kenya where 13 AF related trials-cum-demonstrations and four service activities are carried out. The station serves to demonstrate many agroforestry aspects for many scientific farm researchers and development institutions. It also serves as a training ground for many of ICRAF's and other agencies' interns.
- 4.2. The ICRAF diagnostic and design (D&D) methodology has been developed based on extensive field research in Kenya and other parts of Africa. The testing and refinement of this methodology has led to ICRAF's direct participation in a number of formal and informal field activities as follows:
 - 4.2.1. In 1982 ICRAF conducted a D&D survey at Kathama in Machakos Kenya. Work on this larger-than-farm and intra-household scale has since centred on on-farm trials.

TABLE 1: LIST OF CONFERENCES/WORKSHOPS/SEMINARS
SPONSORED/CO-SPONSORED AND THOSE WITH ICRAF'S INVITED INPUTS.

Conference/Workshop/Seminar	Year
<u>Sponsored/Co-sponsored</u>	
1. International Cooperation in Agroforestry, Nairobi	1979
2. Soils Research in Agroforestry, Nairobi	1979
3. Kenya National Seminar on Agroforestry (ICRAF/University of Nairobi), Nairobi	1980
4. Plant Research in Agroforestry, Nairobi	1981
5. Workshop on Agroforestry in African Humid Tropics (UNU/IITA/IDRC, Nigerian Government, Ibadan.	1981
6. Seminar for Government of Kenya Officers, Nairobi	1981
7. Workshop on Agroforestry and Cash-crop based land use systems (ICRAF/BAT) Nairobi.	1982
8. International Workshop on Professional Education in Agroforestry, Nairobi.	1983
9. International Workshop on Tenure Issues in Agroforestry, Nairobi.	1985

TABLE 1 (cont.)

Invited Inputs

1.	USAID Workshop on Forest Energy and Environment, Nairobi	1981
2.	FAO/Finland Training Course on Watershed Management for Africa, Nairobi	1983
3.	Rwanda/ISNAR Seminar on Agricultural Research in Rwanda	1983
4.	UNEP Meeting of Experts from Governments and Scientific Community to develop a programme of action for Environment Education and Training on African Region, Nairobi.	1983
5.	Club du Sahel Workshop on Agroforestry for Sahel Forestry Officers, Abidjan.	1983
6.	Commonwealth Science Council Workshop on Agroforestry, Lilongwe.	1983
7.	Workshop on Management of Food Research in Africa, Nairobi.	1983
8.	12th Session of the FAO Advisory Committee on Forest Education, Nairobi.	1983
9.	Workshop on Rural Afforestation, Harare.	1983
10.	Workshop on Tree Planting Techniques on Kenya Coast, Mombasa.	1984
11.	CAB/Government of Tanzania Conference on Advancing Agricultural products in Africa, Arusha.	1984

TABLE 1 (cont.)

