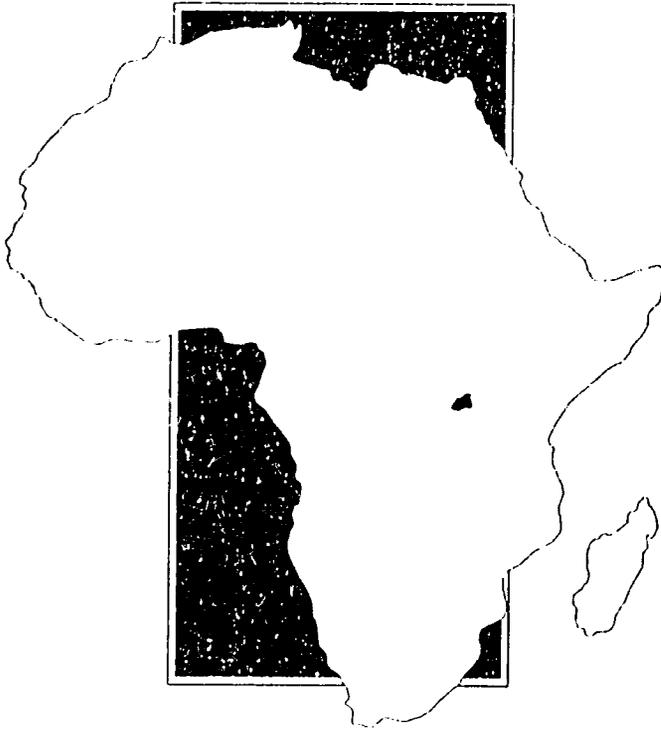


PARCS

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PROTECTED AREA CONSERVATION STRATEGY

ASSESSING THE TRAINING NEEDS OF PROTECTED
AREA MANAGERS IN AFRICA



RWANDA

AWF



AFRICAN WILDLIFE FOUNDATION



The WILDLIFE CONSERVATION SOCIETY

**Biodiversity
Support
Program**



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PARCS

Country Report: RWANDA

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Country Report Rwanda

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EXECUTIVE SUMMARY

RWANDA

TRAINING NEEDS AND TRAINING OPPORTUNITIES ASSESSMENTS

Introduction

Protected Area Managers (PAMs) play a vital role in the protection and conservation of Africa's rich biological resources. Protected area management in Africa is becoming an increasingly complex task requiring technical skills relating not only to wildlife and tourism, but to management, planning, law, policies, finance and accounting as well.

Traditional training institutions and programs for PAMs in Africa generally have not kept pace with the increasing demands on effective protected area management. The PARCS project seeks ways to facilitate the process of developing training programs for skills and competencies in which PAMs themselves recognize a deficiency.

The PARCS Phase I training needs and training opportunities assessments address two questions: (i) "What training do PAMs need in order to enhance the conservation of Africa's protected areas?", and (ii) "What can be done to provide such training for PAMs?"

A questionnaire was designed to gather data on the training needs of protected area managers. The questionnaire was designed as a job description and provided a qualitative and quantitative means of assessing training needs. It assessed both the levels of skill considered necessary to satisfactorily do the job of a protected area manager, and the levels of skill currently possessed by PAMs. Differences between the level of skills needed for the job and the level of skills which PAMs currently have were recognized as a training need. Further information on training needs and training opportunities were obtained through interviews with PAMs, their supervisors and colleagues. This questionnaire was designed in such a manner that the results could be compared and analyzed across three regions of Africa.

Phase I of PARCS (Protected Area Conservation Strategy) constituted the first step in a four year project. The second step, in Phase II, will address the priority training needs in a number of pilot countries in Central, East and Southern Africa, based on the needs and recommendations identified in Phase I.

The first phase of PARCS activities was funded by the Bureau for Africa's Policy, Analysis, Research and Technical Support (PARTS) project through the Research and Development Bureau's Conservation of Biological Diversity Project. Supplementary funding was provided by World Wildlife Fund (WWF). The first year of Phase II (October '93 to October '94) is being funded by the Bureau for Africa's PARTS project.

The Biodiversity Support Program (BSP) is the implementing agent for PARCS. BSP is a USAID-funded consortium of World Wildlife Fund (WWF), The Nature Conservancy (TNC), and World Resources Institute (WRI), established to implement a Cooperative Agreement (No. DHR-5554-A-00-8044-00) between WWF and USAID.

BSP is implementing PARCS in conjunction with three U.S. conservation NGO's active in Africa: The African Wildlife Foundation (AWF), NYZS/ The Wildlife Conservation Society (WCS), and World Wildlife Fund (WWF). For all PARCS activities, AWF is the lead organization in east Africa, WWF implements PARCS in southern Africa, and WCS has responsibility in francophone central Africa.

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Training Needs Assessment

Protected areas fall under the jurisdiction of three organizations, in Rwanda. The Ministry of Agriculture is responsible for the Forestry Department (Direction Générale des Forêts, DGF) and forest reserves; the Ministry of Environment and Tourism (MINETO), and the Office Rwandais du Tourisme et des Parcs Nationaux (ORTPN) are responsible for protected areas such as National Parks and National Monuments. In the past, the ORTPN was a parastatal body, responsible directly for all protected areas outside of the forest reserves. As of mid 1993 it became linked to the MINETO. Both ministries employ protected area managers in the field. The MINETO and ORTPN employ "conservateurs" and the DGF employs "directors" in each of the forest reserves. Neither the ORTPN, the newly created Ministry of Environment and Tourism nor the Direction Générale des Forêts (DGF) have specific training plans for their staff. They do not have specific plans to programme the careers of their protected area managers in the field and to enable the acquisition of specific skills required for the job. Formal institutes used for the training of staff are predominantly the University of Rwanda, local Agricultural and Forestry institutes and foreign universities as well as the Ecole des Spécialistes de la Faune in Garoua, Cameroun.

All three organizations recognized the need for the development of a training plan to better equip their protected area managers (PAMs) with the skills and competencies required in their jobs. For the purpose of this assessment, a training plan is defined as a structured programme that operates on a pre-established timetable to ensure that all protected area management staff receive adequate and equal training prior to assuming their posts as well as professional development and regular refresher courses throughout their career. Such a training plan would also include monitoring and evaluation of the training programs undertaken.

Two protected area managers (PAM), five field operations directors (FOD) and one field associate (FA) completed the questionnaire evaluating the training needs of PAMs. Discussions were also held with numerous headquarters staff at the three organizations and with people involved in donor-funded projects in protected areas in Rwanda, as well as with the people who completed the questionnaires.

Analysis of the questionnaire formed the backbone of the training needs assessment, even though only two PAMs evaluated their own training needs. The 6 questionnaires completed by FODs and the FA were felt to provide sufficient information to supplement the assessment by PAMs. The discussions with the PAMs, FODs and other people allowed a great deal of additional information to be incorporated in this assessment which would not have been covered by the questionnaire alone.

In order to ensure that the questionnaire accurately reflected the scope of responsibilities held by PAMs in Rwanda, the first step in the Phase I assessment was to "validate" the questionnaire: the different categories of respondents reviewed the levels of skill set in the questionnaire by the PARCS team to determine whether they correctly reflected the skills/competencies and main divisions of the PAMs' job. The skills/competencies and main divisions of the job listed in the questionnaire included: Knowledge Skills such as technical knowledge, management knowledge, planning knowledge, legal knowledge, knowledge of policies and procedures, and financial knowledge; Mental and Social skills such as comprehension, problem analysis, creativity, evaluation, oral, written and working with others; Main Divisions of the Job, such as staffing, infrastructure, accounts, tactical plans, laws and regulations, visitors, interventions, community conservation, research, public relations and resource conservation. Training needs for each skill/competency were revealed by a gap analysis which determined the difference between PAMs current skill levels with the levels that they considered necessary to satisfactorily do their job.

Major Training Needs

Although training needs were identified for all skills, the priority training needs identified were the following:

Policies and Procedures
Finance and Accounting
Legal
Technical

Policies and Procedures involves the knowledge of the national, and institutional, policies for protected areas and the official procedures through which these policies must be met.

Technical skills include knowledge of both the theoretical principles of biology, ecology, and tourism, as well as the practical skills necessary in the field.

The Mental and Social Skills in which priority needs for training were identified included:

Creativity
Problem Analysis
Working with Others
Comprehension

The main divisions of the job in which additional skills (and therefor training) were required were:

Community Conservation (eg., interacting with local communities and involving them positively in the conservation process)

Resource Conservation (eg., balancing human use and protection of natural resources)

Interventions (eg., wildlife management and control, vegetation management, human resource use management in and around protected areas)

Constraints on PAMs meeting their job responsibilities include the lack of a well-structured in-service training programme, as well as other constraints such as infrastructure and budget. Funds are usually relatively limited and often PAMs find themselves working in situations which could be much improved by additional input of funding. Overall, however, protected area managers in Rwanda are more adequately backed with funding than in other countries. One of the reasons for this is that the ORTPN has relative autonomy over the management of its funds. Funds generated by tourism are used within the organization. An additional constraint is often the lack of motivation of people in the field due in part to insufficient feedback and evaluation of performance. The major constraints are therefore imposed by limited financial resources and the lack of specific and structured in-service training programs, as well as a lack of motivation in field based personnel.

Recommendations

One of the objectives of the PARCS project is to assist target countries to develop appropriate and sustainable training programs for PAMs. Another objective is to promote inter- and intra-regional approaches to training by providing opportunities for contact between PAMs from different countries and by encouraging them to participate in regional training programs, providing opportunities to do so where possible. The Central African region, including the eastern Zaire/Nile Divide and the western Greater Congo Basin include a number of protected areas with different ecological, economic and sociological functions. PAMs from the whole region could profit from initiatives and expertise developed in different countries. As a collaborative project operating in countries in Central, Eastern and Southern Africa, PARCS could play a vital coordinating and facilitating role to this goal.

A primary recommendation of this training needs assessment is to develop and emphasize the role of in-service and on-the-job training as a means of addressing the training needs of PAMs identified. Course topics should be based on the key training needs in each competency identified by the "gap analysis" and should concentrate on the main divisions of the job requiring priority attention. Specifically, these skills include Policies & Procedures, Financial, Legal and Technical skills, and involve community conservation, resource conservation and interventions. The development of the mental and social skills involved in problem solving should be a technique used in the training courses with special emphasis on the skills demonstrating the greatest gaps. PARCS involvement in the development of such a programme could consist of providing expertise in preparing a syllabus and materials for each course, developing a course schedule that would fit into a general training programme, and identifying potential course venues and instructors. In focal countries, PARCS will be able to work closely with a training officer or person responsible for training in each department. The emphasis of training programs will be as much as possible on practical, field-based training, using "hands-on" techniques.

A goal of PARCS Phase II would be to assist in the development of a "training ethic", emphasizing that training should be a process and not a single incident in a career. PARCS should facilitate the development of a training plan for the departments in charge of protected areas. The long term goal of developing a training plan and programme in each department is to allow each PAMs career to follow a pathway based on performance and initiative.

Country Report Rwanda

Section 1: Protected Area Conservation Strategy

1.1 The Approach

Africa's system of national parks and protected areas constitutes one of the most important safeguards of the continent's rich biological diversity. Protected Area Managers (PAMs), the decision-makers in the field play a critical role in the overall functioning of these areas. In recent years a number of observations on factors constraining effective protected area management, drawn from experiences in the field, have been made. They include:

- a The job of a PAM is becoming an increasingly complex task, requiring technical skills relating not only to wildlife and tourism, but to management, planning, law, policies, finance and accounting as well.
- b Traditional training institutions and programs in Africa generally have not kept pace with the increasing demands of the PAM's job.
- c Courses offered at leading wildlife institutions are often too theoretical, academic, broad-based, host-country specific, and habitat-specific.
- d Few PAMs have access to the formal training opportunities available.
- e Few data exist on the effectiveness, relevance, and value of traditional and non-traditional forms of training for PAMs.
- f The capacity for institutions to train and develop training programs needs to be strengthened.
- g Existing training institutions and programs need to revamp their curricula to address the specific needs of PAMs.
- h Relevant training opportunities outside the traditional conservation sector need to be identified and made available to PAMs.

1.2 The Project

In light of the above the PARCS project seeks to address two questions: (i) what is needed in respect of PAM training to enhance the conservation of Africa's protected areas? and (ii) what can be done to provide such training for PAMs? PARCS is attempting to do this by:

- a undertaking an assessment of training needs, priorities, constraints, and opportunities for PAMs in three regions of sub-Saharan Africa (east, central, and southern)
- b establishing (pilot) training programs to implement recommendations from the project's training needs and opportunities assessments
- c developing a broad series of recommendations for training protected area management staff

The PARCS project is envisioned as a multi-year activity. During the first year (Phase I) an in-depth assessment of training needs, priorities, etc., was completed in each region. Specifically, for PAMs, the assessment was designed to:

- a assess skills needed for effective protected area management
- b assess present skill levels
- c determine the types, amount and frequency of training currently received by PAMs
- d assess training needs of PAMs
- e identify constraints to adequate and effective training
- f identify the institutions and programs presently used for training
- g identify potential opportunities for relevant training
- h identify pilot activities to test innovative training methods

1.3 Overarching Questions

Data generated by the training needs and training opportunities assessments were used to answer a suite of over-arching questions which address the main points outlined in Section 1.2 above. These questions are listed below and are divided into broad, general categories of enquiry each with a sub-set of subordinate, specific ones.

The Questions

1. **What are the responsibilities of a PAM; are they universally recognized?**
 - a What are the descriptions and understandings of the responsibilities of a PAM currently declared by resource management authorities?
 - b What are the responsibilities recognized by PAMs?
 - c How do PAMs perceptions compare with PARCS perceptions?
 - d How do trainers' perceptions compare with PARCS' perceptions?
 - e Has the job of a PAM changed over the last 20 years?
 - f What are others' perceptions? Do they match PAMs' and/or PARCS'?
2. **What are the constraints on meeting these responsibilities? Where does training fit in?**
 - a Where are the overall constraints?
 - b What is the importance of training in overcoming constraints?
3. **Are PAMs skilled to the level necessary to do the job? If not, where are the deficiencies?**
 - a Are skills satisfactory compared to PARCS' perceptions of job skills?
 - b Are there differences between biomes in the technical knowledge of PAMs?

4. **What training has been received by current PAMs? What is perceived by them as useful: how much and what kinds, and relevant to which job requirements?**
 - a What existing training has been received by PAMs?
 - b Comparisons of types of training received by PAMs (in respect of years of service) that has contributed most to gaining skills
 - c Does training received cover all major requirements?
 - d How well does existing training prepare PAMs? Does type of training received reflect the degree for preparation of job requirements?
 - e Does exposure to various conservation techniques (other than in-service training) improve PAMs skills and knowledge?
 - f What do training programs aim for?

5. **Assessment of Field Operations Directors (FODs)**
 - a What are the responsibilities of senior management positions?
 - b What kind of training has been received in these areas?
 - c What are FOD training priorities?

6. **What further training is required?**
 - a Where are the biggest gaps perceived by PAMs between self-evaluation and those required for the job?
 - b Where are the biggest gaps perceived by others?
 - c What are the constraints to training?

7. **What present programs could be enlarged/restructured to include training opportunities for PAMs?**

8. **Are there other appropriate training opportunities that have not been utilized?**

9. **What kind of training should be recommended?**

1.4 The Process

The PARCS project is managed by the Biodiversity Support Program (BSP) and implemented by a collaborative group of three NGOs: The African Wildlife Foundation (AWF), NYZS/ The Wildlife Conservation Society (WCS), and World Wildlife Fund (WWF). AWF is the lead organization in eastern Africa, WWF heads PARCS in southern Africa, and WCS has assumed lead responsibility in francophone central Africa.

Funding for PARCS comes from the Bureau for Africa of the U.S. Agency for International Development (AID). Supplementary funding has been provided by WWF, with AWF, WCS and WWF contributing staff time to the project as well. Furthermore, each collaborating organization is drawing from its expertise and experience with related on-going activities in the field, to enhance the PARCS assessments.

The methodology for the PARCS assessment was developed during a four-day workshop in Nairobi in August 1992. The workshop participants included the three NGO Regional Managers (RM), the BSP core-team member, and a facilitator (training specialist) from Price Waterhouse. [For full details on the methodology see BSP,1993, "Protected Area Conservation Strategy (PARCS). The Methodology".]

Following the workshop, the methodology was reviewed by a number of key members of the conservation community in Kenya and Zimbabwe and a sampling of wardens from several African countries. The RM in southern Africa conducted a trial assessment of training needs in Malawi between 13 Sep and 2 Oct. The methodology was also reviewed by the core team in September and amended in light of those reviews.

1.5 Goal of the Methodology

The main tool of the training needs assessment was a questionnaire (Annexe 1) designed at the methodology workshop in Nairobi. A questionnaire approach was adopted for the needs assessment for the following reasons:

- a The questionnaire could be designed as a matrix and serve as an efficient and practical way to present the array of specific skills required for the job of a PAM
- b It would provide a convenient tool to compare outside assessments of the skills required of the PAM with the PAMs' own perceptions of required skills
- c It would provide a qualitative and quantitative means of assessing training needs
- d It would lend itself well to standardized data extraction, manipulation, comparison and analyses across the three regions of Africa

A strength of the questionnaire is that it is not just a means of gathering information, but it is a training tool in and of itself. The process of leading the PAM through the questionnaire was designed to stimulate thought and discussion on the important facets of protected area management - the questionnaire may well influence the way some PAMs look at their jobs and their role in managing those Areas.

1.6 Target Groups

The primary target group for the PARCS assessment is the Protected Area Manager (PAM), the highest ranking manager on-site in a protected area. Across the many countries in the PARCS assessment, a wide variety of individuals with a multiplicity of titles may act as PAM (e.g., regional officers, warden, senior warden). In order to identify the appropriate individuals for the assessment in each country, it is necessary to carefully examine organizational structures and job descriptions.

In some countries problems in protected area management may result from the placement of higher level staff who have little, if any, experience in such fields as management and planning. Hence, in countries where the PARCS RM and his/her core team representative deemed it possible and desirable, the assessment was broadened to include the level of management above the PAM, i.e., Field Operations Director (FOD) at the government's conservation authority's (CA) headquarters.

It is also recognized that in many cases the job of PAM will eventually be filled by individuals immediately below this level (depending on organizational structures and the procedures of the organization). The RM and his/her core team representative therefore also sometimes included in the assessment individuals directly below the PAM. In Tanzania, for example, there are senior wardens, wardens, and assistant wardens, so assistant wardens may be included in the assessment. In countries such as Zaire, where there are rarely managerial positions below the PAM, lower levels were not included.

The categories of people who were potentially asked to participate in the assessment are listed below:

- a Subordinates to the PAM (e.g., assistant warden) and other individuals who are likely to work as PAMs in the future
- b Protected Area Manager (PAM);
- c Officers senior to PAMs, and other individuals who have recently worked as PAMs
- d Field Operations Director (FOD)
- e Trainers/lecturers at wildlife institutions where PAMs receive training
- f Research Officers

1.7 Target Countries

The PARCS assessment was intended to cover as many countries in eastern, central and southern Africa as possible. In this way, the end product should provide a comprehensive assessment of the training needs and opportunities over a sizeable part the continent.

Practical realities, however, inevitably dictated that in-depth assessments could only be done in some countries, limited assessments in others' and no assessments in yet others. In-depth assessments involved in-country site visits and followed the methodology described in this document. Limited assessments involve more cursory assessments, often conducted from outside the country using means available (limited use of the questionnaire through selective interviews and mailings, collection of baseline data through telephone interviews, literature searches, etc.).

The practical realities that dictated where assessments were conducted included, but were not limited to:

- a government cooperation
- b USAID cooperation
- c civil war/unrest
- d relative importance placed on a country's biodiversity and protected areas vis a vis other countries in the region
- e potential for follow-on activities

The categorization of countries was as follows:

Eastern Africa

In-Depth Assessments: Tanzania (including Zanzibar), Kenya, Uganda, Ethiopia

Limited Assessments: Somalia

Central Africa

In-Depth Assessments: Cameroon, Congo, Rwanda, Zaire

Limited Assessments: Burundi, Central African Republic, Gabon

Southern Africa

In-Depth Assessments: Botswana, Malawi, Zambia, Zimbabwe

Limited Assessment: Mozambique

Special Assessment: Republic of South Africa (training opportunities only)

1.8 Preliminary Groundwork

Regional Managers arranged an initial meeting with a senior official of the appropriate government CA in each country to describe the PARCS project. In a subsequent meeting, which may have been attended by the authority's training officer as well, the following information was sought:

- a organizational structure for the whole Department and, if available, for individual protected areas
- b minimum requirements for, and descriptions of, the job of PAM, FOD, and other positions as appropriate
- c training records
- d in-service training programs (how often provided? who plans them? numbers of staff attending courses? financing? etc)
- e formal wildlife training institutions used (who attends them? how many?)
- f other training opportunities (workshops, seminars: who attends? how many? financing?)
- g number of Departmental training officers (job descriptions?)
- h training programs (annual budget, evaluations, constraints)

Since PARCS is intended to be conducted in an adaptive way, reflecting the needs and wishes of government programs and interests in training, the government CAs were invited to plan how the PARCS project should be conducted.

It was explained to the CAs that the preferred (PARCS) strategy for conducting the questionnaire is for the RMs to hold interviews and discussions with PAMs and make site visits to directly observe Protected Area management. The RMs would, however, tailor their approach to individual country circumstances. Options for conducting the questionnaire were:

- a to explain the questionnaire and have the PAM fill it out with the RM nearby to assist
- b to explain the questionnaire and leave it for the PAM to fill it out on his/her own time
- c to explain the questionnaire in a workshop and have PAMs fill it out individually
- d to mail out the questionnaire
- e to use a consultant or colleague to do one or more of options a-c

The CA Director was then invited to decide which method was best for the PARCS assessment, and requested to help set up meetings and/or workshops with PAMs. The Director was also asked to recommend people to talk to about training opportunities.

RMs then arranged meetings with FODs during which they were asked to complete the needs assessment questionnaire as an independent validation of PAMs' own responses.

Where appropriate, the RM discussed the FODs' position and training needs, including such topics as:

- a Strategic planning
- b Development and compliance of policies, procedures, and standards
- c Representation of organization and public relations
- d Planning optimal deployment of well-motivated competent staff
- e Development and achievement of operational plans and budgets
- f Planning for availability and optimal deployment of technical specialist services from headquarters to protected areas
- g Ensuring availability of hardware and software necessary to achieve organization's objectives, within budget
- h Managing concessions in protected areas

The FOD was asked to: verify that these are the key aspects of the job and to comment on the list; indicate what kind of training is needed to accomplish these tasks, and what are the constraints to obtaining this training.

Section 2: Training Needs Assessment

2.1 Introduction

2.1.1 Summary of country's Protected Area System

Rwanda is the most densely populated country in Africa, with more than 7.5 million inhabitants (1990) over a surface area of 26,338 km². Despite this high population pressure, however, more than 10% of the national territory is covered by protected areas, (ORTPN 1991).

Historically, the western parts of Rwanda were covered by forests, and in the eastern regions were expanses of savanna forests. Today, agriculture has reduced the forest cover to 6-7%. What remains of the forest is now limited to high altitudes, on the Zaire-Nile Divide, between 1600 and 3000m in altitude. As the only remaining area of forest cover, it is coming under increasing population pressure and is being steadily degraded and diminished. The survival of the estimated 1 million inhabitants living in the area around the forests depends to a large extent on these forests, and the its conservation and management will have important consequences on the economic development of the region, and the country (Minagri, 1984).

The decrease in forest cover in Rwanda is due largely to population growth and a resulting demand for agricultural land. This growth has pushed people into increasingly marginal areas with ever decreasing crop output. Rwanda's population has been estimated to double by the year 2000. Whether or not it will be possible to protect the existing natural forest in Rwanda will depend mainly on population control and agricultural intensification programs (using fertilizers, improved crops, etc) as well as an improved agricultural commercialization programme (Minagri, 1984).

The most important reserve of natural forest in Rwanda is the Nyungwe Forest, with great potential value both in ecological terms as well as for potential exploitation. The Nyungwe Forest Conservation Project (PCFN) operated by NYZS/ The Wildlife Conservation Society with funding from USAID, started in 1988 and has concentrated mostly on community education, tourism development and research, applied to the management of the forest. The Nyungwe forest covers 970km², of which about 40% profits from protection as a Réserve Naturelle Forestière. The rest is divided into 4 management zones under the jurisdiction of the Direction des Forêts.

Table 1
Protected Areas of Rwanda

Name of area	IUCN Category	Area (ha)	Year Notified
Parc National de l'Akagera	II	312,000	1934
Parc National des Volcans	II/IX	15,000	1925
Domaine de Chasse Mutara	VI	30,000	1934
Forêt Naturelle de Nyungwe	VIII	97,000	1988
Forêt Naturelle de Gishwati	VIII	28,000	
Forêt Naturelle de Mukura		2,000	

NB. The figures for the Area differ between reports, where PNV has between 12,500 ha and 15,000 ha, PN Akagera between 312,000 and 250,000 ha, Gishwati between 28,000 and 60,000 ha.

ORTPN maintains a somewhat symbolic presence in the last two forests listed, with a few guards only (AECCG report).

2.1.2 Protected Area organizations

Tourism figures as the third most important source of foreign currency in the country, after coffee and tea. Tourism in Rwanda is centered principally on its protected areas and wildlife. In 1989 the UNDP and the Organisation Mondiale du Tourisme wrote a "Plan Directeur pour le Développement du Tourisme". This document analyzes the tourism situation in Rwanda and proposes different ways of developing this crucial economic resource. Recently different organizations, (USAID, UNDP and WB) collaborated with the Ministère du Plan to create a "Stratégie Nationale de l'Environnement au Rwanda" (SNER). The SNER has as its principal focus the integrated management of demography, environment, development and natural resources. SNER resulted from the National Environmental Action Plan, which tried to find a solution to the acute problems of Rwanda in terms of the environment and which attempted to find a means for sustainable development in the country (ORTPN, 1991; IUCN, 1992).

One of the organizations responsible for protected areas in Rwanda is the Office Rwandais du Tourisme et des Parcs Nationaux (ORTPN). It is directly under the control of the presidency and has complete administrative and financial autonomy. Its mandate is :

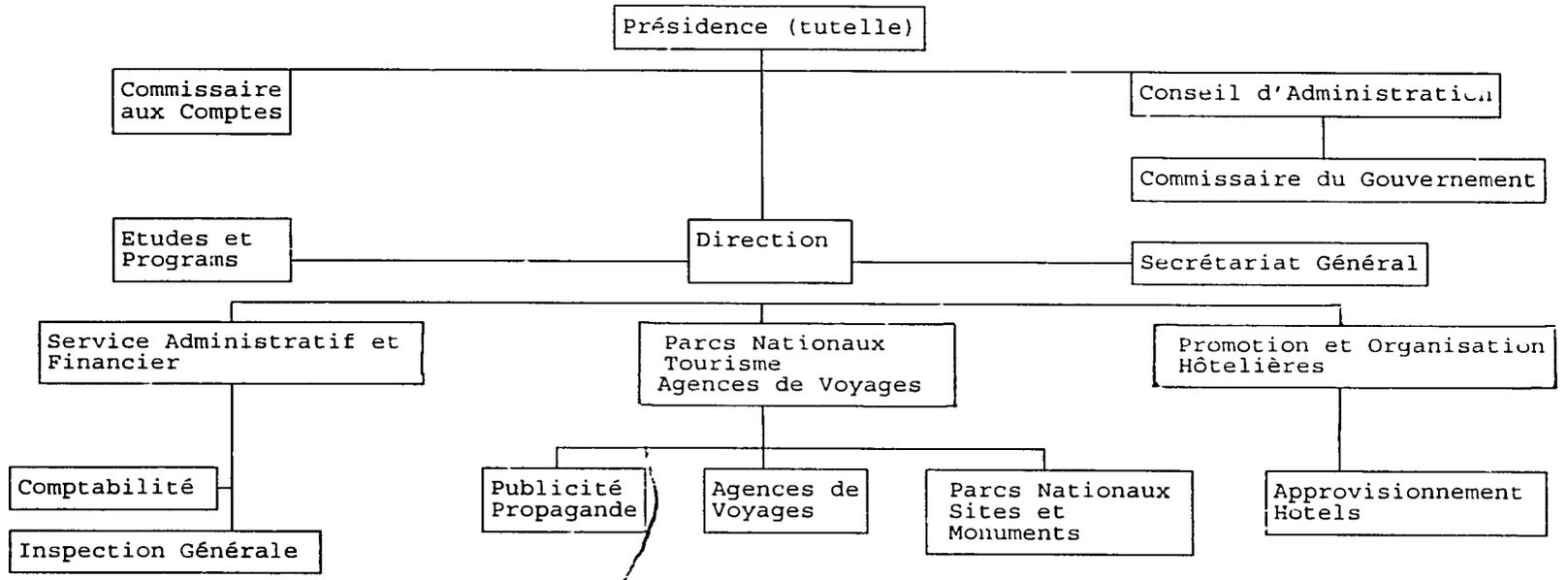
- to assure the promotion of tourism and to facilitate and contribute to the development of tourism;
- to ensure the protection of nature of Rwanda, and especially its fauna and flora, facilitate scientific research and encourage tourism, on the condition that the two latter activities are compatible with the protection of nature.

In addition to the national parks and hunting reserves (réserves de chasse), ORTPN is responsible for 7 hotels and guest-houses, as well as the fisheries of Lake Ihema (inside the PN de l'Akagera).

The ORTPN is administered by a Conseil d'Administration (CA) composed of 6 members, including one president and one vice president. Management of the ORTPN is assured by a Directeur Général. A Commissaire du Gouvernement also attends the CA meetings as an observer, and two Commissaires aux Comptes analyze the organization's accounts.

In principle the ORTPN receives no funds from the government. It uses the receipts generated through the parks and hunting reserves, as well as its hotels.

Organigram:



In 1991, from a total of about 365 employees to ORTPN, 194 (53%) were based in the parks and reserves (most of whom are involved in protection), 58 (16%) are working in the central administration in Kigali, and the rest, 31% are working in the different hotels and the fisheries of lac Ihema (ORTPN 1991).

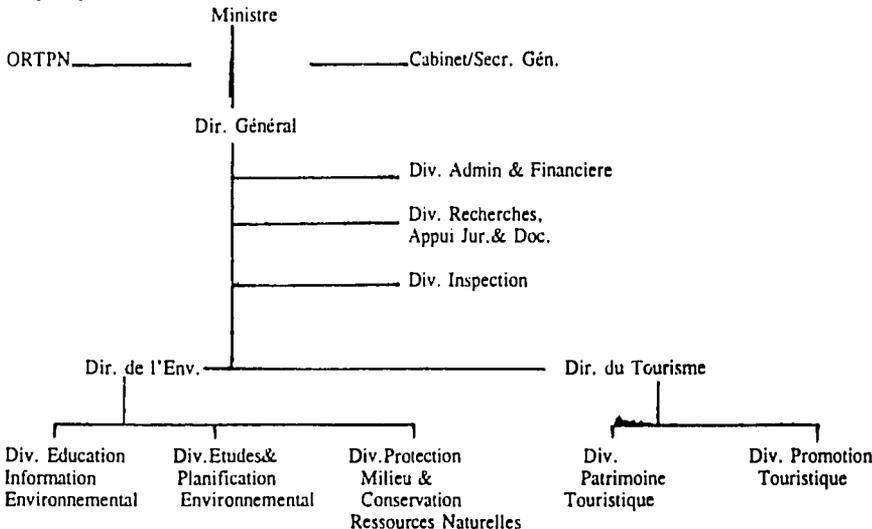
Parc National de l'Akagera-Domaine de Chasse	84 people
Parc National des Volcans	83
Réserve de Forêt Naturelle de Nyungwe	27

Forestry falls under the jurisdiction of the Direction Générale des Forêts (DGF), of the Ministère de l'Agriculture, de l'Elevage et des Forêts (MINAGRI). Since its creation in 1984, the DGF has received support from the Canadian Cooperation and its "Projet d'appui institutionnel et Formation forestière". Its principal objective is to contribute to the improvement of the DGF's capacity to manage its forestry activities. The Swiss government is also contributing logistically and financially to the DGF.

There are two directions in the DGF: The Direction des forêts et des produits forestiers (Department of forests and forest products), with three divisions: 1) gestion et aménagement forestier (forestry management and development), 2) inventaire forestier (inventories), and 3) produits forestiers (forestry products); the Direction du Secrétariat du Fonds forestier national (Department of the national forestry fund) with two divisions: 1) projects and 2) finance and accounting. Other organizations, both statal and parastatal, are also involved in the forested sector. These include: 1) Fisheries, under the Direction Générale de la Production Animale (Department of Animal Produce) of MINAGRI, 2) Soil conservation, under which also falls agroforestry, under the jurisdiction of the Direction Générale du Génie Rural et de la conservation des sols of the MINAGRI (Civil Enigeering and Soil Conservation), 3) management of national parks and hunting, under ORTPN, 4) training of the forestry cadre in the MINEPRISEC (Ministry of Primary and Secondary Schools) and MINESUPRES (Ministry of Tertiary Education), 5) environment in the MINETO and finally, 6) ISAR is involved in forestry research (Mhirit, 1992).

The Ministry of Environment and Tourism (MINETO) was created only in 1992 and originated as a project on environmental planning. This project is now the Department of Environment and is the nucleus of the new Ministry.

Organigram: MINETO (July '92)



Each division and service has a description of the jobs and goals of the division, and this also serves as a job description, to some extent.

2.1.3 National conservation strategy & conservation objectives

Legal Background (IUCN, 1992, and ORTPN, 1991):

Protected Areas:

The Décret-loi du 26 Avril 1974 describes a National Park as an area reserved for the propagation, protection, conservation and development of the vegetation and the wild animal populations, as well as the protection of sites, landscapes or geological formations of scientific or aesthetic value.

A Domaine de Chasse is an area reserved for conservation, management and protection of wild animals, as well as the protection and development of the habitat.

Partial Reserves or Sanctuaires are created, by a ministerial arrêté for the protection of animal or plant species that are particularly threatened and the habitats essential for their survival.

Hunting:

The same law fixes the regulations applicable to hunting. There are various kinds of permits, related to the types of animal the hunter is authorized to shoot. Under normal (non war) conditions, hunting is permitted from November to March. The number of quotas is determined following previously held censuses.

Protected Species:

The same law is accompanied by three annexes listing the three different categories of animal: the first lists animals which are totally protected except for with a scientific or an administrative hunting permit, and is usually accompanied by taxes. The second list figures those animals under partial protection and on whom hunting is authorized only with a hunting permit. The third list figures those animals classified as pests.

There is no clearly defined Forestry Policy in the Direction Générale des Forêts. Three main lines of orientation have been identified, however, upon which an action plan could be based. These include:

- 1) establishment and conservation in the long term of the ecologically balanced natural forests,
- 2) increasing forestry production,
- 3) improvement and increasing the value of forestry production.

The main actions proposed are:

- 1) supporting the conservation and management of the natural forest reserves,
- 2) extending reforestation activities,
- 3) developing the integrated utilization of ligneous plants in the agricultural economy,
- 4) development of a coherent forestry economy,
- 5) developing the economical use of ligneous biomass as an energy source,
- 6) development of applied research and training of the forestry sector (Mhirit, 1992).

In 1988 the Conseil National de Développement adopted the Law 47/1988, which has as its main principal the obligation to maintain and develop the forest cover of the country and the institutionalization of the forestry sector.

The Ministry of Agriculture (MINAGRI) has started development of a forest management policy. For this to be possible, a study was carried out to:

- make a diagnosis of the situation and examine the possible interventions (actions) which would enable the adoption of a clear policy for the management of these forests.
- collect the data in order to prepare operational plans for projects based on the identification of zones and forms of interventions (MINAGRI, 1984).

2.1.4 Existing training programs

2.1.4.1 Forestry Training

The entire educational system in Rwanda was changed in 1977. It now is composed of three stages: 1. primary and post-primary, 2. secondary, and 3. tertiary education. Post-primary education is for those students who did not pass on to secondary school. Secondary school can be general or professional/technical training. Both must prepare students for professional training and tertiary education. There are two secondary schools for agriculture that train forestry technicians, Nyamishaba and Kibisabo. The higher level cadre is trained abroad, especially in Belgium, Canada and East Africa. The following table presents the number of Rwandan forestry personnel having been trained in 1991:

Table 2
Rwanda Forestry Training

Training Institutions	Numbers of People		Total
	A0	A1	
1. Makerere Univ. (Uganda)	4	-	4
2. Laval Univ. (Canada)	2	10	12
3. Univ. of Idaho (USA)	1	-	1
4. Univ. of Banghor (India)	3	3	6
5. I.I.C. (Netherlands)	1	2	3
6. Morogoro Univ. (Tanzania)	3	24	27
7. Eldoret Univ. (Kenya)	-	4	4
8. University in USSR	2	-	2
9. Institut de Bouaké (Ivory Coast)	-	6	6
10. Zinguirichot School (Senegal)	-	1	1
Total	16	50	66

A0 is the level of Engineer, and A2 is the level of superior technician.

Forestry technicians (A2) are trained at secondary schools: the Ecole Agricole et Forestière de Nyamishaba and the Ecole véto-forestière at Kibisabo. The courses taken include general information, earth science, forestry techniques, socio-economic and administrative courses, and some field excursions. At a lower level there are also Centres d'Enseignement Rural et Artisanal Intégré (ERAI) (Rural and Integrated Artisans Training Centres), who give professional training to rural people.

There is no in-service, continuing education in the forestry sector, in terms of repeated training, seminars, workshops, etc. Once having received their specialized training, personnel do not receive any more training. For this reason the Centre de Perfectionnement Agricole (CPA, Agricultural Training Training Centre) was set up by the MINAGRI in 1990 at the Ecole Agri-Vétérinaire de Kabutare (EAVK) at Butare, with help from the French Cooperation. The first phase of this support was to set up the infrastructure and materials for training, and starting up training in 1991-92. This Centre is under

the tutelle of MINAGRI and MINEPRISEC. The first training courses, each lasting one week, included (Mhirit, 1992):

1. Soil and Civil Engineering
2. Plant Production
3. Animal Produce
4. Animal Health
5. Public Relations

At present, the CPA is suffering from a shortage of staff, and only A2 level agricultural technicians are receiving training.

The problem with the schooling system in Rwanda is that although 60% of children go to primary school, only 7-10% can go on to secondary school due to lack of infrastructure and positions. As a consequence, there is a serious lack of motivation.

A number of actions have been proposed within the government to improve the training capacities of the forestry sector. These include:

1. Technical and logistical support to the DGF
2. Institutional support (Training institutions)
3. Repeated in-service training of technicians
4. Creation of a Forestry Course at the Faculty of Agronomy at University of Rwanda

Training of the protected area managers, or Directeurs des UGZ, has all been at foreign universities, because they all have engineer level degrees (A0/A1). They all have a License (Bachelors degree) in Forestry.

Training records are kept of all staff, and pre-service requirements are set. But there is no training programme once personnel are recruited.

2.1.4.2 ORTPN Training

In the ORTPN (MINETO), training records are kept, but this is largely pre-recruitment training, or training they receive once in their career. Repeated training, refresher courses, workshops, seminars etc are not planned and although records are kept, they tend to occur on an *ad hoc* basis and selection of participants is not necessarily based on who would be best suited for training.

2.1.5 In-country PAM profile

PAMs of both MINETO (ORTPN) and MINAGRI (Dir UGZ) tended to have relatively high levels of schooling (compared to other countries in Central Africa). They all have at least a secondary school education, and in the MINAGRI, most have tertiary education. Most PAMs in National Parks have been to the Ecole des Spécialistes de la Faune in Garoua, Cameroun. Their overall capabilities, however, are often very theoretical and the training is not readily applied in practice.

2.2 Methods

Results from the analyses of questionnaire data were expected to provide the backbone of the training needs assessment. The following methods were developed to extract the information from the questionnaire.

2.2.1 Analysis by Validation and Gap Analysis

The questionnaire was analyzed on two levels. On the first level, respondents commented on the accuracy of the questionnaire as a job description for a protected area manager based in the field. This was the Validation Analysis. On the second level, the level of skill in a number of different skills/competencies was judged for PAMs, by different categories of respondents. The level of skill was then compared to the level of skill considered necessary for the job. The size of the "gap" between required skill level and actual skill level was the training need. This gap analysis indicated which skills/competencies had the greatest priority training needs. The following discussion of methodology describes the different ways in which the analyses were conducted.

Validation Analysis for Knowledge, relative to PARCS score

The validation analysis refers to the analysis of the level to which respondents felt the questionnaire accurately described the job of a PAM. In this analysis comparison is made between the level of knowledge respondents considered necessary to satisfactorily do their job and the level PARCS considered necessary. The level PARCS considered necessary was established by the three regional managers, based on their experience in a number of African countries, and their collaboration with both African and expatriate colleagues. Any variance between the two levels would indicate a difference in how the job was perceived. For this reason, the smaller the difference in scores (i.e. scores of 0, -1 or + 1), the greater the similarity in the perception of the job. Positive scores indicate that the respondents consider the necessary level to be lower than that set by PARCS, as the level they consider necessary is subtracted from the PARCS level, and negative scores indicate that respondents consider the necessary level to be higher than that set by PARCS. A score of zero indicates total agreement.

This analysis is necessary to determine whether or not the level set by PARCS is considered accurate and whether it can be used as the standard of comparison for the analysis of training needs, or whether another standard of comparison needs to be found. The following piece by piece discussion of the results will show that in general, with a few exceptions, the level set by PARCS is considered accurate (see also 2.3.4.c). As a consequence, the PARCS level was used for analysis of training needs (gap-analysis 2.3.5).

The responses could include four skill levels, as described in detail in the methodology. The highest skill level possible was "in-depth knowledge", followed by "working knowledge", "some knowledge" and lastly by "no knowledge".

Comparison of PAM and Assistant PAM Validation Analysis of Knowledge Scores with Target Validators (average scores)

This analysis compares all the average validation scores for each category of respondent (position). The comparison will show whether or not the different categories of respondents agreed with PARCS, in general, with respect to the levels of skill required to fulfill the position of PAM successfully. The average country/organization score is an average score of all the PAMs and Assistant PAMs combined, and represents the general level considered necessary by PAMs and Assistant PAMs. The greater the difference in scores, the greater the difference of perception in the required skill level.

Overall, the level set by PARCS can be considered the lowest acceptable level, as all validators considered slightly higher levels of knowledge necessary. Overall agreement was high, however, as variation from the PARCS level was slight.

Gap Analysis of Training Needs for Knowledge Relative to PARCS/Respondent's Validation Score

In this analysis, the skill level required in each competency set by PARCS will be used as the standard of comparison. The level considered by each respondent to best reflect their actual skill level is compared to the level considered necessary by PARCS, to measure the gap and possible training need. Only when the difference results in a positive score (meaning that PARCS set the level higher than the

respondent) is the score considered in the analysis below. Negative scores mean that respondents have a higher level than considered necessary and a score of 0 means that the actual level reflects the level required. As respondents tended to agree with PARCS as to the level of skill required, there isn't much variation between measuring the gap using the PARCS standard and using the respondents own set standard. What variation did occur between the two standards, however, tended to indicate higher levels of skill considered necessary by PAMs than considered necessary by PARCS. The gaps identified when compared to respondents' own validation score, therefore, tended to be somewhat greater than when compared to PARCS.

Comparison of Average PAM and Assistant PAM Gap Analysis of Knowledge Scores with reference to PARCS score with Target Validators

The scores in the gap analysis (indicating the difference between the level of knowledge considered necessary by PARCS and the actual level of PAMs and Assistant PAMs) are calculated for all categories of respondents, and presented in a table. Categories of respondents other than PAMs still evaluated the level of skill attained by an "average" PAM. This enables comparison of the training needs for PAMs identified by each category, using the same standard of comparison. The greater the score, the larger the gap in knowledge. Only positive scores are considered in this analysis, as a negative score would indicate overtraining which is not of interest in this exercise.