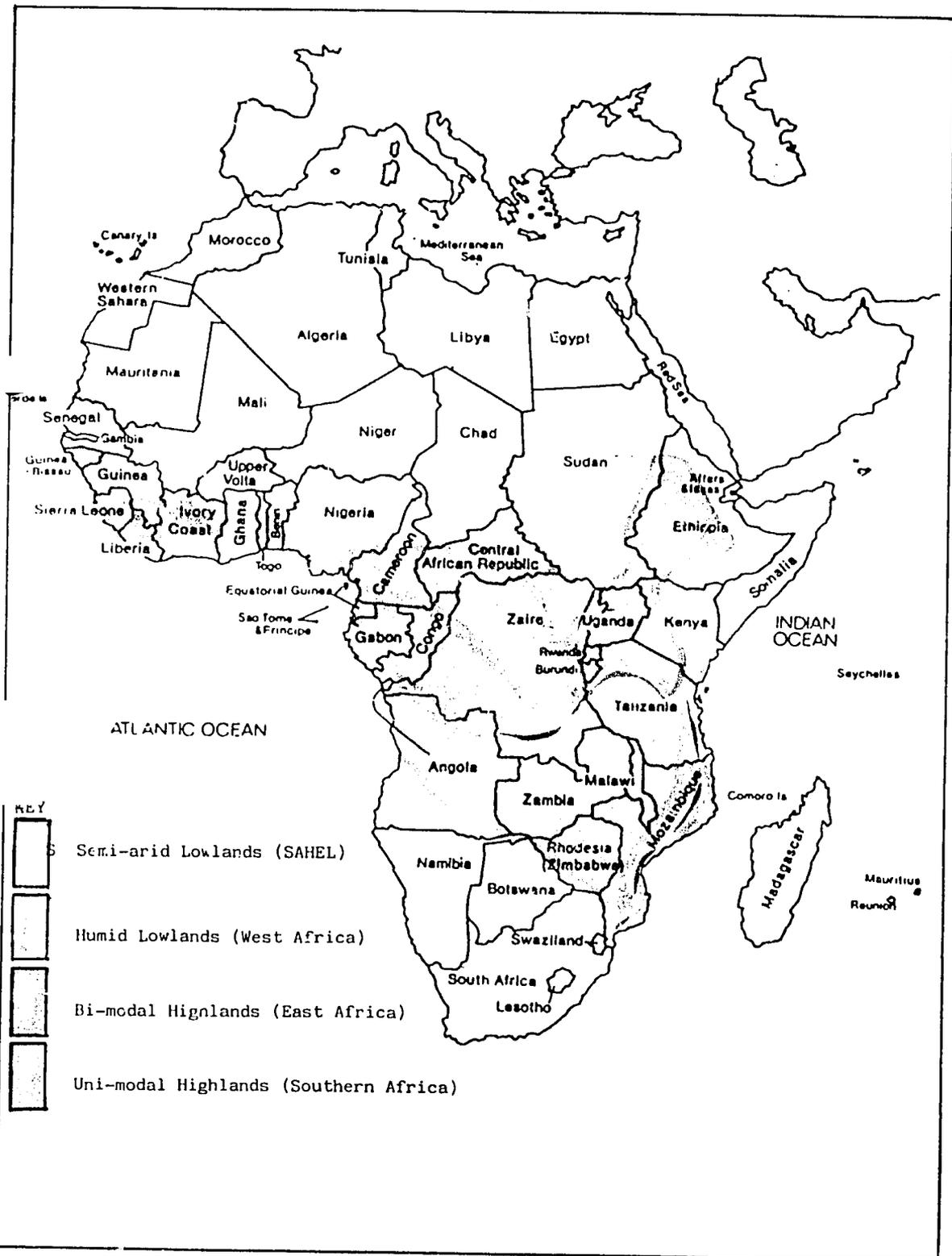
12.	2nd Meeting of the Committee on Agricultural Cooperation on the Preferential Trade Area (PTA), Lusaka.	1984
13.	USAID/REDSO Workshop on Natural Resources Interaction in Eastern and Southern Africa.	1984
14.	Kenya Forestry Officers Conference, Kakamega.	1984
15.	FAO Workshop on Planning Fuelwood Projects, Lilongwe.	1984
16.	JLCA Workshop on Potentials of Forage Legumes in Farming Systems, Addis Ababa.	1985
17.	Egerton University College Curricula Development and Teaching of Agroforestry Courses, Kenya.	1985
18.	UNESCO Agroforestry Training Course for Humid Zone, Makokou, Gabon.	1985
19.	SIDA Study tours for Soil Conservation Officers from Tanzania, Zambia, Malawi and Ethiopia.	1985/86
20.	US Peace Corps Training Programme in Naivasha, Kenya.	1986
21.	Catholic Diocese of Nakuru Workshop on Sustainable Agriculture, Molo, Kenya.	1986

- 4.2.2. In Siaya (Kenya), ICRAF is collaborating with CARE-Kenya to develop and test variable scale approaches and guidelines for agroforestry projects.
- 4.2.3. Preparation of diagnostically derived agroforestry alternatives and drawing up plans for "observation trials" and tree nurseries for the Mazingira Agroforestry Project for rural Kenya, sponsored by Ford Foundation/Dutch Government.
- 4.2.4. In 1982/83 ICRAF assisted in the promotion and formulation of an IDRC-funded Collaborative Project on Dryland Agroforestry Research in Kakuyuni. ICRAF has since continued to provide technical backstopping to the three Kenyan Institutions which are implementing the project.
- 4.2.5. Participation in the implementation of the CIDA/CARE/ICRAF Tree Seed Project in collaboration with Mazingira Institute in Kenya.