Validation Analysis of Social and Mental Skills

The extent of agreement with the mental and social skills considered necessary for PAMs to do their job by PARCS is measured, to derive an overall percentage of agreement. Where respondents agreed with PARCS, the response was "yes". The amount of agreement for each skill is presented in a histogram and is considered the validation for the questionnaire. Where the answer is "no", respondents felt the skill was not relevant to the job of a PAM. Even a low skill level in such a question would not indicate a training need from their perspective, because the skill is not considered necessary.

Analysis of Current Mental and Social Skill Levels

A cumulative total of responses indicating low skills levels is calculated, and presented in a table for all competencies and main divisions of the job. Scores of 1 or 2 indicate low skills, where 1 represents no skill, and 2 represents poor skill. This allows the competency and the main division of the job in which low skills are frequently identified to be isolated as areas in which training is needed.

Analysis of Attitudes

The analysis of attitudes is linked to respondents years of service, in order to determine whether this has a bearing on the way in which they would instil work ethics, commitment to conservation and community attitudes. The responses to the three questions are demonstrated in a stacked histogram showing their years of service. The different responses given by PAMs are numbered, and the frequency in which each response is identified is shown in the histogram.

Training Received

The training which respondents have received is analyzed using histograms and tables, in order to show in which competencies they feel training has contributed to their skill levels, and which forms of training (formal wildlife, formal other, in-service and on-the-job) have contributed most to their current levels of knowledge, mental and social skills. Only training which they recognize as having contributed is listed.

Training Priorities

The three listed training priorities are fitted to the competencies and main divisions of the job to show in which part of the matrix the priorities fall. They are then linked with the training needs as demonstrated by the gap analysis, and the analysis of low skill levels in mental and social skills. This allows for comparison between the areas in the matrix in which the questionnaire has shown the greatest training needs to lie and the areas in which respondents feel their greatest training needs to occur.

2.2.2 Country-specific methods

There was a major difficulty encountered in Rwanda with respect to contacting field-based personnel, and that was the war which has been affecting the country since October 1990. During the time of the RM's visit to Rwanda, certain areas in the country were not considered safe for travelling and a number of expatriates based in the field were being recalled to Kigali for safety reasons. As a consequence, the RM did not visit the parks and reserves, but spoke to those PAMs that were in Kigali, and sent questionnaires to others in the field. One of the questionnaires that was sent out was explained to the PAM by Field Associates that were working with him in the field. Unfortunately, a number of questionnaires that were sent directly to PAMs were not returned.

In addition to sending out questionnaires, two of the PAMs that were in Kigali for a short visit were also contacted. In their case, the questionnaire was explained by the RM and filled out in the PAMs own time.

People contacted

- Mr. Kurt Fuller, USAID
- Dr. Dieter Steklis, Director Research Station Karisoke
- Dr. José Kalpers, IGCP
- Mr. Habyambere, T. Directeur Général des Forêts
- Mr. Twagirashyaka, Felin Directeur UGZ-I Nyungwe
- Mr. Glenn Smucker, DAI-Natural Resource Management Project MINETO
- Mr. Uwilingiyimana, Juvenal Directeur ORTPN
- Mr. Bunane, Chef de Service ORTPN
- Mr. Namacumu, Chef de Section Parcs Nationaux
- Mr. Robert Winterbottom (DAI) Technical Advisor to MINETO
- Mr. Gashigayija Valence, Direction de Tourisme
- Mr. Harelimana Valence, Protection du Milieu Naturelle et Conservation des Ressources Naturelles
- Mr. Nduwamungu, Jean DGF-Service des Savannes de l'Est
- Mr. Dusenge, Evariste DGF-Service Forêts Naturelles
- Dr. W. Webber, WCS
- Mr. Samyn, Conseiller Technique au DGF
- Dr. L. Williamson, WCS Nyungwe
- Mr. Shaban, WCS Nyungwe counterpart, Ex-PAM Nyungwe
- Dr. Craig Scholley, Ex-Director Karisoke
- Mr. Célestin Ayimama, UNDP/FAO Etude de Formation Forestière de PAFT, MINAGRI
- Mr. Joseph Muhigande, Direction du Tourisme
- Dr. Cheryl Fimbel, PCFN, NYZS/ The Wildlife Conservation Society
- Dr. Robert Fimbel, PCFN, NYZS/ The Wildlife Conservation Society

Table 3
IUCN Categories present/surveyed

IUCN Category	Present	Surveyed
1. Strict Nature Reserve	0	0
2. National Park	2	1
3. Natural Monument	0	0
4. Managed Nature Reserve	0	0
5. Protected Landscape	0	0
6. Resource Reserve	1	0
7. Natural Biotic Area	0	0
8. Managed Resource Area	3	1
9. Biosphere Reserve*	1	0
Total	6	2

* Same as the National Park

2.2.3 FODs comments on training needs

Interviews were held with the following people at the departmental headquarters, for their comments on training, and the constraints to PAMs working in the field.

Gashigayija Valence & Harelimana Valence, MINETO

The greatest training needs are at a higher level than PAMs, although PAMs also require training. People at the administrative level have received little training. There are only basic courses given at the University, and there is no course covering the management of natural resources. There has been interest shown in incorporating such a course at University of Butare, however.

The three main priorities for training include:

- planning
- public relations/communication
- practical knowledge of technical skills and their application

The most effective forms of training would include:

- a. regional repeated in-service training workshops
- b. participatory rural appraisal and rapid rural appraisal workshops
- c. training trainers for institutions

Evariste Dusenge, Direction Général des Forêts

Most PAMs, or Directeurs des Unités de Gestion, have attended foreign universities, and they all have the level of an ingénieur (A0/A1). They all have a minimum of a bachelors degree in Forestry.

Although training records are kept of all the staff, and there are established requirements for recruitment, there is no training programme for personnel once they have been recruited.

Samyn, Technical Advisor to Direction Générale des Forêts (working with the FOD)

There is absolutely no coordination between the various donor organizations involved in the forestry and conservation sectors. All training done by these various organizations is completely isolated from what others are doing. This is a major set back and problem in Rwanda where there is considerable donor activity. Unless they work together in a coordinated fashion, with the different Ministries, it will be difficult to formulate a proper training programme.

The Coopération Suisse is reevaluating the Ecole at Nyamishaba to develop a more appropriate training programme there. This is a school for A2 forestry technicians. At this point they are only "half-technicians", or "demi-intellectuels" with weaknesses in certain skills. Nyamishaba has far too many students being trained. There is a great need for A0 Ingénieurs. Many of the students receive training abroad, but the diplomas they receive are not all of the same standard or comparable (in some, the diploma takes only one or two years, in others the same diploma requires 4 years of study). So although they are considered to be specialized, they are not equivalent to the A0 level. Even with a very good training, they lack skills in management, administration and planning.

Joseph Muhigande, Direction du Tourisme, MINETO

There is a need for short term training courses given by expatriate specialists to set the standard and start Rwanda on in-situ training as refresher courses. One of the state hotels (ORTPN) could easily be converted into a training school: "Centre de perfectionnement environnementale et touristique". The almost unused CPA could also be used.

2.2.4 Analysis of the Questionnaire

For the analysis of all the data generated by the questionnaire, a series of data sheets were devised, in which all the data could be sorted and stored, and to facilitate entry into the computer programme for the actual analysis. The following seven data sheets were created:

- Data sheet A allows the additional accountabilities and responsibilities to the job of a PAM that were identified to be compiled.
- Data sheet B focuses on knowledge skills and records both the score which respondents considered to reflect the skill level required to do the job of a PAM, and the score which respondents considered to reflect the actual skill level of PAMs. From the data sheet, the differences between the respondents scored necessary level and the PARCS score was calculated, and the difference between the necessary level (PARCS and own) and their current skill level was calculated.
- Data sheet C focuses on mental and social skills and records whether respondents agreed with the statements made by PARCS, and what their skill level is with respect to these tasks.
- Data sheet D lists the responses to the three attitudes questions.
- Data sheet E records whether respondents spoke the language of the neighboring communities, and whether they were able to use computers, and if yes, to what purpose.
- Data sheet F lists the three training priorities identified by respondents and ties them in with the 16 competencies and 11 main divisions of the job in the questionnaire. It also identifies the form which these training priorities should take, as either formal, in-service, on-the-job and other.
- Data sheet G summarizes training already received as described in the bottom row of the questionnaire and uses the competencies 2-17 as in the questionnaire.

Two workshops were held with the regional managers, data entry and computer analysts attending. The first, held in August 1992 was to develop the overarching questions which were to be answered by the questionnaire, and to determine how those questions could best be answered using the data generated by the questionnaire. The second workshop developed the programs required to answer each question and devised the specific questions with which the computer analysts were to run the programme.

SPSS (Statistical package for the Social Sciences, PC Version 4) was used to do the analysis on most of the questions, and Word Perfect and Harvard Graphics were used to do the tables and graphics. The computer analyst, Vitalis Mbanda Wafula spent 1000 hours on PARCS, and his colleague David Sumba spent over 500 hours on data entry and on analysis as well as the presentation and graphics of the results.

2.2.5 Gender

A question on gender was included in the questionnaire in order to determine whether there was a link between a respondent's gender and the responses given. Unfortunately this question was not included in the first questionnaires used, but added at a later date. Where female respondents filled in the questionnaire, any variations in the responses were considered from this point of view. In none of the countries assessed were large enough sample sizes of women assessed, to allow any link to be made.

2.3 Results

The results of the PARCS survey in Rwanda are presented below. A short paragraph follows each set of results and provides a brief interpretation. Throughout this section of the report, reference will be made to figures and tables with results from various analyses of questionnaire data. Each analysis figure and table is defined by a PARCS number which generally refers to the paragraph in the results section where the data is discussed. These PARCS numbers are to be used in all country reports to allow direct comparisons of training needs within and between countries in the three regions in which PARCS Phase I was conducted. The figures and tables on which these discussions are based are annexed to each report.

2.3.1 Data Collection Table

From the table it can be seen that only 2 PAMs were able to complete the questionnaire for the assessment. This is due partly to a travel ban due to political unrest, and partly due to lack of time. A relatively large number of FODs were available in Kigali to respond for the "average" PAM. A Field Associate also completed the questionnaire, enabling further validation of the responses.

2.3.2 Background information sheets

None were recorded for Rwanda.

2.3.3 Respondent's Years in Service/Years as a PAM

Only the question of how many years PAMs had worked in the service was asked. The question of how many years they had worked as a PAM was only added to the questionnaire once all the Rwandan PAMs had been surveyed.

Of the two PAMs surveyed, one was in the category 1-5 years and one in the category 6-10 years.

2.3.4 Validation Analysis for Knowledge

In general, respondents agreed with PARCS with respect to the level of knowledge considered necessary to do the job of a PAM.

2.3.4.a Additions and Deletions to Accountabilities and Responsibilities

There were none.

2.3.4.b Validation Analysis of Knowledge of PAMs and Assistant PAMs relative to PARCS' Validations

This analysis compares the level respondents considered necessary to satisfactorily do their job with the level PARCS considered necessary. Any variance between the two levels would indicate a difference in how the job was perceived. For this reason, the smaller the difference in scores (i.e. scores of 0, -1 or +1), the greater the similarity in the perception of the job. Positive scores indicate that the respondents consider the necessary level to be lower than that set by PARCS, and negative scores indicate that respondents consider the necessary level to be higher than that set by PARCS. A score of zero indicates total agreement.

This analysis is necessary to determine whether or not the level set by PARCS is considered accurate and whether it can be used as the standard of comparison for the analysis of training needs, or whether another standard of comparison needs to be found. The following piece by piece discussion of the results indicates that in general, with a few exceptions, the level set by PARCS is considered accurate (see also 2.3.4.c). As a consequence, the PARCS level was used for analysis of training needs (gap-analysis 2.3.5).

Where there is disagreement, it is generally a higher level of knowledge that is considered necessary. The overall level of agreement was high, but unfortunately this is deceptive. When PARCS didn't set the level at "in-depth knowledge", it was frequently "working knowledge". There is only one level higher possible from "working knowledge", namely "in-depth knowledge". It would have been impossible for PAMs to respond unanimously for a higher level required and be considered significant by this analysis because a difference of -1 is not considered significant. The cut-off point taken was a difference of -2 or -3 (see 2.3.4.c). In other words, there was little option other than overall agreement, if responses varied in favour of higher levels of knowledge.

i. Technical Knowledge:

There was no variance greater than 1 or -1 from the level set by PARCS, except for question 9, where the respondents felt that in-depth knowledge was necessary of the cultural and historical context for the location of the protected area. Almost all of the variance brought the level required to in-depth knowledge.

ii. Management Knowledge:

In this case total agreement was rare, although rarely was variance greater than 1 or -1. One PAM felt that "some" knowledge would suffice for personnel management questions, and knowledge of stock control and procurement. The other PAM felt that in-depth knowledge was required throughout.

Interestingly, one PAM felt that "some" knowledge would suffice for protected area vs people conflict management. In a country where there is so much population pressure on protected areas, this does not seem to be a very enlightened consideration!

iii. Planning Knowledge:

Some knowledge was considered enough by one of the PAMs for planning with respect to staffing and infrastructure, but in-depth knowledge was considered necessary for all other aspects of planning.

iv. Legal Knowledge:

Again, the same PAM considered some knowledge to suffice for legal matters with respect to staffing and infrastructure, as well as legal matters pertaining to community development (Hence the low score in 2.3.4.c).

It is always the same PAM that felt that the skill levels necessary for a PAM in matters pertaining to staffing, infrastructure and community development did not need to be higher than "some", or, in other words, a general awareness of the subject and its general applicability, but not sufficient to even complete routine tasks. This does seem surprising for a PAM in Rwanda*

v. Policies & Procedures Knowledge:

The same PAM also felt that less than working knowledge was needed both for accounting policy and, in the next section, accounting and principles of internal control. This again seems surprising in a country where tourism generates quite a considerable wealth to the country and it seems logical that proper accounting and the policies thereof are given high priority.

In policy matters pertaining to community conservation this PAM felt that working, as opposed to in-depth knowledge would be sufficient.

vi. Financial Knowledge:

Financial and accounting knowledge was given somewhat less priority by the same PAM with respect to visitor receipts and financial disbursements to local communities (some knowledge was considered adequate). For most other questions, however, in-depth knowledge was considered necessary.

2.3.4.c Measure of Agreement for PARCS Validation Score

Overall agreement was high, with an average of 91 % agreement (scores of -1,0,1). Where there was disagreement, it often favoured a higher level of knowledge necessary than given by PARCS, but as mentioned above, one PAM felt that knowledge in matters pertaining to personnel, infrastructure, accounting and community relations did not always need to be higher than "some". These responses were surprising, especially with respect to community relations and accounting. The other PAM felt that in-depth knowledge would be ideal for most questions. Although this might be the ideal, it would not be realistic to expect a PAM to have in-depth knowledge for all the questions arising in the questionnaire.

This measure of agreement is based on variation not exceeding a score of 1 or -1. As mentioned above, this does tend to favour agreement, because if the PARCS level is set at "working knowledge", there can be no disagreement exceeding 1 or -1 unless respondents consider the skill as unnecessary, which is rarely the case. Only those skills were included in the questionnaire that are usually part of, or potentially part of a PAM's responsibility.

2.3.4.d Comparison of PAM Validation Analysis of Knowledge Scores with Target Validators (average scores)

This table presents all the average validation scores for each category of respondent (position). This shows whether or not the different categories of respondents agreed with PARCS, in general, with respect to the levels of skill required to fulfill the position of PAM successfully. The greater the difference in scores, the greater the difference of perception in the required skill level.

The levels considered necessary for a PAM set by the Field associate very closely resembled those set by PARCS, giving a good validation for the PARCS standard. The levels set by the FODs were also quite close to the PARCS levels, although they tended to be somewhat higher. Only in a few instances was a slightly lower level considered adequate. The greatest difference in the level considered necessary was between the PARCS level and the level set by PAMs, and as mentioned previously, this difference

was not considered significant by this analysis. Overall, the level set by PARCS can be considered the lowest acceptable level, as most validators considered slightly higher levels of knowledge necessary. Overall agreement was high and variation from the PARCS level was slight.

2.3.5 Gap Analysis of Training Needs for Knowledge

The skills in which PAMs felt their training needs were the greatest are Policies and Procedures, followed by Legal skills. Relative to the levels they consider necessary (as opposed to what PARCS considers necessary), Financial & Accounting skills as well as Technical skills are also highly ranked. The smallest training needs are in Management and Planning. According to the Field Associate, the priority training needs include Financial knowledge, Policies, Technical and Planning knowledge. According to the FOD they include Legal, Policies, Financial and Technical knowledge. The agreement between all 3 categories of respondent lies in their identification of Policies & Procedures as requiring a relatively large amount of training. For both FODs and FAs, Management requires relatively little training.

2.3.5.a/b Gap Analysis Relative to PARCS/Respondent's Validation Score

In this analysis, the skill level required in each competency set by PARCS will be used as the standard of comparison. The level considered by each respondent to best reflect their actual skill level is compared to the level considered necessary by PARCS, to measure the gap and possible training need. Only when the difference results in a positive score (meaning that PARCS set the level higher than the respondent) is the score considered in the analysis below. Negative scores mean that respondents have a higher level than considered necessary and a score of 0 means that the actual level reflects the level required. As respondents tended to agree with PARCS as to the level of skill required, there isn't much variation between measuring the gap using the PARCS standard and using the respondents own set standard. What variation did occur between the two standards, however, tended to indicate higher levels of skill considered necessary by PAMs than considered necessary by PARCS. The gaps identified when compared to respondents' own validation score, therefore, tended to be somewhat greater than when compared to PARCS.

The validity of this analysis must be questioned due to the very small number of PAM responses, and it can really only be used as an illustration of limited value.

i. Technical Knowledge:

The results that appear the most interesting are the questions in which no gap was identified. These were in Main Divisions H and K (predominantly), which deal with relationships with neighboring communities and ensuring an appropriate balance between resource conservation and use, respectively. In other words, the two PAMs felt that their skills in these two areas were at least adequate, if not more than adequate. This is something which could profit from field testing, as it does not seem to be likely that they would have adequate skills in these areas given their training history and the problems in Rwanda due to heavy population pressure on protected areas. Both PAMs have had a lot of contact with development and conservation projects, however, in which it is possible that they have profited from informal training in these areas. It seems unlikely, however, that they would have "in depth" or even "working" knowledge, and it is possible that their perception of what is involved in these subjects is unclear.

Never was a gap of more than 1 identified and in only 3 of the 17 questions did both PAMs identify a training need. In other words, although PAMs receive the same formal training in Rwanda as in other countries in Central Africa, they feel much more confident that this training is sufficient and adequate with respect to the technical skills involved in their job. This is somewhat surprising. Relative to their own score, which in technical knowledge was often higher than PARCS, respondents felt the gap to be much higher. In this case, there was only one question in which no gap was identified, and 7 questions in which both respondents identified a gap (41%). There was also one question, dealing with research activities, in which a gap of 2 was identified.

ii. Management Knowledge

In only 4 of the questions was a gap identified, and in only one question did both respondents identify a gap (10%). This was in the question pertaining to protected area vs people conflict management. This question did not identify such a large gap when the respondent's own standard was used because, as mentioned previously, one PAM did not consider this important and requiring of more than "some" knowledge. When their own standard of comparison was used, never did both PAMs identify a gap, and only twice was a gap of more than one identified, namely in the questions dealing with management of stocks, and project (job) management. There did not appear, therefore, to be much need for additional training in management in general, according to the PAMs.

iii. Planning Knowledge

Relative to the PARCS score there was never a gap identified by both PAMs, and a gap was only identified in 58% of the questions. Only in two questions was a gap of more than 1 identified, but only by one PAM and no gap was then identified by the other PAM.

Relative to the respondent's own score, a gap of 2 was identified in three questions, and in two questions did both PAMs identify a gap. These questions referred to financial and accounting integrity (C) and development and achievement of tactical plans and budgets (D). Relative to their own score, at least one PAM identified a gap in 10 of the 12 questions (83%).

iv. Legal Knowledge

In 33% of the questions a gap was identified by both respondents, when their skill level was compared to the level considered necessary by PARCS. When compared to their own score, 44% of questions identified a gap for both respondents. They did not consider their knowledge to be insufficient with respect to laws concerning neighboring communities (No.45).

v. Policies and Procedures

The greatest frequency of gaps of more than one appeared in this category, both when compared to the PARCS and their own score. 40% of questions had both PAMs identifying a training need when compared to both scores. These were in questions pertaining to infrastructure, visitor satisfaction, community relations and protected area representation during public meetings. 40% of questions had a gap of more than 1 identified when compared to the PARCS score, and 30% when compared to their own score.

vi. Financial Knowledge

Relative to PARCS only very rarely was any gap in knowledge identified. Twice did one PAM identify a gap of 1. Relative to their own score a gap was identified much more frequently. 67% of questions had a gap identified, and all of those identified a gap of 2 by at least one PAM. 50% of questions had both PAMs identifying a gap. This shows that in general, they felt that the skill level considered by PARCS was low, but that they usually had that skill level. They felt, however, that a higher level was necessary, and that they needed additional training to attain that level.

The following table demonstrates that the skills in which respondents felt their training needs were the greatest are Policies and Procedures, followed by Legal skills. Relative to the levels they consider necessary (as opposed to what PARCS considers necessary), Financial & Accounting skills as well as Technical skills are also highly ranked. The smallest training needs are in Management and Planning.

Table 4

Percentage of questions in which at least 60% (both) of respondents identified a training need, using the PARCS standard of comparison and their own standard of comparison

Skill	Percentage (PARCS)	Percentage (Own)
Technical knowledge	18	41
Management knowledge	10	0
Planning knowledge	0	17
Legal knowledge	33	44
Policies & Procedures knowledge	40	40
Financial & Accounting knowledge	0	50

2.3.5.d Comparison of Average PAM Gap Analysis of Knowledge Scores with reference to PARCS score with Target Validators

This table presents a gap analysis of all categories of respondents (positions) with respect to the PARCS score (which is considered to accurately reflect the job of a PAM, see section 2.3.4.d). This will enable comparison of the training needs for PAMs identified by each category, using the same standard of comparison. The greater the score, the larger the gap. Only positive scores are considered in this table, as a negative score would indicate overtraining, which is not of interest in this exercise.

The table demonstrates that both FODs and Field Associates consider the gaps in knowledge of PAMs to be greater than the PAMs themselves.

There is considerable difference between the FODs and the Field Associate in their identification of the competency in which the greatest training needs occur. According to the Field Associate, these include Financial knowledge, Policies, Technical and Planning knowledge. According to the FOD these include Legal, Policies and Financial and Technical knowledge. The agreement between all 3 categories lies in their identification of Policies & Procedures as requiring a relatively large amount of training. For both FODs and FAs, Management requires relatively little training.

Table 5

Percentage of Questions in which an average gap of more than 1 was identified for each competency

Competency	PAM	FOD	Field Associate
Technical knowledge	0	15	50
Management knowledge	10	10	20
Planning knowledge	0	0	50
Legal knowledge	0	33	33
Policies & Procedures knowledge	20	20	60
Financial & Accounting knowledge	0	17	67

The importance of Policies and Procedures and the fact that it ranks high as a training need is a finding that is consistent throughout all the Central African countries assessed. The relatively low rank of management knowledge is also consistent throughout all Central African countries assessed. Technical

skills tend to be ranked in the middle, but with some gaps in knowledge demonstrated. It is evident that according to all categories of respondent assessed, there are important gaps in the knowledge of PAMs that need to be addressed with training. The gaps are not necessarily in those areas which are the most obvious, nor in the areas PAMs tend to consider their greatest training needs (see 2.3.11). Policy and Procedures rarely figures in this list of respondents' three priority training needs, although it is uniformly found to represent the greatest gap in knowledge over all Central African countries assessed.

Table 6
Percentage of questions in which an average gap of about 2 or more was identified for each division of the job

Main Division of the Job	PAM	FOD	FA
A. Staffing	0	0	17
B. Infrastructure	0	20	17
C. Finance/Accounts	0	0	0
D. Tactical Plans	0	0	0
E. Laws and Regulations	0	20	20
F. Visitors	14	14	29
G. Interventions	20	20	60
H. Community Conservation	13	25	75
I. Research	0	17	67
J. Public Relations	0	0	57
K. Resource Conservation	0	25	100

The above table demonstrates that for all categories of respondent, community conservation had a high training need, as well as interventions. Resource conservation was considered to have a large training need by the FODs and the FA, but not necessarily by the PAMs.

2.3.6 Validation Analysis of Mental & Social skills

2.3.6.a Analysis of "yes" responses

This analysis shows the extent to which respondents agreed that the skills listed under mental and social skills are required by PAMs, in order to satisfactorily do their job. Where respondents agreed with PARCS, they answered "yes". The histogram presents the amount of agreement for each skill, and can be considered the validation of the questionnaire. If agreement is high, the questionnaire is considered validated.

There is a very high overall accuracy score of 97.9% for the agreement on each question in this section, indicating a high level of agreement that the questions are relevant to the job of a PAM. The questionnaire can therefore be considered to accurately reflect the needs of a PAM in Mental and Social Skills.

2.3.6.b Analysis of "no" responses

This analysis shows where there was disagreement, in those cases where PAMs considered the question not to be relevant to their job. The figures shown represent the percentage of respondents that felt that a particular question did not relate to the job of a PAM.

In only 3 cases did one PAM disagree with PARCS and consider a question irrelevant. Never did both PAMs feel so. In general, no one competency or main division solicited a great deal of disagreement.

2.3.7 Current Mental & Social Skill level

2.3.7.a Low Skill Levels

In general, there were gaps identified in all mental and social skills, by all categories of respondents, although the gaps identified by PAMs were considerably smaller than those identified by the FODs and FAs. The skills in which PAMs identified gaps were in Comprehension, Written and Problem Analysis. The skills in which FODs identified gaps were in Creativity, Problem Analysis and Working with Others, whereas the Field Associate identified gaps of almost 100 % in all of the competencies.

2.3.7.a.i Table of Low Skill Levels

This table presents the cumulative total of all respondents having answered 1 or 2, indicating those questions where respondents felt their skill level to be low (needing training). A score of 1 indicates no skill, 2 indicates poor skill.

The PAMs assessed did not feel that their mental and social skills were very low and only rarely was a skill level of 1 or 2 scored. On no question did both PAMs ever feel that their skill levels were low. The only competencies in which a low level was scored more than once were "comprehension", "problem analysis" and "written". They felt that their creativity, evaluation, oral and working with others skills were generally adequate. Even a cumulative score of 2 or 3 is not indicative of a great gap in these skills. For the Main Divisions of the Job, only one division had a cumulative score of more than one, and that was "D", ensuring the development and achievement of tactical plans and budgets. In other words, these Rwandan PAMs do not feel that they are lacking in mental and social skills, nor that they need training in these fields.

Table 7
Percentage of times a gap of 1 or 2 was identified for each competency

Mental & Social Skills (Competency)	Percentage
Comprehension	13.6
Problem Analysis	9
Creativity	5
Evaluation	0
Oral	5.5
Written	12.5
Working with Others	0

PAMs considered that the main divisions of the job in which they needed the most training in mental and social skills were the development of tactical plans, finance/accounting and resource conservation. Overall, they felt that their mental and social skills did not need training in the other divisions.

Table 8
Percentage of times a score of 1 or 2 was given for each main division of the job

Main Division of the Job	Percentage
A. Staffing	7
B. Infrastructure	7
C. Finance/Accounting	17
D. Tactical Plans	21
E. Laws and Regulations	7
F. Visitors	7
G. Interventions	0
H. Community Conservation	0
I. Research	0
J. Public Relations	0
K. Resource Conservation	13

2.3.7.b Comparison of Average PAM Gap analysis of Mental & Social Skills with other Target Groups

From this table it becomes evident that the other target groups, both FOD and FA, felt that the PAMs had consistently over estimated their mental and social skills. FODs felt that their skill levels were much lower than did the PAMs themselves, and the FA scored their skills even lower. The difference between FOD and FA rankings were smaller than between the FOD and PAM rankings. The percentages of times an average score of 1 or 2 was given by FODs and FAs for the PAMs for each competency is given in the table below.

Table 9
Percentage of times an average gap of 1 or 2 was identified for each competency

Competency	Percentage FOD	Percentage FA
Comprehension	33	92
Problem Analysis	55	100
Creativity	70	100
Evaluation	11	89
Oral	0	100
Written	0	100
Working with Others	40	100

From the preceding table it is clear that there are important gaps in the mental and social skills of the average PAM in Rwanda. Although they are all relatively high, Creativity, Problem Analysis and Working with Others score the highest, according to the FODs.

Table 10
 Percentage of times a score of 1 or 2 was given for each main division of the job

Main Division of the Job	FOD	FA
A. Staffing	43	86
B. Infrastructure	43	100
C. Finance/ Accounting	0	100
D. Tactical plans	43	100
E. Laws & Regulations	14	100
F. Visitors	14	86
G. Interventions	0	100
H. Community Conservation	50	100
I. Research	33	100
J. Public Relations	43	100
K. Resource Conservation	60	100

With respect to the main divisions of the job, the FODs and Field Associates felt that the PAMs needed a great deal of training. The Field Associate felt that skill levels were low in almost all the divisions of the job, and there was little difference between them. The FODs felt that the greatest amount of training in mental and social skills was required in resource conservation, followed by community conservation, public relations and tactical planning.

2.3.8 Analysis of Attitudes

In order to effectively manage protected areas and deal with people both within and outside the department, protected area managers must have social skills which do not necessarily fall under the categories of knowledge or mental & social skills listed above. Leadership and team building are important components of a PAM's responsibility. To assess the skill levels of PAMs in these qualities, the respondents were asked to describe the methods they felt were the best suited to instil work ethics, commitment to conservation and healthy attitudes to adjacent communities in their staff. The responses to these questions fell into a number of broad categories, which were subsequently listed and numbered. Overall, the responses favoured showing hard work and dedication to conservation through example and involving both staff and local communities in management of the protected areas. Participation in management and conservation is a common theme throughout most of the responses.

2.3.8.a Methods to Instil Work Ethics

Due to the fact that only two PAMs were assessed, each having worked for a different number of years in the service, it would be impossible to analyze this data relative to years of service. One point of interest is the choice of methods to instil work ethics. These include 2 (showing hard work and dedication through example), 4 (acknowledging good work in others while positively criticizing bad work), 5 (showing tolerance to others' points of view) and 10 (cultivating good working relationships which creates rapport for instruction).

2.3.8.b Methods to Instil Commitment to Conservation

Again, the only noteworthy information to be gathered from this data is the choice of method. These include 4 (becoming involved in extension conservation activities), and 5 (participating in the design, implementation and analysis of effective law enforcement programs).

2.3.8.c Methods to Instil Healthy Attitudes to Adjacent Communities

Both PAMs agreed on one method, namely maintaining dialogue with local communities and getting staff involved in keeping communities up to date with conservation developments in the area. Other methods chosen were accepting the validity of community participation in protected area management and listening to and demonstrating willingness to understand community problems.

2.3.9 Language skills of PAMs

In Rwanda there is one language spoken throughout the whole country, and this is Kinyarwanda. It is therefore not surprising that all Rwandan PAMs speak this language and that 100 % of respondents answered "yes" to the question of whether they spoke a language understood by the local community adjacent to the protected area. This question was asked in order to assess whether it was possible for PAMs to be actively involved in community extension work and whether communication problems could lie at the root of the conflict between protected areas and neighboring communities.

2.3.10.a/b Computer Skills of PAMs

One of the two PAMs was able to use a computer, but only for data analysis. These skills he had acquired through on the job learning from working with NGO projects. It is not a skill that is taught to PAMs by the department.

2.3.11 Training Priorities Identified by Respondents

The priorities for training identified by PAMs after having completed the questionnaire were in Management, Planning and Evaluation. This does not overlap completely with the training priorities identified by the gap analysis, as Management, Planning and Evaluation score amongst the lowest in needing training. Although the gap analysis reflects the respondents own impressions on the skills of PAMs, these still do not coincide with the priorities they state for training. In other words, the questionnaire brings out gaps which the respondents do not readily recognize as training needs. The skills which come out in the questionnaire through the gap analysis as requiring the greatest training are very different from the skills they would identify as requiring training when asked point blank. It demonstrates the usefulness of taking respondents through the questionnaire and discussing the different competencies and the skills required to satisfactorily do the job of a PAM.

2.3.12.a/b/c Training Received

For all skills, PAMs identify formal wildlife training (Garoua and University) to have contributed most to their current levels. For knowledge skills, on-the-job training has also contributed significantly. At no point was in-service training stated to have contributed, indicating that this is an area of training which needs to be addressed in any programme intending to do training of PAMs in Rwanda. Some instances of other formal training were listed, and these included conferences and seminars in Uganda and Rwanda.

2.3.12.d Years since Formal Wildlife Training Received

Due to the small sample size of PAMs, this information was insufficient to produce any significant results.

2.3.12.f Training that has contributed most to PAMs skill level

As in 2.3.12 a/b/c above, formal wildlife training (university and Garoua) have been identified as contributing most to PAM's skill levels, and especially in knowledge skills. This is not surprising as they have received very little other training, apart from the occasional seminar or conference, which often is not recognized as training by participants. There is no in-service training organized by the department.

2.3.12.g Type of training that has contributed most to job requirements, analyzed by respondents years of service

This analysis shows that the PAM that had more years of service felt that on the job training contributed to his skill levels in a number of areas, as well as formal wildlife training. The PAM that had between 1 and 5 years of service felt that the only training that contributed to his skill levels was formal wildlife training.

2.3.12.h Training needs identified by Gap Analysis of questionnaire for PAMs and Assistant PAMs

This table presents the cumulative total of scores in which a gap of 2 or 3 was identified in Knowledge skills, and a score of 1 or 2 (low skill level) was identified in Mental and Social skills as a symbol. The size of the dot is determined by the number of times a gap was identified. Large dots indicate frequently identified training needs, small dots indicate relatively rarely identified training needs. The total number of times a gap was identified in each box in the matrix is divided by the number of questions in each box, in order to evenly weigh all the boxes in the questionnaire. The table is a summary of the gap analysis for all the competencies and the main divisions. The columns, or competencies, in which a large gap was the most frequently identified are 6 (Policy & Procedures) and 4 (Planning) for the knowledge skills, and 8 (Comprehension), 9 (Problem Analysis) and 13 (Written). these results are presented separately in the previous sections 2.3.5 and 2.3.7.

2.3.12.i Measure of Agreement of Training needs of respondents' priorities and questionnaire analysis

This table merges the figures presented above (2.3.12.h) with the three priorities listed by each respondent at the end of the questionnaire (2.3.11). Where there is overlap (i.e. a training need identified both by themselves and by the gap analysis) there is an asterisk in the box. The table demonstrates the lack of overlap in that there are no areas identified in both analyses (no asterisk).

2.4 SUMMARY AND CONCLUSIONS

The Protected Area Conservation Strategy (PARCS) was devised in order to address two important questions: 1) what training do Protected Area Managers (PAMs) need in order to enhance the conservation of Africa's protected areas? and 2) what can be done to provide this training for PAMs, as well as what steps can PAMs themselves take to identify and design pilot educational efforts that respond to their needs?

In order to answer the first question, and to begin to understand how to answer the second, a training needs assessment was undertaken in 15 African countries. A self-assessment questionnaire, general enough to be applicable in all countries was developed for this purpose, enabling comparison across regions and countries.

In addition to the training needs assessment, a training opportunities assessment was started. This assessment will continue after the needs assessment has ended, in order to develop a more thorough, and useful list of opportunities.

The results from the training needs assessment, which are summarized below, will be used in developing participatory pilot training projects in the second phase of the PARCS project.

The training needs assessment and training opportunities assessment were designed in order to generate data which could then be used to answer a number of overarching questions. The questions are relevant throughout Africa and represent the problems of training and protected area management in a wide variety of habitats and situations. The answers to these questions can be used to address some of these problems, and in many cases provide solutions to the problems.

Overarching questions

a. What are the responsibilities of a PAM? Are these responsibilities universally recognized?

It is possible to describe, in a general manner, the role of a Protected Area Manager, and have this description fit for managers all over Africa and in the variety of habitats and categories of protected areas that exist over the continent. The questionnaire, which was a job-description for a protected area manager, was used in 15 different countries and there was very little disagreement on the responsibilities listed. Within each country, a number of different people were contacted and questioned on the validity of the questionnaire as a job description. These people were not only protected area managers, they were also field operation directors at headquarters, regional managers, field associates, trainers and research officers. They all agreed to a very high degree with the description proposed by the PARCS project.

In Rwanda there were no changes made to the job description as presented by the questionnaire. The overall level of agreement to the description, including the level of skill required for each competency and main division of the job was 91%. In other words, few people, of all categories, queried any aspect of the questionnaire and it's relevant to a protected area manager in Rwanda. In some instances, respondents felt that the questionnaire underestimated somewhat the level of skill required for the different aspects of the job, but overall agreement was high. Although not all aspects of the job as described in the questionnaire are put into effect in each protected area in Rwanda (i.e. very little tourism or resource use in some protected areas, and very little research in others), respondents did feel that all the skills were required of a PAM.

Protected area managers did feel that their jobs had changed over the past 20 years, with an important increase in population pressure around most, if not all protected areas, and an increase in tourism. The role of a PAM was no longer purely a guardian of an area but a manager of an important economic commodity and a mediator between the protected area authorities and other people, be it neighboring communities, tourists or other.

b. What are the constraints on meeting these responsibilities? Where does training fit in?

There are a number of constraints that were mentioned, by protected area managers, field operations directors and field associates, making it difficult for protected area authorities to carry out all their responsibilities. One of the major constraints is a budgetary one. This limits not only infrastructure and logistics, but also limits the staffing possibilities in protected areas, and limits the training available to staff. The financial constraint is of particular importance in Central Africa where protected area management has not been a priority in the past, and where funding is often very limited. Of the central african countries assessed, however, Rwanda has been one of the first to recognize the economic potential of its natural habitats and to develop its tourism. Tourism is one of the major sources of foreign revenue in the country and an important foundation to the country's economy.

Financial constraints are not the only ones influencing protected area management in Rwanda. One of the constraints on training is the new educational system in Rwanda, which came into effect in 1977. The result of this change is a severe lack of opportunities for secondary and tertiary education in the country. Only 7 to 10% of primary school graduates continue with their schooling due to lack of infrastructure and positions in the schools. As a consequence, a lack of motivation has developed which has a strong negative influence on the intellectual potential of the country. Linked to the lack of secondary and tertiary educational possibilities, there is also a lack of trainers who could be used for the training of protected area managers and foresters. One of the problems that needs to be addressed, however, is that of motivation. Training, outside of prerecruitment training, is often seen as a means of earning extra money through per diems. If training programs do not include such per diems, which are often extremely high, participants are not motivated to attend. The link between training and extra earnings has to be broken either by linking training to other forms of reward (such as promotion) or making it a part of a standard, programmed career path.

A constraint which has been extremely limiting on PAMs' meeting their responsibilities has been the war in Rwanda since October 1990. At present a peace accord has been signed and potentially the country can now start with reconstruction. A number of the protected areas have been severely affected by the war, however. The Akagera National Park has seen a large amount of fighting and the Volcano National Park, also the habitat for the mountain gorilla in Rwanda, has been the battlefield during much of the war. Protected area management has been very difficult over the past years and many of the areas will remain unsafe for a long time, due to mines and other remnants of the fighting.

Compared to other central african countries, Rwanda has profited from a large amount of donor interest and activity in the natural resources sector. This is tied, in part, to the importance of its natural habitats in terms of biodiversity. Protected area managers are relatively well trained and have profited from a number of training initiatives. Overall, however, there is no training plan addressing the needs of both forestry and ORTPN staff at all levels. There is no repeated, in-service training programme bringing staff up-to-date with the needs of their jobs, and helping to motivate them in their careers. Training is not seen as part of the process of movement throughout a person's career. This form of training is very limiting, in that it is relatively inflexible and not adapted to the needs which arise during the process of a person's career. As a consequence, gaps arise in the knowledge and skills required to do the job successfully, and these gaps are not addressed. training should be seen as periodic and repeated as frequently as possible and necessary, so that the changing job requirements and responsibilities can be constantly addressed.

c. Are PAMs skilled to the level judged by this training needs assessment to satisfactorily do their job? Where are the deficiencies?

The process of filling in and discussing the questionnaire for the needs assessment already brought out some of the gaps in the skills of PAMs which limit them in their jobs. The questionnaire as a job description was a useful exercise for people who had never actually seen a description of their job. It helped them see both the complexity of the job itself and the skills, in terms of knowledge as well as mental and social skills, that were needed for the job. From the discussions it became evident that in a large majority of those skills they had never received any form of training. After having filled in the questionnaire, however, many of the respondents still listed as their three training priorities those

competencies which were the most obvious to them and the most frequently mentioned. There was a considerable discrepancy between the competencies in which the greatest gaps in skill level were identified by the needs assessment, and the competencies in which respondents felt their priority training needs occurred.

The knowledge skills in which the greatest gaps occurred (or in which the greatest training needs were identified by the analysis), from the perspective of protected area managers were Policies & Procedures and Legal skills, as well as Financial & Accounting and Technical skills. The skills in which training was the least urgent, although a need was also identified, were Management and Planning skills. Both FODs and Field Associates considered the gaps in knowledge of PAMs to be greater than the PAMs did themselves, however. The Field Operations Directors and the Field Associates did not completely agree in their identification of the competencies in which the greatest training needs for PAMs occur. According to the Field Associate, these include Financial knowledge, Policies, Technical and Planning knowledge. According to the FOD these include Legal, Policies, Financial and Technical knowledge. The agreement between all 3 categories lies in their identification of Policies & Procedures as requiring a relatively large amount of training. For both FODs and FAs, Management requires relatively little training.

With respect to mental and social skills, there tended to be gaps identified in all the competencies, by all categories of respondents. The gaps identified by PAMs, however, were considerably smaller than those identified by the FODs and FAs. The skills in which PAMs identified gaps were in Comprehension, Written and Problem Analysis. The skills in which FODs identified gaps were in Creativity, Problem Analysis and Working with Others, whereas the Field Associate identified gaps of almost 100 % in all of the competencies. Overall, the gaps occurred in skills required in problem analysis and problem solving. The greatest gaps in skills occurred in the mental and social skills, and it was felt that PAMs required a great deal more training in these skills which are generally not covered in the traditional training opportunities. Although the knowledge skills in Rwanda were perhaps not as low as in other central african countries assessed, due to the relatively good training opportunities available, and the relatively high level of training most PAMs have received, the mental and social skills were lower than other countries. Emphasis in the past has been on the learning of technical skills, and has traditionally concentrated on a great deal of memorization of information, rather than on creative problem solving. Training in Rwanda needs to put a great deal more emphasis on the skills required once in the field, dealing with problems and making decisions.

d. What training has been received by current PAMs that is perceived by them as useful? How much? What kinds? Relevant to which kinds of job requirements?

The only training that PAMs listed as having been received are formal wildlife training at a wildlife institute or at university, and on-the-job training. Conferences, seminars or workshops were rarely listed. These other formal sources of training are not perceived as such by participants. In-service training was never listed. One of the problems of training other than formal training at an institute or university is that recipients do not get a certificate or other form of official recognition for attendance and participation. In addition, it is not felt to contribute to their career development. In order to make other forms of training more effective, it would be important to address this issue and to officially recognize participation in such training opportunities. It would be crucial to include some form of assessment or evaluation so that mere attendance would not be efficient. This would also help solve the problem of financial expectations from any form of formal training outside pre-recruitment training. Donor organizations often complain that it is impossible to organize seminars, conferences or other training fora without including very high per diems for all national participants. This expectation has been created in the past an attendance is now often contingent on these per diems. The benefits outside of the financial ones are often ignored. To redress this issue, it would be possible to create other benefits to be accrued from attendance, and active participation. Career development may be made to be contingent upon active participation, or a system of official recognition through credit points may be developed.

e. Assessments of Field Operations Directors

Only two PAMs were assessed, due to various difficulties in Rwanda. This severely limits the value of the questionnaires completed by the PAMs as it cannot be truly held as representative for PAMs in Rwanda. The burden of this analysis therefore rests on the questionnaires completed by FODs and Field Associates, as well as the discussions held with numerous people both in the relevant organizations and in donor organizations. Discussions revealed that training needs often include planning and management skills, as well as technical skills. Most Rwandan PAMs have been well trained in comparison with other countries, due in part to the importance of Rwanda's protected areas for its economy. The jobs of PAMs have changed a great deal in recent years, however, with the increase in tourism as well as the increase in population pressure. The skills required of PAMs are changing rapidly as they are in most other central African countries, yet the training they receive has changed little. As in most other countries throughout Africa, PAMs in Rwanda have very little decision-making power. Both the ORTPN and the Direction des Forêts are very centralized. Headquarter staff do not always have the information required to make decisions and communication is also often slow. PAMs need to be trained and then enabled to make decisions in the field.