5. AGROFORESTRY RESEARCH NETWORKS FOR AFRICA (AFRENA)

In 1984, ICRAF initiated the Agroforestry Research Networks for Africa (AFRENA) programme. It consists of collaborative research and training programmes based on four ecological zones in Africa. The four zones are: (a) the unimodal plateau zone of Southern Africa, (b) the bimodal highland zone of Eastern Africa, (c) the humid rainforest zone of West and Central Africa, and, (d) the semi-arid Sudano-Sahelian zone of West Africa. (see Fig. 2).

Fig. 2 ICHAF: AFRENA ECOLOGICAL ZONES



5.2. The four AFRENA programmes have two overall aims:

- to generate agroforestry technologies which address major diagnosed problems of farming systems in respective zones (e.g. erosion, fertility, fuelwood, etc.), and to adapt these technologies to local national land use circumstances;
- to strengthen national and regional capabilities to conduct long-term technology-generating agroforestry research, by:
 - i) promoting/facilitating inter-institutional collaboration around agroforestry research projects at national level;
 - ii) providing short- and long-term training in agroforestry R&D methods to participating scientists, and;
 - iii) initiating/facilitating collaboration between countries in the respective zone through joint planning and implementation of zonal research programmes in a networking (information, resource- and result-sharing) fashion.

All the four programmes are now at various stages of planning, fund-searching and/or early implementation. As of mid-September, the status of the four programmes is as follows:

5.3. The Southern African (plateau) programme is most advanced. With planning funds from IDRC and CIDA, the four participating countries (Malawi, Tanzania, Zambia and Zimbabwe) in collaboration with ICRAF

have set up national agroforestry committees with membership from 24 relevant disciplinary institutions (see Table 2), have carried out in-depth land use constraint analyses (in their plateau zones), and written draft national plans on agroforestry research priorities. A zonal workshop was held in Harare early September where the four countries and ICRAF finalized zonal and national research plans. The four national AF research team leaders have started a six-month on-the-job training period at ICRAF. During October 1986 an in-depth project planning exercise will be jointly carried out in Zambia by the four trainees and ICRAF scientists. This will be used as a case study for a training course in November 1986 where multidisciplinary teams of scientists from the four countries (and some from other SADCC countries) will be trained in AF research methodologies and procedures by ICRAF staff. Implementation of zonal- and location-specific research projects are expected to start in early 1987.

The whole programme will fall under the SADCC umbrella and will be jointly implemented by ICRAF and SACCAR.

- 5.4. The Eastern African (highlands) programme will comprise Kenya, Rwanda, Burundi and, eventually, Uganda. A cooperative agreement with USAID which will provide the funding for ICRAF for zonal research and for network training and coordination has been signed. Previous contacts in Rwanda (ISAR), Burundi (ISABU), and in Kenya, where collaborative activities are already under-way will gradually be expanded and integrated into the zonal research and training network. Exploratory visits will be made to the countries to initiate the planning process during late 1986. A zonal research coordinator will also be recruited.

TABLE 2 ICRAF COLLABORATING INSTITUTIONS IN AFRENA FOR SOUTHERN AFRICA ECOZONE

COUNTRY	INSTITUTION
TANZANIA	. Department of Forestry (Ministry of Natural Resources & Tourism)
	. Tanzania Forestry Research Institute (TAFORI)
	. Tanzania Agricultural Research Institute (TARO)
	. Tanzania Livestock Research Institute (TALIRO)
	. Tanzania National Research Council (UTAFITI)
	. University of Dar es Salaam
MALAWI	. Sokoine University of Agriculture Forestry & Veterinary Sciences
	. National Research Council
	. Ministry of Agriculture
	. Ministry of Forestry and Natural Resources
	. National Environment Unit
	. Bunda College of Agriculture (University of Malawi)
ZAMBIA	. Tobacco Research Authority
	. National Council for Scientific Research
	. Department of Agriculture (Ministry of Agriculture)
	. Department of Forestry (Ministry of Natural Resources)
	. Department of Natural Resources
	. School of Agricultural Sciences (University of Zambia)
ZIMBABWE	. Department of Research and Specialist Services
	. Department of Agricultural and Technical Extension Services
	. Forestry Commission
	. Department of Natural Resources
	. University of Zimbabwe
	. Environmental Development Agency of Zimbabwe