Discussions with Field Operations Directors showed that a system of in-service training addressing the specific needs of field-based managers and headquarters-based staff alike was considered an important and effective means of addressing the training needs of both. Specific training was required to learn about zoning of protected areas, and how to set up, use and protect zones for different uses. Rapid role assessment training, to learn to deal with problems with neighboring communities was also considered useful and important. In general the FODs of the different organizations (MINETO, ORTPN and DGF) felt that training should not only focus on the field-based managers, and that even at the headquarters training was required in planning, public relations and technical skills, amongst others. Training in general was felt to be very motivating, and frequent in-service training the most effective way of addressing the needs in Rwanda. The first steps would be developing training programs, and training the trainers.

f. What further training is required?

Further training is required in a large number of areas. The most important gap in knowledge skills was in Policies & Procedures, Financial, Legal and Technical skills. In terms of Mental and Social skills, the most important gaps were in Problem Analysis, Comprehension, Creativity and Working with Others.

Although the questionnaire did make respondents think differently about the job of a Protected Area Manager, and made them more aware of the variety of responsibilities of a PAM, there was a tendency to fall back into the traditional perspective when questioned about what the priority training needs were. The most frequently listed training priority was Management, followed by Planning and Evaluation. This does not overlap completely with the training priorities identified by the gap analysis, as Management, Planning and Evaluation score amongst the lowest in needing training. Management and Planning are the skills which PAMs consider the most obvious to their jobs, as they are field-based managers. The Field Associate did include Planning as an important training need, but Management was never included as a priority from the gap analysis. Given that PAMs have never seen a job description and therefore do not see the different skills and competencies expected of them, they still see themselves in the general sense as managers, needing management skills. In this sense, management is taken very loosely to include all the skills required in being a manager, rather than looking at the specific skills necessary. The questionnaire brought out the specific skills required under the general heading of management.

The main divisions of the job that required training the most frequently were community conservation, interventions and resource conservation. Even with respect to the mental and social skills, community conservation and resource conservation were identified as requiring training by the FOD and the Field Associate. The PAMs felt that tactical planning and laws and regulations required greater training in mental and social skills.

g. What present programs could be restructured/enlarged to include training opportunities for PAMs?

There are a number of training opportunities in Rwanda which could be both restructured or enlarged in order to include training in the need identified by this assessment for PAMs, and other target groups. Rwanda has numerous training institutes which could provide both the expertise and the location for training. There are also a large number of donor-funded projects in Rwanda which would be capable of working with the different departments in order to develop training. What is needed is a coordinating body which would bring the different departments together, and which would develop training programs to fit the needs identified in the different departments. There does not seem to be any reason to set up a new school or training institute in Rwanda, given the presence of opportunities in Rwanda, and the fact that they are not filled to capacity. Funding is a constraint, at present, however, and there must be an emphasis on training which does not necessarily include sending candidates to expensive institutes abroad, or providing participants with high per diems to cover their daily expenses.

Institutes and training colleges which could be restructured to cover the needs of PAMs in Rwanda include:

- Centre de Perfectionnement Agricole (CPA) at the Ecole Agri-Vétérinaire de Kabutare (EAVK) in Butare. This training opportunity was set up in 1990 and is already suffering from lack of funds and shortage of staff and as a consequence is not running to capacity; -ISAR (Institut Scientifique dans l'Agriculture au Rwanda). This institute has a forestry department which could be restructured to include PAM training needs;
- Ecole Agricole et Forestière de Nyamishaba;
- Ecole Vêto-Forestière de Kibisabo;
- University of Rwanda Agronomy Department at Butare;
- numerous Centres d'Enseignement Rural et Artisanal Intégrés (ERAI)

Outside of the creation of specific courses at these training institutes and schools, they could be able to provide the training of trainer expertise required and help in the development of a training officer post in the different organizations (MNETO, ORTPN and DGF), in order to plan the training and career development of staff.

h. Are there other appropriate opportunities that have not been utilized?

At present, few of the abovementioned training opportunities are being used for any purpose other than pre-service training, preparing people for their job. Rarely do people get refresher courses or any form of repeated training, and when they do, it is generally on an *ad hoc* basis. In some instances people are sent for courses abroad, or they attend seminars or conferences, but this is not part of a training programme and not all people get the same opportunities.

It is possible that there are other training opportunities not mentioned in this study. Opportunities for training such as courses offered by banks, management schools, consulting firms, accounting bureaus, etc, on planning, management, administration, accounting, etc, were not assessed. It is likely that there would be several such opportunities in Rwanda which could be used for PAM training. Assessment of further training should continue in order to provide a more exhaustive list of training opportunities in Rwanda.

i. What kinds of training should be recommended?

Based on discussions with Field Operations Directors and Field Associates, as well as Protected Area Managers, it is obvious that there is much interest in the development of in-service training programs. Programs that have short, frequently repeated and refresher training courses that are developed to the specific needs of protected area staff would be the ideal. This may take the form of courses given by mobile training units, courses given at existing training institutions or courses given at the direction headquarters when field staff come to the capital. The recipients of in-service training programs should not only be protected area managers, or "conservateurs". They should include people at a number of different levels, so that training occurs throughout a person's career and so that people arrive at a

particular level in the hierarchy already trained to the level necessary for that job.

The value of formal training in preparing people for specific positions should not be questioned. The question should be, however, how to supplement this training so that it is no longer elitist and so that everyone can profit from training. It should also be repeated as frequently as possible. Training at present is not seen as part of the process of movement throughout a person's career. The goal should be that training is seen as available to everyone and as a means of moving forward in a career, so that it also provides pride in the work and professional satisfaction.

The kind of training that would be recommended, therefore, is training that is developed by the department and which is available to everyone in a planned progress along a career path. The training is specific to the needs of the job. The choice of protected area manager as target group for this assessment is due in part to the fact that often it is this group that is lacking both in training and in manpower: field-based managers who are capable of carrying out the large number of functions and responsibilities attributed to the position. The target groups for training will include not only protected area managers, but also people below the level of PAM, who will need to be prepared to one day assume the position of PAM, and people above the position of a PAM, who will need similar skills to the field-based manager, in order to supervise, coordinate and direct protected area managers.

In-service training can be used for a number of purposes. Some of the more salient uses are:

- providing people with the necessary skills in order to acquire posts with new responsibilities
- providing people with up-to-date information or refresher courses on knowledge skills that they have not studied for a number of years
- providing people with opportunities for changing their career path, or taking a new direction
- providing specific skills which cannot be inculcated effectively in people with no experience of employment, and which cannot be included in pre-service courses (Hardcastle, et.al.,1992)

The present study recognizes the need in both the forestry and wildlife sectors for sociological skills. These skills were revealed, in the knowledge skills gap analysis as contained in the main divisions of the job in which the greatest training needs occur (Resource Conservation, Community Conservation and Interventions). Policies & Procedures, Finance/Accounting Legal and Technical skills come out as requiring priority training more urgently than Management Skills. These skills were also revealed in the Mental and Social skills as those requiring training, and included Problem Analysis, Comprehension, Creativity and Working with Others. One of the crucial first steps in any programme addressing training needs would be the training of trainers, in the organizations responsible for protected area management (MINETO, ORTPN and DGF), in order to provide the capacity to carry out in-service training. Expertise could come from any number of training institutions in Rwanda, or from technical assistance abroad. A training programme would need to be developed within the organizations in order to plan and give direction to training for people's careers. This would demand the creation of a training officer post.

Section 3: Recommendations

Based on discussions with Field Operations Directors and Field Associates, as well as Protected Area Managers, it is obvious that there is much interest in the development of in-service training programs. Programs that have short, frequently repeated and refresher training courses that are developed to the specific needs of protected area staff would be the ideal. This may take the form of courses given by mobile training units, courses given at existing training institutions or courses given at the direction headquarters when field staff come to the capital. The recipients of in-service training programs should not only be protected area managers, or "conservateurs". They should include people at a number of different levels, so that training occurs throughout a person's career and so that people arrive at a particular level in the hierarchy already trained to the level necessary for that job.

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Annexes

Annexe 1: Questionnaire

Annexe 2: Data tables and figures

PROTECTED AREAS CONSERVATION STRATEGY (PARCS): TRAINING NEEDS ASSESSMENT

Four organisations, the African Wildlife Foundation, Wildlife Conservation International, World Wildlife Fund and the Biodiversity Support Program are working together on a project called PARCS. One of the main aims of the project is to identify the skills required for the job of protected area manager and to assess the training needs.

To achieve this we have developed a chart of the typical skills (competencies) required to do the job of protected area manager. We would like you to assist us by doing two things:

- to check the appropriateness of the chart to your job
- to assess your current skill level for each component of the chart

Before filling in the questionnaire please read everything through very carefully. This information will be confidential and will be used to build up an analysis of the training requirements for each country in Africa participating in the study.

The attached chart has 17 columns and 12 rows.

- Rows A-K show main divisions of the job.
- Row L will be used to identify the types of training you have already received.
- The first column shows 'accountabilities and responsibilities' associated with each division A-K. Please add any further accountabilities and responsibilities specific to your job by writing in the relevant compartment.
- Columns 2-17 show the competencies associated with your job in terms of knowledge (2-7), mental skills (8-11), social skills (12-14) and attitudes (15-17).

You will notice that some compartments are blank. These do not need to be filled in.

KNOWLEDGE (columns 2-7)

Knowledge has been grouped into four levels:

1.	None	has no knowledge of subject matter indicated
2.	Some	awareness of the subject and general applicability
3.	Working	sufficient knowledge to complete routine tasks
4.	In-depth	a breadth and depth of knowledge which enables initiative to be taken in non-routine situations

n/a = not applicable in present job. Please indicate your knowledge level.

We would like you to go down each column 2-7 and fill in the boxes.

in the left hand box put the number which corresponds to your view of the level of knowledge needed to do the job successfully.

in the right hand box (shaded) put the number which corresponds to your assessment of your current knowledge.

e.g. in E5:

In-depth knowledge of relevant laws and regulations eg. firearms, arrest, charging and human rights

4

3

such an answer shows us that the person completing the questionnaire agrees that in-depth knowledge is needed (4 in the left hand box). By putting 3 in the right hand box the respondent has identified a training need.

When you come to the bottom of each column please complete the compartment (L) by showing which form of training has contributed most to your knowledge of the subject in the column. These categories could include: Formal wildlife training institutions (please specify with dates), Other training opportunities (eg. workshops, seminars), In service formal training (organised by your department), On-the-job training (skills learnt whilst doing your job).

MENTAL AND SOCIAL SKILLS (columns 8-14)

Mental and social skills have been grouped into four levels:

1. None
2. Poor
3. Satisfactory
4. Good

We would like you to go down each column 8-14 and fill in the boxes.

First of all indicate whether each skill is appropriate to your job by circling either Yes (Y) or No (N).

Then indicate in the right hand box (shaded) your level of ability for each particular skill regardless of whether it is applicable to your present job.

eg. in 19:

determining true causes of visitor
dissatisfaction & behaviour

Y N

Such an answer shows that this skill is required and the respondent has the required level of skill to successfully complete this aspect of the job. Therefore in this particular case there is no identified training need.

When you come to the bottom of each column please complete the compartment by showing which forms of training have contributed most to your skills in the subject of the column. Use the categories described before. Please list the most important one first.

ATTITUDES (columns 15-17)

The chart indicates the principal attitudes of the job. All we require you to do is to answer three questions.

If you do not understand any of the questions in this questionnaire please leave the boxes empty and move onto the next question.

In order for you to keep a record of your completed questionnaires we are providing two copies of each section and a sheet of carbon paper. The WHITE sheets (numbers 1, 2, 3 & 4) are to be returned after completion. You may keep all of the COLOURED sheets. Once you have completed the questionnaire please carefully tear off the four white sheets and return them in the enclosed addressed envelope.

Thank you for helping us undertake this training needs assessment. We appreciate your time and input.



**Biodiversity
Support
Program**

Main Divisions of the Job	1. Accountability and Responsibilities	KNOWLEDGE
		2. Technical (Wildlife/Tourism)
A Ensure availability of a competent and well motivated staff	<ul style="list-style-type: none"> Maximizing potential of allocated staff Responsible for identifying training needs Responsible for recommendations and application of disciplinary measures 	
B Ensure appropriate infrastructure within budget	<ul style="list-style-type: none"> Responsible and accountable for maintenance, repair, rehabilitation and construction Recommending additional facilities 	Working knowledge of infrastructure, construction, slings, materials, etc. <input type="checkbox"/> <input type="checkbox"/>
C Ensure financial and accounting integrity of the protected area	<ul style="list-style-type: none"> Accountable and responsible for all revenue generated and disbursement (received from headquarters and receipts) Responsible for accurate accounting 	
D Ensure development and achievement of tactical plans and budgets and contribute to protected area strategic planning	<ul style="list-style-type: none"> Accountable for development of annual plan and budget of protected area Responsible for working within the agreed plan and budget Identify strategic options in the protected area and contribute to strategic planning 	
E Ensure that all activities within the protected area comply with laws and regulations	<ul style="list-style-type: none"> Accountable for enforcement of law and regulation and ensuring safe practices throughout the protected area 	In depth knowledge of safe practices with respect to wildlife <input type="checkbox"/> <input type="checkbox"/> 2 In depth knowledge of techniques of anti-poaching <input type="checkbox"/> <input type="checkbox"/> 3
F Ensure optimum levels of visitor satisfaction	<ul style="list-style-type: none"> Responsible for ensuring that the highest levels of visitors' services and practices under his/her jurisdiction are maintained 	In depth knowledge of visitors' expectations <input type="checkbox"/> <input type="checkbox"/> 4 In depth knowledge of protected area infrastructure techniques, site design and analysis <input type="checkbox"/> <input type="checkbox"/> 5 In depth knowledge of interaction between tourist and local areas <input type="checkbox"/> <input type="checkbox"/> 6
G Ensure agreed intervention (eg early burning, problem animal control) programmes are completed to budget and timetables	<ul style="list-style-type: none"> Responsible for design, implementation, and evaluation of intervention programmes to meet conservation objectives in the protected area 	In depth knowledge of intervention needs, techniques and implications <input type="checkbox"/> <input type="checkbox"/> 7
H Ensure harmonious relationships with neighbouring communities	<ul style="list-style-type: none"> Responsible and accountable for design and implementation of a programme to achieve harmonious relations Responsible for instilling acceptance by staff of the role of local communities in protected area management 	Working knowledge of extension methodology <input type="checkbox"/> <input type="checkbox"/> 8 Some knowledge of cultural and historical context for the location of protected area <input type="checkbox"/> <input type="checkbox"/> 9
I Be aware of research activities and progress against plan	<ul style="list-style-type: none"> Responsible and accountable for ensuring that research programme is implemented according to the protected area conservation objectives and timetables 	Working knowledge of research methodologies <input type="checkbox"/> <input type="checkbox"/> 10 Working knowledge of the role of research in meeting conservation objectives <input type="checkbox"/> <input type="checkbox"/> 11
J Represent the protected area and its interests in public meetings	<ul style="list-style-type: none"> Accountable for ensuring that the protected area is represented in every possible area Responsible for ensuring that the information available about the protected area is up to date 	Up to date working knowledge of all activities within the protected area <input type="checkbox"/> <input type="checkbox"/> 12 In depth knowledge of the context of the protected area in the regional/national/global arena <input type="checkbox"/> <input type="checkbox"/> 13
K Ensure an appropriate balance between resource conservation and use in the protected area	<ul style="list-style-type: none"> Responsible and accountable for design and implementation of resource management / protection strategies to meet protected area conservation objectives Responsible and accountable for the preparation, approval, and implementation of a resource conservation management plan for the protected area 	In depth knowledge of types, locations, trends and requirements of important natural and cultural resources in the protected area <input type="checkbox"/> <input type="checkbox"/> 14 In depth knowledge of types, locations, trends and requirements of threatened and endemic fauna and flora and the key species of the ecosystem <input type="checkbox"/> <input type="checkbox"/> 15 Working knowledge of environmental impact analysis techniques <input type="checkbox"/> <input type="checkbox"/> 16 Working knowledge of surveys and monitoring techniques (field data collection/analysis) <input type="checkbox"/> <input type="checkbox"/> 17
L Training received		

3. Management	4. Planning	5. Legal	6. Policies/Procedures	7. Financial/accounting
Working knowledge of supervisory and personnel management skills 18 <input type="checkbox"/> <input type="checkbox"/>	Working knowledge of scheduling staff development & timetables 28 <input type="checkbox"/> <input type="checkbox"/>	Some knowledge of employment laws 40 <input type="checkbox"/> <input type="checkbox"/>	In depth knowledge of staff policies, procedure, and practices 49 <input type="checkbox"/> <input type="checkbox"/>	
Some knowledge of human resources techniques and their application as appropriate (e.g., job evaluation or worth of job, salary structuring, training needs analysis) 19 <input type="checkbox"/> <input type="checkbox"/>	↓	↓	↓	↓
Working knowledge of managing casual labour 20 <input type="checkbox"/> <input type="checkbox"/>	Working knowledge of job planning 29 <input type="checkbox"/> <input type="checkbox"/>	Some knowledge of contract law (for writing contracts to subcontractors) 41 <input type="checkbox"/> <input type="checkbox"/>	In depth knowledge of maintenance / construction policies, procedures and standards and procurement procedures 50 <input type="checkbox"/> <input type="checkbox"/>	
Working knowledge of principles of stock control and procurement 21 <input type="checkbox"/> <input type="checkbox"/>	Working knowledge of financial planning 30 <input type="checkbox"/> <input type="checkbox"/>		Working knowledge of accounting policy and procedures 51 <input type="checkbox"/> <input type="checkbox"/>	Working knowledge of accounting and principles of internal control 59 <input type="checkbox"/> <input type="checkbox"/>
Working knowledge of how to apply preventative maintenance 22 <input type="checkbox"/> <input type="checkbox"/>	Working knowledge of planning, budgeting and control 31 <input type="checkbox"/> <input type="checkbox"/>		Working knowledge of overall strategies and direction of his/her organisation (national conservation policy) 52 <input type="checkbox"/> <input type="checkbox"/>	
	In depth knowledge of patrol planning needs 32 <input type="checkbox"/> <input type="checkbox"/>	In depth knowledge of relevant laws and regulations (e.g., licences, arrest, charging, human rights) 42 <input type="checkbox"/> <input type="checkbox"/>	In depth knowledge of policies and procedures 53 <input type="checkbox"/> <input type="checkbox"/>	
Working knowledge of management and accommodation and catering facilities under protected area jurisdiction 23 <input type="checkbox"/> <input type="checkbox"/>	In depth knowledge of techniques in developing long and short term visitor plans 33 <input type="checkbox"/> <input type="checkbox"/>	Working knowledge of contract law as applicable to concessionaires and visitors 43 <input type="checkbox"/> <input type="checkbox"/>	In depth knowledge of visitor policies and procedures 54 <input type="checkbox"/> <input type="checkbox"/>	Working knowledge of keeping records of visitor numbers and keeping receipts 60 <input type="checkbox"/> <input type="checkbox"/>
Working knowledge of project (job) management 24 <input type="checkbox"/> <input type="checkbox"/>	In depth knowledge of job planning 34 <input type="checkbox"/> <input type="checkbox"/>	In depth knowledge of relevant laws and regulations 44 <input type="checkbox"/> <input type="checkbox"/>	In depth knowledge of policies and procedures related to intervention 55 <input type="checkbox"/> <input type="checkbox"/>	
In depth knowledge of protected area vs people conflict management 25 <input type="checkbox"/> <input type="checkbox"/>	Working knowledge of how to develop a community conservation plan 35 <input type="checkbox"/> <input type="checkbox"/>	Some knowledge of laws related to community development 45 <input type="checkbox"/> <input type="checkbox"/>	In depth knowledge of policies and procedures related to community conservation 56 <input type="checkbox"/> <input type="checkbox"/>	Working knowledge of record keeping for financial disbursements to local communities 61 <input type="checkbox"/> <input type="checkbox"/> In depth knowledge of records of resource use or resources shared -- both financial and in-kind distributions 62 <input type="checkbox"/> <input type="checkbox"/>
	Some knowledge of development of research plan for the protected area 36 <input type="checkbox"/> <input type="checkbox"/>	In depth knowledge of legal aspects of collecting/exporting materials & specimens 46 <input type="checkbox"/> <input type="checkbox"/>	Working knowledge of research policies and procedures 57 <input type="checkbox"/> <input type="checkbox"/>	Working knowledge of budget & allocations for research activities 63 <input type="checkbox"/> <input type="checkbox"/>
Working knowledge of the concept of public relations and methods of dealing with the media 26 <input type="checkbox"/> <input type="checkbox"/>		In depth knowledge of the legislation regarding protected areas 47 <input type="checkbox"/> <input type="checkbox"/>	In depth knowledge of the public relations policies, procedures and practices 58 <input type="checkbox"/> <input type="checkbox"/>	
Some knowledge of obligatory role (attendance) at meetings and awareness of activities around the protected area expedient to attend 27 <input type="checkbox"/> <input type="checkbox"/>		Some knowledge of the laws of slander and libel 48 <input type="checkbox"/> <input type="checkbox"/>		
	Working knowledge of resource conservation management planning techniques and methodologies 37 <input type="checkbox"/> <input type="checkbox"/> In depth knowledge of how to develop and implement protected area management objectives 38 <input type="checkbox"/> <input type="checkbox"/> In depth knowledge of how to develop and maintain protected area management zoning system 39 <input type="checkbox"/> <input type="checkbox"/>			Working knowledge of how to estimate costs for implementation of resource conservation management plan recommendations 64 <input type="checkbox"/> <input type="checkbox"/>