5.5. The semi-arid Sudano-Sahelian zone programme follows a slightly different approach. ICRAF is collaborating with SAFGRAD with the initial aim of strengthening their farming systems research projects in Benin, Burkina Faso and northern Cameroun by introducing agroforestry components in them. With funding from IFAD, ICRAF has on behalf of SAFGRAD recruited three African scientists (a Kenyan, a Ghanaian and a Senegalese) who will be in charge of the SAFGRAD agroforestry research projects in the three countries mentioned above after they have gone through a six-months training period at ICRAF starting September 1986. The three scientists, together with two or three ICRAF staff members, will travel early 1987 to the three SAFGRAD research sites to carry out detailed project planning. These plans will be written up at ICRAF by the three trainees before they conclude their stay at ICRAF.

5.6. The West African humid forest zone programme will initially be concentrated in one country, Cameroun, where a collaborative research project will be developed during the third quarter of 1986 by Camerounese and ICRAF scientists in the country's southern forested zone. This project will then be used to disseminate the approach among other countries in the ecozone. Funding for the Cameroun Project, both planning and implementation (five years), is already committed by the Near East Foundation in New York. It is envisaged that in the development of research plans ICRAF will work closely with IITA in this zone.

6. TRAINING

6.1. ICRAF attaches strong emphasis on training and education as a means of strengthening the capability of national institutions involved in agroforestry research and development. Africa has benefited most

from this activity. Funded by USAID from 1982 to 1985. ICRAF has offered five 3-week training courses on "Agroforestry Research for Development: Concepts, Practices and Methods". Three of these courses have been in Africa where a total of 71 participants from 21 African countries have been trained (see Fig. 3 and Table 3).

- 6.2. Nine scientists from Kenya, Tanzania, Zimbabwe, Sudan and Ethiopia have benefited from the 6 month on-the-job training scheme with sponsorship from GTZ, Ford Foundation, IDRC and the British Council. Two other scientists from Uganda have benefited from a one-year fellowship scheme. From September, 1986 to March, 1987 seven scientists from the 4 collaborating countries in Southern Africa and three members of the FSR Teams of SAGRAD will take part in the 6 months training.

7. ADVISORY AND CONSULTANCY ASSIGNMENTS

ICRAF staff have provided advice on a wide range of aspects of agroforestry in response to a growing number of specific requests from Africa. As such, a number of advisory/consultancy assignments have been carried out on a cost-recovery basis to provide agroforestry dimensions to research and development projects for donor agencies, development banks, private companies and others (see Table 4).

8. INFORMATION DISSEMINATION

- 8.1. Through ICRAF's Question and Answer Service and mailing list, agroforestry information dissemination is reaching an increasing number of African Research and Development Scientists. Out of 400 requests received for specific agroforestry aspects, 40 per

TABLE 3: TRAINING ACCOMPLISHED IN AFRICA

COUNTRY	COURSES			ON-JOB		TOTAL
	1983	1984	1985	TRAINING	FELLOWSHIP	
Benin	-	1	-	-		1
Botswana	-	1	-	-		1
Burundi	1	-	2	-		3
Cape Verde	1	-	-	-		1
Ethiopia	2	-	2	1		5
Ghana	1	1	-	-		2
Kenya	6	5	7	2		20
Liberia	-	1	-	-		1
Madagascar	1	-	3	-		4
Malawi	1	1	1	-		3
Mali	-	-	1	-		1
Mauritius	1	-	-	-		1
Niger	1	-	-	-		1
Nigeria	1	2	1	-		4
Rwanda	-	-	2	-		2
Senegal	-	1	-	-		1
Sudan	-	2	5	2		9
Tanzania	3	1	-	4		8
Uganda	2	3	3	-	2	10
Zambia	1	-	-	-		1
Zimbabwe	1	2	1	1		6
Total	22	21	28	10	2	83