Main Divisions of the Job	1. Accountability and Responsibilities	MENTAL SKILLS	
		8. Comprehension	9. Problem Analysis
A. Ensure availability of a competent and well-motivated staff	<ul style="list-style-type: none"> Maximizing potential of allocated staff Responsible for identifying training needs Responsible for recommendations and application of disciplinary measures 	Recognising staff potential advancement Y N <input type="checkbox"/> ↓ 1	Determining causes of poor performance and behaviour Y N <input type="checkbox"/> ↓ 3
B. Ensure availability of appropriate infrastructure (within budget)	<ul style="list-style-type: none"> Responsible and accountable for maintenance, repair and rehabilitation and construction Recommending additional facilities 	Spotting malpractices and potential hazards Y N <input type="checkbox"/> 2	Determining causes of specific and trends on equipment and infrastructure failures Y N <input type="checkbox"/> 14
C. Ensure financial and accounting integrity of the protected area	<ul style="list-style-type: none"> Accountable and responsible for all revenue generated and disbursement (received from headquarters and receipts) Responsible for accurate accounting 	Understanding financial implications of information Y N <input type="checkbox"/> 3	Determining causes of figures not reflecting the true situation Y N <input type="checkbox"/> 15
D. Ensure development and achievement of tactical plans and budgets and contribute to protected area strategic planning	<ul style="list-style-type: none"> Accountable for development of annual plan and budget of protected area Responsible for working within the agreed plan and budget Identify strategic options in the protected area and contribute to strategic planning 	Understanding implications of set objectives including their feasibility Y N <input type="checkbox"/> 4	Determining true causes of failure to achieve plan and budget Y N <input type="checkbox"/> 16
E. Ensure that all activities within the protected area comply with laws and regulations	<ul style="list-style-type: none"> Accountable for enforcement of law and regulation and ensuring safe practices throughout the protected area 	Understanding applicability of laws and regulations in protected areas Y N <input type="checkbox"/> 5	Determining true causes of incidences and trends in incidences Y N <input type="checkbox"/> 17
F. Ensure optimum levels of visitor satisfaction	<ul style="list-style-type: none"> Responsible for ensuring that the highest levels of visitors services and practices under his/her jurisdiction are maintained 	Recognising the significance of physical and statistical information regarding visitor impact Y N <input type="checkbox"/> 6	Determining true causes of visitor dissatisfaction and behaviour Y N <input type="checkbox"/> 18
G. Ensure agreed intervention programmes are completed to budget and timetables	<ul style="list-style-type: none"> Responsible for design, implementation, and evaluation of intervention programmes to meet conservation objectives in the protected area 	Understanding information that may lead to interventions Y N <input type="checkbox"/> 7	Determining causes of deviation from intended results of interventions Y N <input type="checkbox"/> 19
H. Ensure harmonious relationships with neighbouring communities	<ul style="list-style-type: none"> Responsible and accountable for design and implementation of a programme to achieve harmonious relations Responsible for instilling acceptance by staff of the role of local communities in protected area management 	Understanding the significance of statistical, physical, written and oral information relating to community-protected area links Y N <input type="checkbox"/> 8	Understanding underlying causes of conflict both in the long and short term Y N <input type="checkbox"/> 20
I. Be aware of research activities and progress against plan	<ul style="list-style-type: none"> Responsible and accountable for ensuring that research programme is implemented according to the protected area conservation objectives and timetables 	Understanding the significance of research findings and the function of research Y N <input type="checkbox"/> 9	Determining causes of why research programme is not to timetable Y N <input type="checkbox"/> 21
J. Represent the protected area and its interests in public meetings	<ul style="list-style-type: none"> Accountable for ensuring that the protected area is represented in every possible area Responsible for ensuring that the information available about the protected area is up to date 	Understanding the significance of points raised during press and other meetings Y N <input type="checkbox"/> 10	Determining the causes of adverse comments in press Y N <input type="checkbox"/> 22
K. Ensure an appropriate balance between resource conservation and use in the protected area	<ul style="list-style-type: none"> Responsible and accountable for design and implementation of resource management/protection strategies to meet protected area conservation objectives Responsible and accountable for the preparation, approval, and implementation of a resource conservation management plan for the protected area 	Understanding of day-to-day and long term implications of the protected area's management objectives Y N <input type="checkbox"/> 11 Recognising and understanding the implications of potential environmental impacts of different activities Y N <input type="checkbox"/> 12	Identifying and determining the causes of conflicts between protected area resource conservation and use Y N <input type="checkbox"/> 23
L. Training received			

		SOCIAL SKILLS			
III. Creativity	II. Evaluation	12. Oral	13. Written	14. Working with others	
Developing on the job training Y N <input type="checkbox"/> ↓ 24	Evaluating staff performance Y N <input type="checkbox"/> ↓ 34	Counselling staff Y N <input type="checkbox"/> ↓ 43	Writing staff appraisals and training briefs Y N <input type="checkbox"/> ↓ 52	Motivating staff Y N <input type="checkbox"/> ↓ 60	
Creating adaptive solutions to infrastructural problems Y N <input type="checkbox"/> 25	Deciding priorities and selecting from alternative courses of action for maintenance and repair Y N <input type="checkbox"/> 35	Giving clear instructions to staff and contractors Y N <input type="checkbox"/> 44	Writing specification orders and instructions to third party Y N <input type="checkbox"/> 53	Gaining the cooperation of suppliers and subcontractors Y N <input type="checkbox"/> 61	
		Explaining financial implications to senior management and junior staff Y N <input type="checkbox"/> 45			
Developing options to achieve plans and budgets in light of changing circumstances Y N <input type="checkbox"/> 26	Selecting priorities during budget preparation process Y N <input type="checkbox"/> 36	Presenting plan and budget Y N <input type="checkbox"/> 46	Preparing planning and budget briefs for manager, justifying proposals Y N <input type="checkbox"/> 54	Selling plan and budget convincingly Y N <input type="checkbox"/> 62	
Having flexibility to reach compromises which respect objectives of the law Y N <input type="checkbox"/> 27	Balancing and evaluating needs of the involved parties in spirit and letter of the law Y N <input type="checkbox"/> 31	Explaining proper procedures and regulations to residents and users of the protected area Y N <input type="checkbox"/> 47	Writing clearly worded notices and instructions Y N <input type="checkbox"/> 55	Gaining cooperation of wrong doers Y N <input type="checkbox"/> 63	
Developing options for improving visitor amenities within means available Y N <input type="checkbox"/> 28	Evaluating options and selecting courses of action regarding visitor services Y N <input type="checkbox"/> 38	Getting protected area's perspective across to visitors Y N <input type="checkbox"/> 48	Preparing interpretive materials Y N <input type="checkbox"/> 56	Dealing with dissatisfied visitors Y N <input type="checkbox"/> 64	
Designing (contributing to design) or adapting interventions to meet specific needs Y N <input type="checkbox"/> 29	Selecting appropriate programmes and evaluating their success Y N <input type="checkbox"/> 39	Giving clear instructions on technical intervention procedures Y N <input type="checkbox"/> 49	Writing clear reports explaining intervention, its success, failure, etc. Y N <input type="checkbox"/> 57	Gaining cooperation of local communities where appropriate Y N <input type="checkbox"/> 65	
Developing ideas for improving community/protected area relations Y N <input type="checkbox"/> 30	Determining why certain community related initiatives have achieved success Y N <input type="checkbox"/> 40	Presenting information at a level appropriate to target audience Y N <input type="checkbox"/> 50		Having cultural sensitivity Y N <input type="checkbox"/> 66	
Identifying opportunities for the application of research Y N <input type="checkbox"/> 31	Evaluating the results of research and their application Y N <input type="checkbox"/> 41		Ensuring research reports are comprehensible for lay people Y N <input type="checkbox"/> 58	Establishing positive relationships with researchers Y N <input type="checkbox"/> 67	
Developing public relations materials (oral, written, etc.) Y N <input type="checkbox"/> 32	Selecting materials appropriate for each meeting Y N <input type="checkbox"/> 42	Making formal public presentations and respond to questions unambiguously Y N <input type="checkbox"/> 51	Preparing press releases Y N <input type="checkbox"/> 59	Building up and maintaining network of contacts for information on all important/relevant meetings and events Y N <input type="checkbox"/> 68	
Developing methods to achieve management zone objectives Y N <input type="checkbox"/> 33				Working with local communities and other concerned parties during plan development and implementation Y N <input type="checkbox"/> 69	

Main Divisions of the Job	I. Accountability and Responsibilities	ATTITUDES		
		15. Work Ethics	16. Commitment to Conservation	17. Community Attitudes
A. Ensure availability of a competent and well motivated staff	<ul style="list-style-type: none"> Maximizing potential of allocated staff Responsible for identifying training needs Responsible for recommendations and application of disciplinary measures 	Needs objectivity in appraisal and general staff dealings	Needs to demonstrate commitment and instill commitment in others	Needs to demonstrate and instill understanding of need for harmonious relationship
B. Ensure availability of appropriate infrastructure (within budget)	<ul style="list-style-type: none"> Responsible and accountable for maintenance, repair and rehabilitation and construction Recommending additional facilities 	Honours contractual agreements in spirit and letter		
C. Ensure financial and accounting integrity of the protected area	<ul style="list-style-type: none"> Accountable and responsible for all revenue generated and disbursement (received from headquarters and receipts) Responsible for accurate accounting 	Instills honesty		
D. Ensure development and achievement of tactical plans and budgets and contribute to protected area strategic planning	<ul style="list-style-type: none"> Accountable for development of annual plan and budget of protected area Responsible for working within the agreed plan and budget Identify strategic options in the protected area and contribute to strategic planning 			
E. Ensure that all activities within the protected area comply with laws and regulations	<ul style="list-style-type: none"> Accountable for enforcement of law and regulation and ensuring safe practices throughout the protected area 	Honesty, tolerant to others' points of view	Finding balance and understanding the needs of both conservation and the involved parties	Tolerance to others' points of view to minimize conflict between protected area and others
F. Ensure optimum levels of visitor satisfaction	<ul style="list-style-type: none"> Responsible for ensuring that the highest levels of visitors' services and practices under his/her jurisdiction are maintained 		Needs to demonstrate commitment to conservation	Needs to demonstrate belief in validity of including local communities in protected area management and enterprises linked to tourism
G. Ensure agreed intervention programmes are completed to budget and timetables	<ul style="list-style-type: none"> Responsible for design, implementation, and evaluation of intervention programmes to meet conservation objectives in the protected area 			
H. Ensure harmonious relationships with neighbouring communities	<ul style="list-style-type: none"> Responsible and accountable for design and implementation of a programme to achieve harmonious relations Responsible for instilling acceptance by staff of the role of local communities in protected area management 			
I. Be aware of research activities and progress against plan	<ul style="list-style-type: none"> Responsible and accountable for ensuring that research programme is implemented according to the protected area conservation objectives and timetables 	<p>Must have an open mind to research findings</p> <p>Must support role of research as a component of protected area management</p>		
J. Represent the protected area and its interests in public meetings	<ul style="list-style-type: none"> Accountable for ensuring that the protected area is represented in every possible area Responsible for ensuring that the information available about the protected area is up to date 	<p>Honesty, Integrity</p> <p>Must make clear when representing the protected area or a personal view</p> <p>Must never criticize the organisation openly</p>	Demonstrated as absolute	Demonstrated as absolute
K. Ensure an appropriate balance between resource conservation and use in the protected area	<ul style="list-style-type: none"> Responsible and accountable for design and implementation of resource management/protection strategies to meet protected area conservation objectives Responsible and accountable for the preparation, approval, and implementation of a resource conservation management plan for the protected area 	Honours conservation objectives of resource management plan		
L. Training received				

The chart indicates the principal attitudes of the job. All we require is that you answer the following questions:

As a manager how do you instill:

a. work ethics?

b. commitment to conservation?

c. healthy attitudes to adjacent communities?

(If you need more space use blank sheet on the next page)

LANGUAGES

Do you speak a language understood by the local community adjacent to your protected area?

COMPUTERS

Do you use computers? If so, in what ways?

TRAINING PRIORITIES

Having completed the questionnaire and thinking specifically of the requirements of your job, what do you think are your three greatest training needs? What form of training do you think would be best to address these needs (eg. formal, in-service, on the job, or others)?

1.

2.

3.

This questionnaire was completed by: Title (no name needed)
..... Department/Section
..... Organisation
..... Country
Date:

How many years have you worked for your department/organisation?

If applicable, how many years have you been in charge of a protected area?

What is the conservation status of your protected area? (eg. national park, game reserve etc)

What biome is most representative of the protected area under your management? (please circle) montane, savannah, marine, aquatic, dry forest, moist forest, desert

Are you male or female ? (Please tick appropriate box)

PARCS REF NO.

--	--	--	--	--	--	--	--	--	--

Date received:

BEST AVAILABLE DOCUMENT

Annexe 2:

2.3.1 Data Collection Table: Questionnaires
Rwanda

POSITION	METHOD							Total
	1	2	3	4	5	6	7	
1. Assistant PAM								
2. PAM		1			1			2
3. Regional Manager								
4. FOD (for PAMs)		5						5
5. FOD (for own job)								
6. Trainer								
7. Researcher								
8. Field Associate		1						1
9. Private Sector PAM								
Total		7			1			8

- Method:
1. Explain questionnaire and fill out with Regional Manager nearby
 2. Explain questionnaire and leave to fill out in own time
 3. Explain questionnaire at workshop and fill with Regional Manager nearby
 4. Consultant explain questionnaire and fill out with consultant nearby
 5. Consultant explain questionnaire and fill out in own time
 6. Consultant explain questionnaire at workshop and fill out with consultant nearby
 7. Send out questionnaire by mail

2.3.4c PAMs' Measure of Agreement: PARCS validation score
Rwanda

COMPETENCY	Question No	Total % of combined scores of -1,0,1	
		Question	Competency average
Technical	1	100	91.2
	2	100	
	3	100	
	4	50	
	5	100	
	6	100	
	7	100	
	8	100	
	9	0	
	10	100	
	11	100	
	12	100	
	13	100	
	14	100	
	15	100	
	16	100	
	17	100	
Management	18	100	90.0
	19	100	
	20	100	
	21	100	
	22	100	
	23	100	
	24	100	
	25	50	
	26	100	
	27	50	
	Planning	28	
29		100	
30		100	
31		100	
32		100	
33		100	
34		100	
35		100	
36		0	
37		100	
38		100	
39		100	
Legal	40	50	77.8
	41	50	
	42	100	
	43	100	
	44	100	
	45	100	
	46	50	
	47	100	
48	50		
Policy and Procedures	49	50	95.0
	50	100	
	51	100	
	52	100	
	53	100	
	54	100	
	55	100	
	56	100	
	57	100	
	58	100	
Financial and Accounting	59	100	100
	60	100	
	61	100	
	62	100	
	63	100	
	64	100	

Overall % accuracy score

91.0

Total sample: n=8

Asst PAMs & PAMs combined: n=2

2.3.4d Own score validation analysis: Knowledge average scores
Rwanda

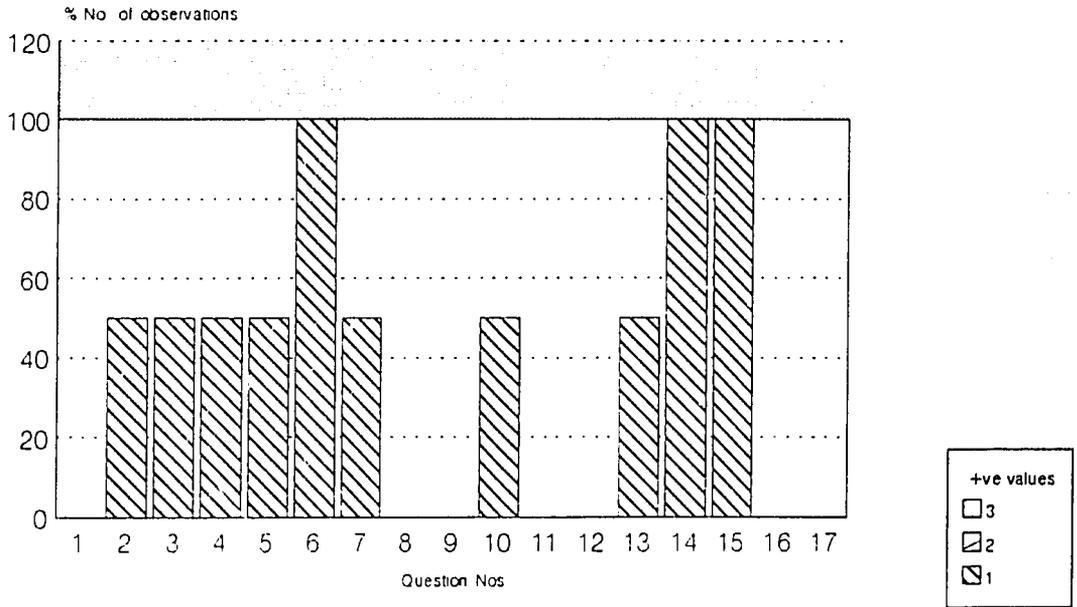
COMPETENCY	Qs No.	Box No.	PARCS Score	Average Country / Org. Score	POSITION								
					1 n=	2 n=2	3 n=	4 n=5	5 n=	6 n=	7 n=	8 n=1	9 n=
Technical	1	B	3	4		4		3.4				3	
	2	E	4	4		4		3.8				4	
	3	E	4	4		4		4				4	
	4	F	4	5		3		3.6				4	
	5	F	4	4		4		3.8				4	
	6	F	4	4		4		3.6				4	
	7	G	4	4		4		3.8				4	
	8	H	3	4		4		3.6				4	
	9	H	2	4		4		3.2				3	
	10	I	3	4		4		3.8				3	
	11	I	3	4		4		3.6				3	
	12	J	3	4		4		3.8				4	
	13	J	4	4		4		3.6				3	
	14	K	4	4		4		3.8				4	
	15	K	4	4		4		3.8				4	
	16	K	3	4		4		3.8				3	
	17	K	3	4		4		3.8				3	
Management	18	A	3	3		3		3.8				3	
	19	A	2	2.5		2.5		3.8				3	
	20	A	3	3		3		3.4				3	
	21	B	3	3		3		3.6				4	
	22	B	3	4		4		3.8				4	
	23	B	3	4		4		3.6				3	
	24	F	3	4		4		3.8				4	
	25	H	4	3		3		3				4	
	26	I	3	3		3		3.2				3	
	27	I	2	3		3		3.4				2	
Planning	28	A	3	3		3		3.6				3	
	29	B	3	2.5		2.5		3.4				3	
	30	B	3	4		4		3.4				4	
	31	C	3	4		4		3.8				4	
	32	D	4	4		4		3.6				4	
	33	E	4	4		4		3.4				3	
	34	F	4	4		4		4				4	
	35	G	3	4		4		3.3				4	
	36	H	2	4		4		3.8				3	
	37	I	3	4		4		3.8				3	
	38	K	4	4		4		3.8				4	
Legal	40	A	2	3		3		3				3	
	41	B	2	3		3		3.2				3	
	42	E	4	4		4		3.6				3	
	43	F	3	4		4		3.4				3	
	44	G	4	4		4		3				4	
	45	H	2	3		3		3.6				3	
	46	I	4	4		4		3.6				3	
	47	I	4	4		4		3.4				4	
	48	J	2	3		3		3				2	
	Policy and Procedures	49	A	4	3		3		3				3
50		B	4	4		4		4				3	
51		C	3	3		3		3				4	
52		C	3	3.5		3.5		3.5				4	
53		D	4	4		4		4				3	
54		E	4	4		4		4				4	
55		F	4	4		4		4				4	
56		G	4	3.5		3.5		3.5				3	
57		H	3	4		4		4				3	
Financial and Accounting	59	C	3	3.5		3.5		3.5				4	
	60	C	3	3		3		3				4	
	61	H	3	3		3		3				3	
	62	H	4	4		4		4				3	
	63	I	3	4		4		4				3	
	64	K	3	4		4		4				3	

Total sample: n=8

Asst PAMs & PAMs combined: n=2

2.3.5.a₁ PAMs gap analysis relative to PARCS

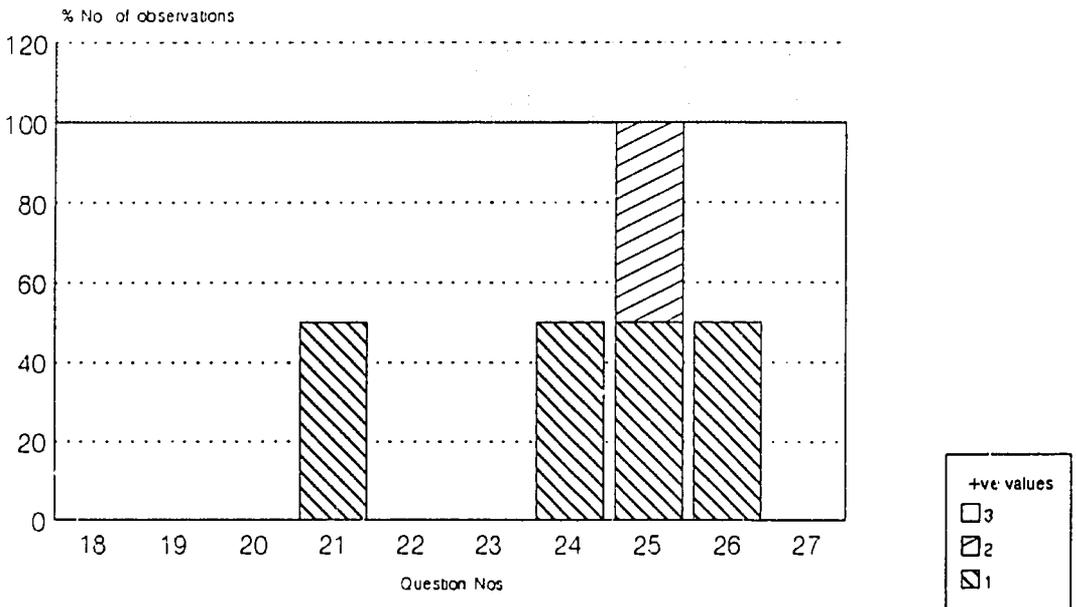
Technical Knowledge: Rwanda



Total Sample n=8 (PAMs & Ass PAMs n=2)

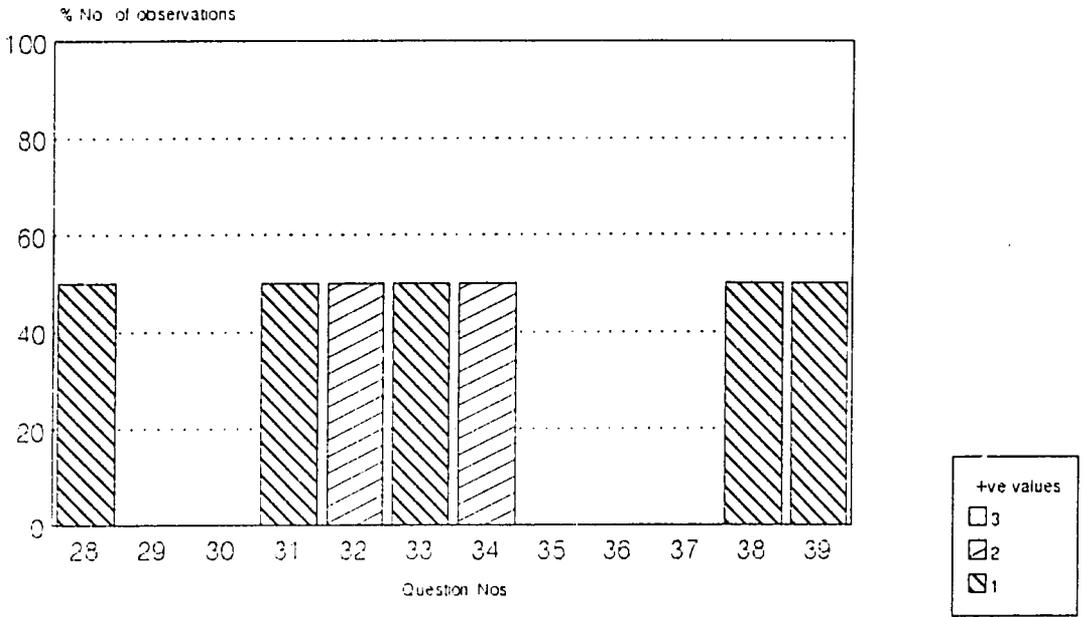
2.3.5.a₂ PAMs gap analysis relative to PARCS.