TABLE 4 ICRAF ADVISORY/CONSULTANCY ASSIGNMENTS IN AFRICA

COUNTRY	ADVISORY/CONSULTANCY ASSIGNMENT
AFRICA GENERAL	<ul style="list-style-type: none"> . Sudano-Sahel profile for use in programme and development for sustainable agricultural production 1979 . UNEP Consultation on Tropical Deforestation (UNEP) 1979 . Booklet prepared on AF for field agricultural officers (USAID) 1984 . Technical Consultation on Wood Energy in Africa (FAO) 1984 . Participation in Project Identification in SADCC countries (SWISS AID) 1984
BURUNDI	<ul style="list-style-type: none"> . World Bank Phase II Forestry Project appraisal Team (World Bank) 1984
KENYA	<ul style="list-style-type: none"> . Kenya Tea Zone Agroforestry Project (KTDA) 1983 . Background report on AF potentials in KENYA (NORAD) 1984 . New Mutaro Womens Group Irrigation Project (EEC) 1984 . Assistance to NORAD Agricultural Project Mission to Kenya (NORAD) 1984 . Kenya Bee-keeping Project Kirinyaga (EEC) 1984 . Baringo Forestry Project (FAO) 1984 . Soil Conservation on Grazing land (SIDA) 1984 . Catchment conservation and Rehabilitation in Lake Victoria Basin (UNDP) 1985/86
RWANDA	<ul style="list-style-type: none"> . Reconnaissance mission and report on AF potential (IBRD) 1984 . Seminar on agroforestry and preparation of a memorandum of agreement with ISAR (Swiss Cooperation) 1984
SOMALIA	<ul style="list-style-type: none"> . Agroforestry Training Course (USAID) 1985 . Global assistance in AF in Research & Development (Swiss Aid) 1984
SUDAN	<ul style="list-style-type: none"> . Reconnaissance Mission and report on AF in Jebel Marra Project (Ford Foundation) 1984-85

COUNTRY	ADVISORY/CONSULTANCY ASSIGNMENTS
TANZANIA	. Training Seminar for Tanzanian Officers (World Bank) 1983
ZAMBIA	. Training Seminar for Officers (SIDA) 1984 . D & D Exercise (NORAD) 1985 . Soil conservation and agroforestry (SIDA) 1985/86
UGANDA	. Restructuring of the Ugandan Agricultural Research (IDRC) 1981
ETHIOPIA	. Agroforestry Consultancy (SIDA/SWEDFOREST) 1985
MALI & SENEGAL	. Fuelwood and Agroforestry in Mali & Senegal Club de Sahel (1983)

cent are from Africa. In addition over 1600 scientists from 38 African countries are on ICRAF's mailing list and do regularly receive ICRAF's Newsletter.

- 8.2. ICRAF is expanding and improving the delivery of agroforestry information services to researchers and field workers in Africa through an IDRC-funded "Agroforestry Information for Sub-Saharan Africa".

9. EXPERIENCE

- 9.1. In back-stopping its activities in Africa, ICRAF has relied heavily on its multidisciplinary staff experience in Africa. Out of 35 professional staff members, 23 of them have spent a total of 230 man-years in Africa prior to joining ICRAF. While at ICRAF the professional staff have spent over 85 man-years in research, training and development work (see Table 5).

Table 5: ICRAF STAFF EXPERIENCE IN AFRICA
(IN MAN-YEARS).

DISCIPLINE	NO OF STAFF	PRIOR TO ICRAF			WHILE AT ICRAF
		RESEARCH	TRAINING	DEVELOPMENT	RESEARCH
SOCIAL					
SCIENCES	(2)	4	6	3	9
FORESTRY	(6)	17	6	13	21
AGRICULTURE	(5)	23	27	2	22
LIVESTOCK	(2)	1	8	21	12
LANDUSE	(4)	11	1	18	13
INFORMATION	(2)	8	2	16	8
ADMINISTRATION	(2)	10		33	
TOTAL	(23)	74	50	106	85*

* 36 ICRAF STAFF MEMBERS HAVE SPENT 85 MAN-YEARS
IN AGROFORESTRY RESEARCH MOST OF WHICH WERE
IN-HOUSE AT THE HEADQUARTERS IN NAIROBI.