Management Knowledge: Rwanda



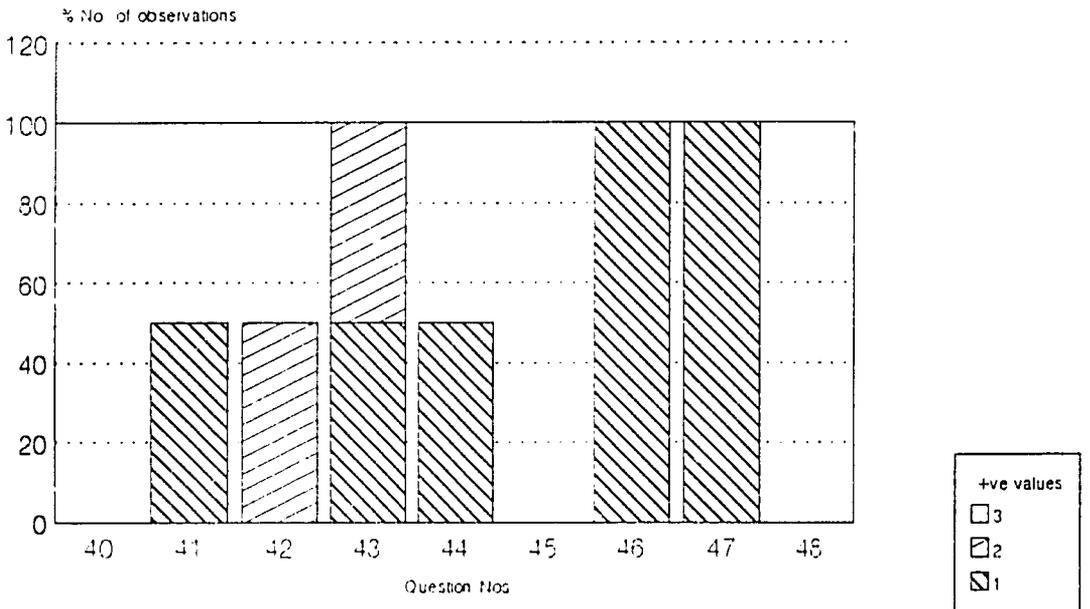
Total Sample n=8 (PAMs & Ass PAMs: n=2)

2.3.5.a₃ PAMs gap analysis relative to PARCS. Planning Knowledge Rwanda



Total Sample n=8 (PAMs & Ass PAMs n=2)

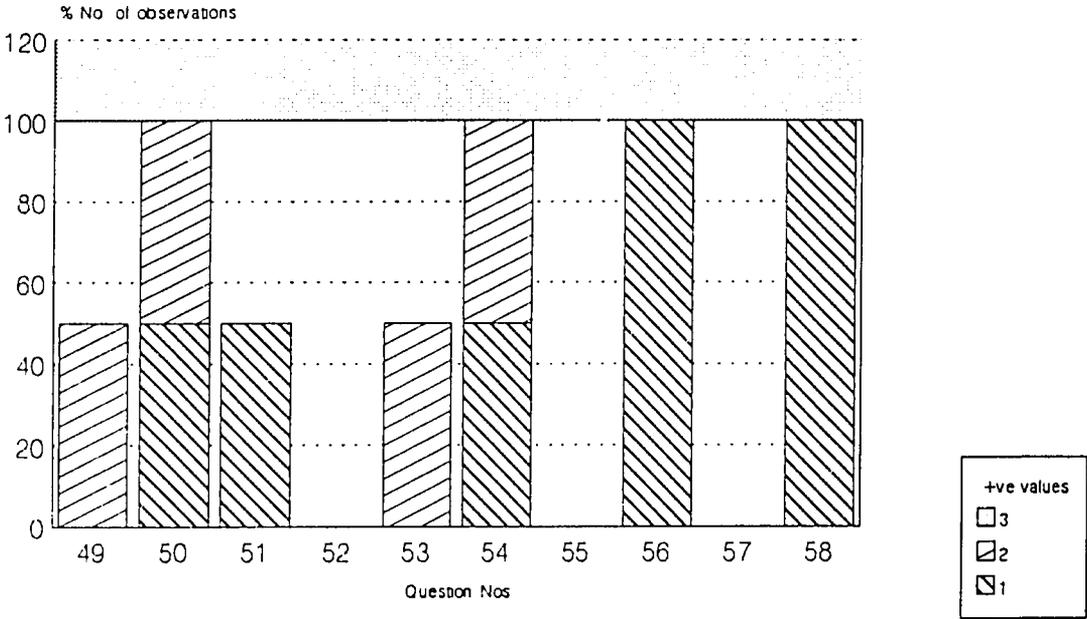
2.3.5.a₄ PAMs gap analysis relative to PARCS Legal Knowledge Rwanda



Total Sample n=8 (PAMs & Ass PAMs n=2)

2.3.5.a₅ PAMs gap analysis relative to PARCS

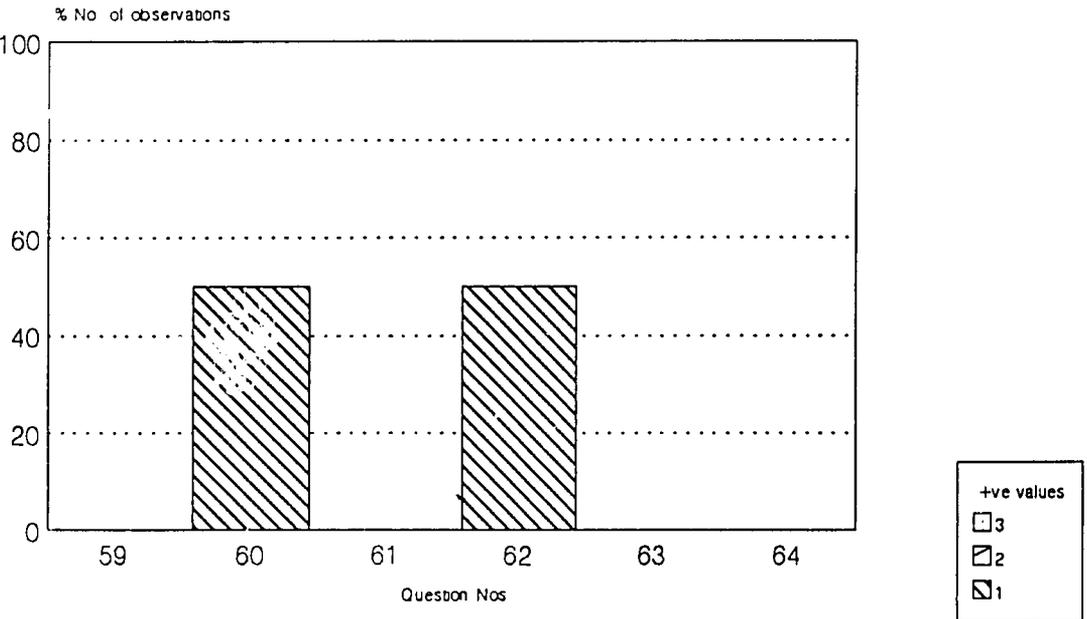
Policies & Procedures Knowledge: Rwanda



Total Sample n=8 (PAMs & Ass PAMs:n=2)

2.3.5.a₆ PAMs gap analysis relative to PARCS.

Financial Knowledge: Rwanda



Total Sample n=8 (PAMs & Ass PAMs:n=2)

15

56

2.3.5d Parcs score gap analysis: Knowledge average scores
Rwanda

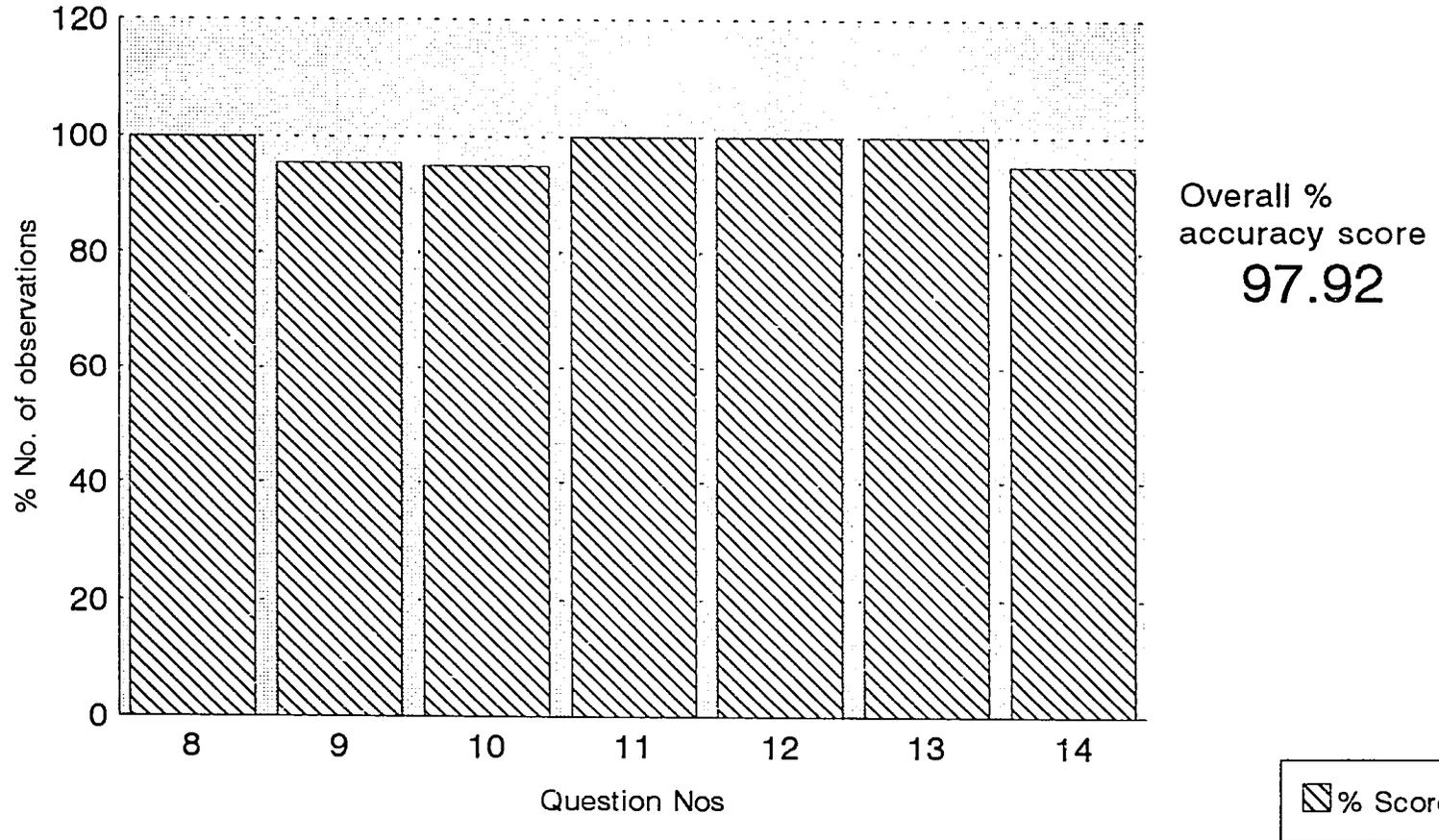
COMPETENCY	Qs No.	Box No.	PARCS Score	Average Country / Org. Score	POSITION								
					1 n=	2 n=2	3 n=	4 n=5	5 n=	6 n=	7 n=	8 n=1	9 n=
Technical	1	B	3			0		0.4				1	
	2	E	4	0.5		0.5		0.8				1	
	3	E	4	0.5		0.5		1.4				1	
	4	F	4	0.5		0.5		1.4				2	
	5	F	4	0.5		0.5		1.4				1	
	6	F	4	1.0		1.0		1.4				1	
	7	C	4	0.5		0.5		1.4				1	
	8	H	3	0		0		0.6				2	
	9	H	2	0		0		0				0	
	10	I	3	0.5		0.5		0.4				2	
	11	I	3	0		0		0.8				2	
	12	J	3	0		0.5		0.4				0	
	13	J	4	0.5		1.0		1.4				2	
	14	K	4	1.0		1.0		1.8				2	
	15	K	4	1.0		1		1.6				3	
	16	K	3	0		0		0.4				2	
	17	K	3	0		0		0.2				2	
Management	18	A	3	0		0		0.4				1	
	19	A	2	0		0		0				0	
	20	A	3	0		0		0.6				0	
	21	B	3	0.5		0.5		0.6				1	
	22	B	3	0		0		0.8				1	
	23	F	3	0		0		0.5				1	
	24	F	3	0.5		0.5		0.4				1	
	25	G	4	1.5		1.5		1.6				3	
	26	J	3	0.5		0.5		0.6				2	
	27	J	2	0		0		0				0	
Planning	28	A	3	0.5		0.5		0				1	
	29	B	3	0		0		0.4				1	
	30	C	3	0		0		0.4				0	
	31	D	3	0.5		0.5		0.4				1	
	32	E	4	1.0		1		1.4				1	
	33	F	4	0.5		0.5		1.0				2	
	34	F	4	1		1.0		1.0				2	
	35	H	3	0		0		0.2				2	
	36	I	2	0		0		0				1	
	37	K	3	0		0		0.6				2	
	38	K	4	0.5		0.5		1.2				2	
39	K	4	0.5		0.5		1.4				3		
Legal	40	A	2	0		0		0				0	
	41	B	2	0		0		0.2				0	
	42	E	4	1		1.0		1.8				1	
	43	F	3	0.5		0.5		0.6				1	
	44	F	4	0.5		0.5		1.6				2	
	45	H	2	0		0		0				1	
	46	I	4	1		1.0		1.6				2	
	47	I	4	1		1.0		1.2				2	
48	J	2	0		0		0				1		
Policy and Procedures	49	A	4	1		1.0		1.4				2	
	50	B	4	1.5		1.5		1.8				2	
	51	C	3	0.5		0.5		0.6				0	
	52	D	3	0		0		0.2				1	
	53	E	4	1		1.0		1.2				1	
	54	F	4	1.5		1.5		1.8				2	
	55	F	4	0		0		1.4				1	
	56	H	4	1		1.0		1.4				2	
	57	I	3	0		0		0.6				1	
58	J	4	1		1.0		1.4				2		
Financial and Accounting	59	C	3	0		0		0.6				0	
	60	C	3	0.5		0.5		0.6				0	
	61	H	3	0		0		0.8				2	
	62	H	4	0.5		0.5		1.8				3	
	63	I	3	0		0		0.6				2	
	64	K	3	0		0		0.4				2	

Total sample: n = 8

Asst PAMs & PAMs combined: n = 2

2.3.6a Validation analysis of Mental and Social Skills

PAMs Yes responses: Rwanda



Total Sample n=8 (Ass PAMs & PAMs combined: n=2)

AS

2.3.6b Validation analysis of Mental and Social Skills
PAMs Scattergram for 'NO' responses :Rwanda

MAIN DIVISIONS	COMPETENCY (% of respondents)						
	8	9	10	11	12	13	14
A							
B							
C							
D							
E							50
F							
G			50				
H							
I		50					
J							
K							

Total sample: n=8

Asst PAMs & PAMs combined: n=2

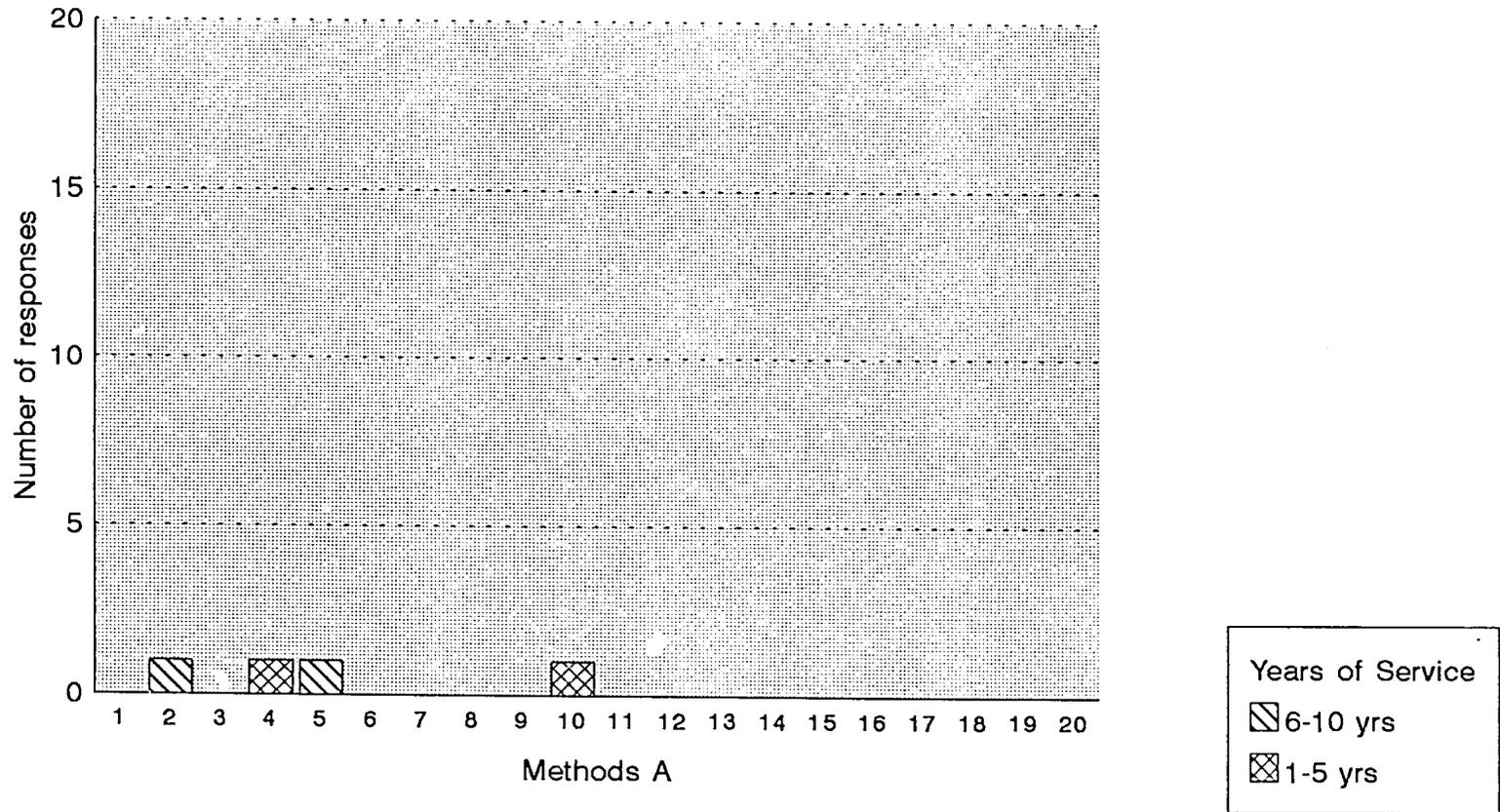
2.3.7b PAMs vs Validators Mental and Social Skills :Average scores Rwanda.

COMPETENCY	Qs No.	Box No.	Average Country / Org. Score	POSITION								
				1 n=	2 n=2	3 n=	4 n=5	5 n=	6 n=	7 n=	8 n=1	9 n=
Comprehension	1	A	3.5		3.5		3.4				2	
	2	B	2.5		2.5		2.2				2	
	3	C	3.0		3.0		2.8				2	
	4	D	3.0		3.0		2.6				2	
	5	E	3.0		3.0		2.6				3	
	6	F	3.0		3.0		2.6				2	
	7	G	3.5		3.5		2.6				2	
	8	H	3.0		3.0		2.4				2	
	9	I	3.5		3.5		2.6				2	
	10	J	3.5		3.5		2.2				2	
	11	K	3.0		3.0		2.4				2	
	12	K	2.5		2.5		2.6				2	
Problem analysis	13	A	3.0		3.0		2.2				2	
	14	B	3.5		3.5		3.0				2	
	15	C	3.0		3.0		2.6				2	
	16	D	3.5		3.5		2.4				1	
	17	E	3.5		3.5		3.0				2	
	18	F	3.5		3.5		2.8				1	
	19	G	4.0		4.0		2.8				2	
	20	H	3.5		3.5		2.4				2	
	21	I	3.5		3.5		2.4				1	
	22	J	3.5		3.5		2.2				1	
	23	K	4.0		4.0		2.4				2	
Creativity	24	A	4.0		4.0		2.2				2	
	25	B	3.0		3.0		2.4				2	
	26	D	3.0		3.0		2.4				2	
	27	E	4.0		4.0		2.6				2	
	28	F	4.0		4.0		2.6				2	
	29	G	3.5		3.5		2.6				2	
	30	H	3.5		3.5		2.2				1	
	31	I	4.0		4.0		2.2				1	
	32	J	3.5		3.5		2.2				1	
	33	K	3.5		3.5		2.4				1	
	Evaluation	34	A	4.0		4.0		2.4				3
35		B	3.5		3.5		2.8				1	
36		D	4.0		4.0		3.0				2	
37		E	4.0		4.0		3.0				2	
38		F	3.5		3.5		2.6				2	
39		G	4.0		4.0		2.6				2	
40		H	4.0		4.0		2.6				1	
41		I	3.0		3.0		2.8				1	
42		J	3.5		3.5		2.8				1	
Oral		43	A	4.0		4.0		3.0				2
	44	B	4.0		4.0		3.0				2	
	45	C	3.5		3.5		2.6				2	
	46	D	3.0		3.0		3.2				1	
	47	E	3.5		3.5		3.0				2	
	48	F	3.5		3.5		3.2				2	
	49	G	4.0		4.0		3.2				2	
	50	H	4.0		4.0		2.6				1	
	51	I	4.0		4.0		2.6				1	
	Written	52	A	4.0		4.0		3.0				2
53		B	3.5		3.5		2.6				2	
54		D	2.5		2.5		2.6				1	
55		E	4.0		4.0		3.2				2	
56		F	3.0		3.0		2.8				1	
57		G	4.0		4.0		3.0				1	
58		H	4.0		4.0		3.0				1	
59		I	4.0		4.0		2.8				1	
Working with others		60	A	4.0		4.0		2.8				2
	61	B	4.0		4.0		2.4				2	
	62	D	3.5		3.5		2.4				1	
	63	E	4.0		4.0		1.6				1	
	64	F	3.5		3.5		2.4				1	
	65	G	4.0		4.0		2.8				2	
	66	H	3.5		3.5		2.6				1	
	67	I	3.5		3.5		3.0				2	
	68	J	3.0		3.0		3.2				1	
	69	K	4.0		4.0		3.0				1	

Total sample: n=8

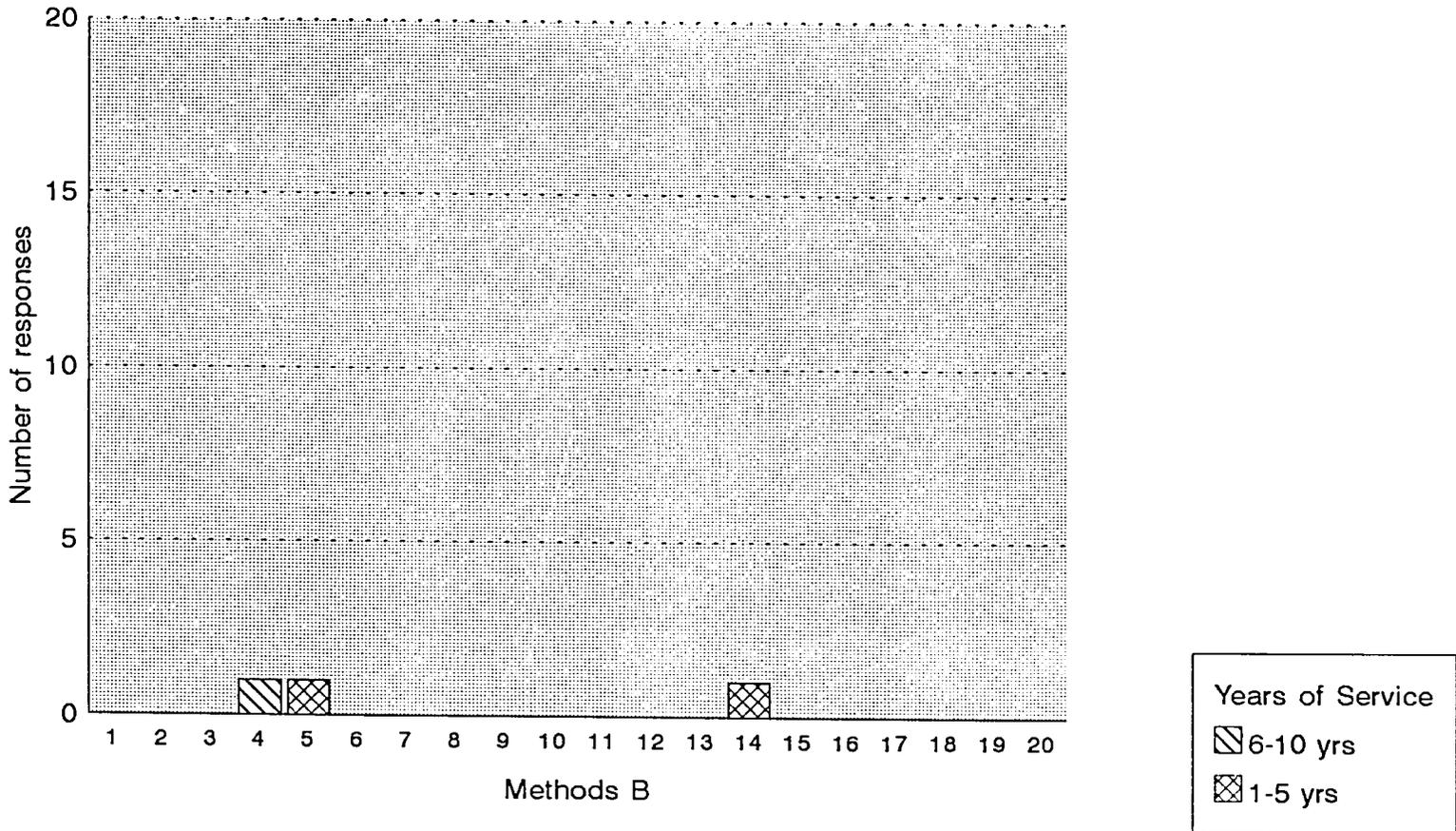
Asst PAMs & PAMs combined: n=3

2.3.8a PAMs Methods To Instill Work Ethics Rwanda



Total Sample:n=8 (Ass PAMs & PAMs:n=2)

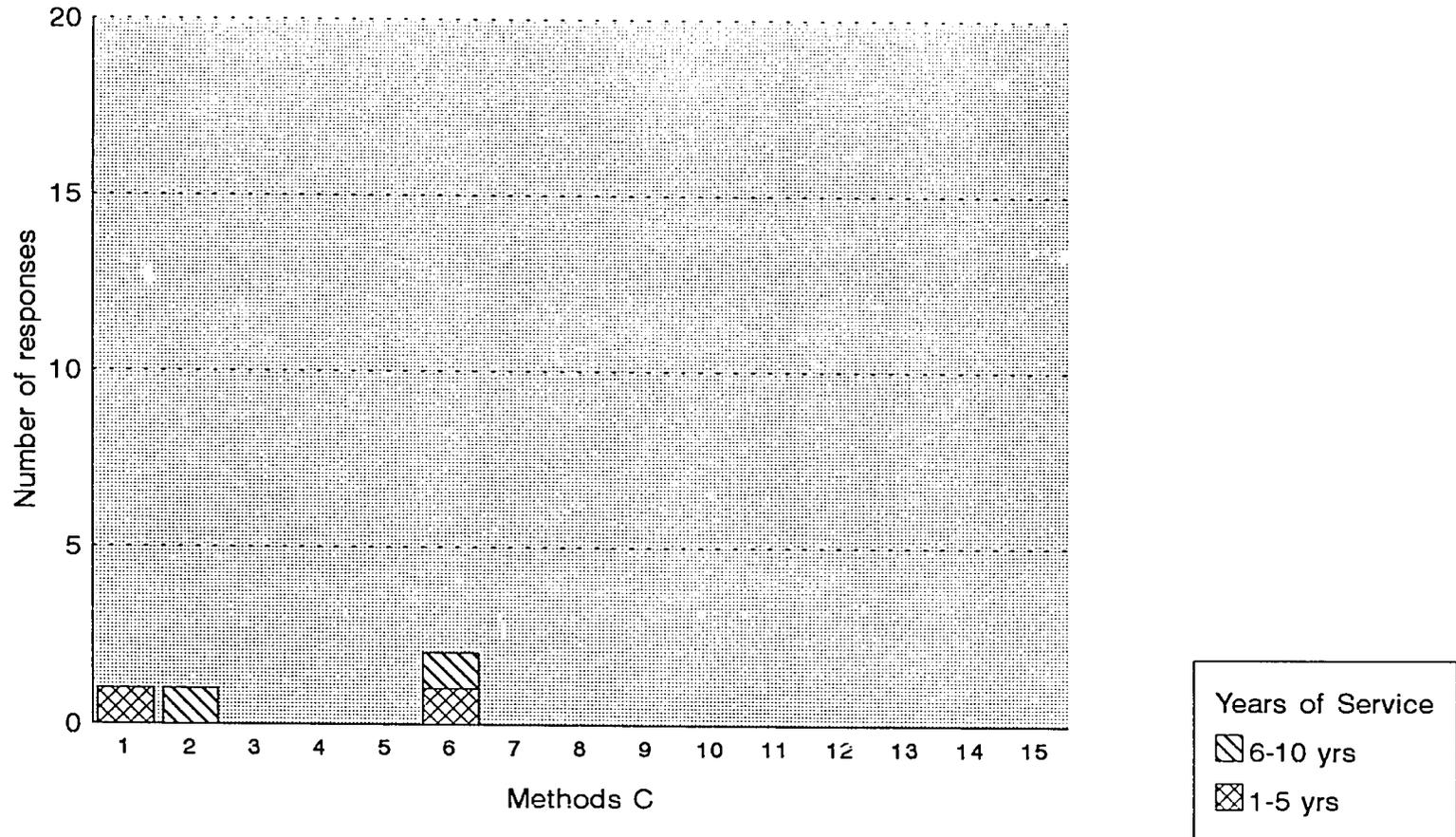
2.3.8b PAMs Methods To Instill Commitment to Conservation Rwanda



Total Sample: n= 8 (Ass PAMs & PAMs: n=2)

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2.3.8c PAMs Methods To Instill Healthy Attitudes to Adjacent Communities Rwanda

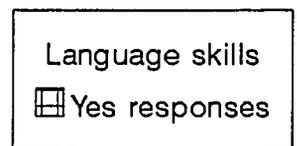
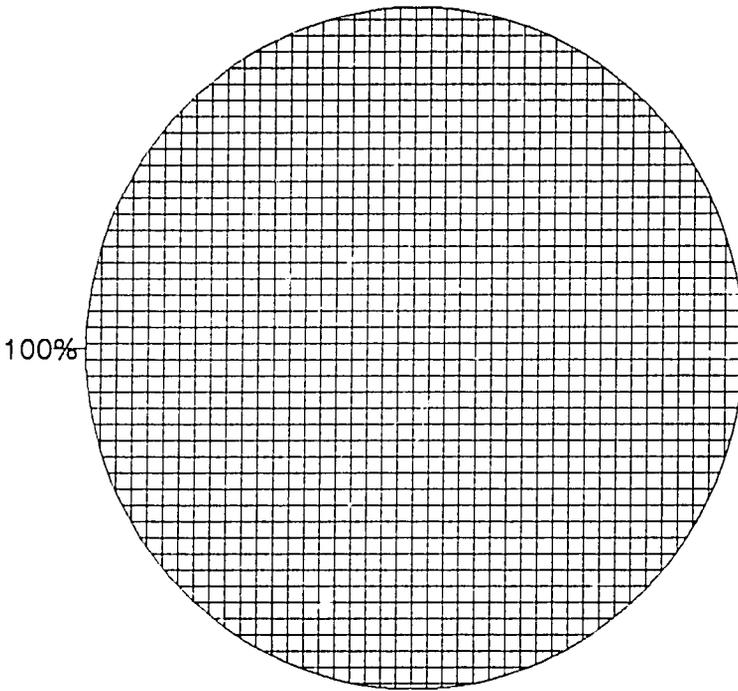


Total Sample: n = 8 (Ass PAMs & PAMs: n = 2)

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2.3.9. PAMs Language Skills

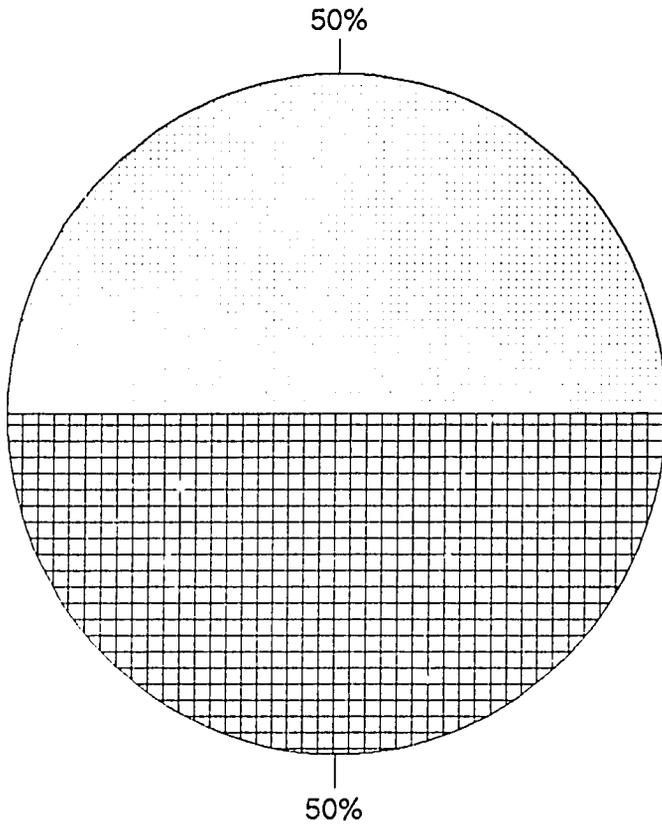
Rwanda



Total Sample: n=8 (Ass PAMs & PAMs: n=2)

2.3.10a PAMs Computer Skills

Rwanda



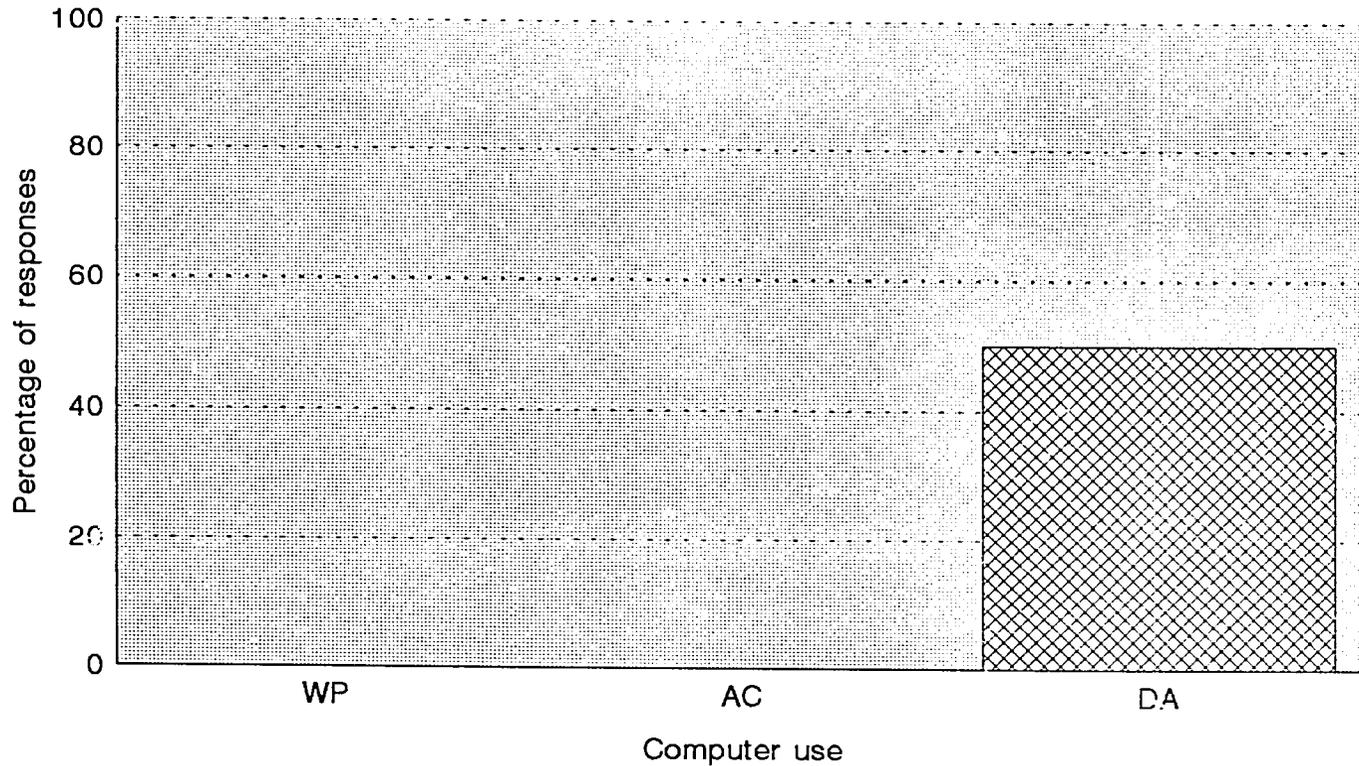
Computer skills

- No responses
- Yes responses

Total Sample: n= 8 (Ass PAMs & PAMs: n=2)

2.3.10.b PAMs Computer Uses

Rwanda



Total Sample: n=8 (Ass PAMs & PAMs: n=2)

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2.3.11 PAMs identified Training priorities:
Rwanda

MAIN DIVISIONS	COMPETENCIES																	Totals
	Blank	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	
Blank			1	1							1							3
A																		
B																		
C																		
D																		
E																		
F			1															1
G																		
H																		
I																		
J																		
K																		
Totals			2	1							1							4

Total sample: n=8

Asst PAMs & PAMs combined: n=2

2.3.12 PAMs training received:
Rwanda

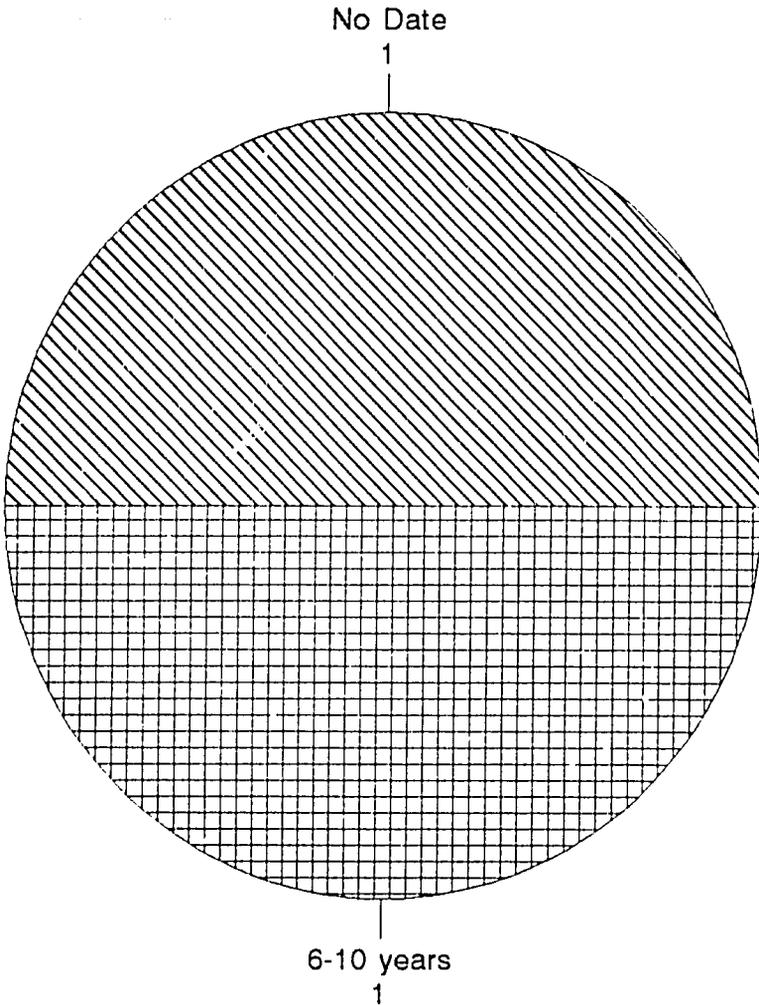
	Competencies	TYPES OF TRAINING (Dot if training has occurred)				
		Formal wildlife	Formal Other	In Service	On- the-job	Other
(a) Knowledge	2	■	■		■	
	3	■	■		■	
	4	■			■	
	5	■	■		■	
	6	■			■	
	7	■			■	
(b) Mental and Social Skills	8	■				
	9	■				
	10	■				
	11	■				
	12	■				
	13	■				
	14	■				
(c) Attitudes	15	■				
	16	■				
	17	■				

Total sample: n=8

Asst PAMs & PAMs combined: n=3

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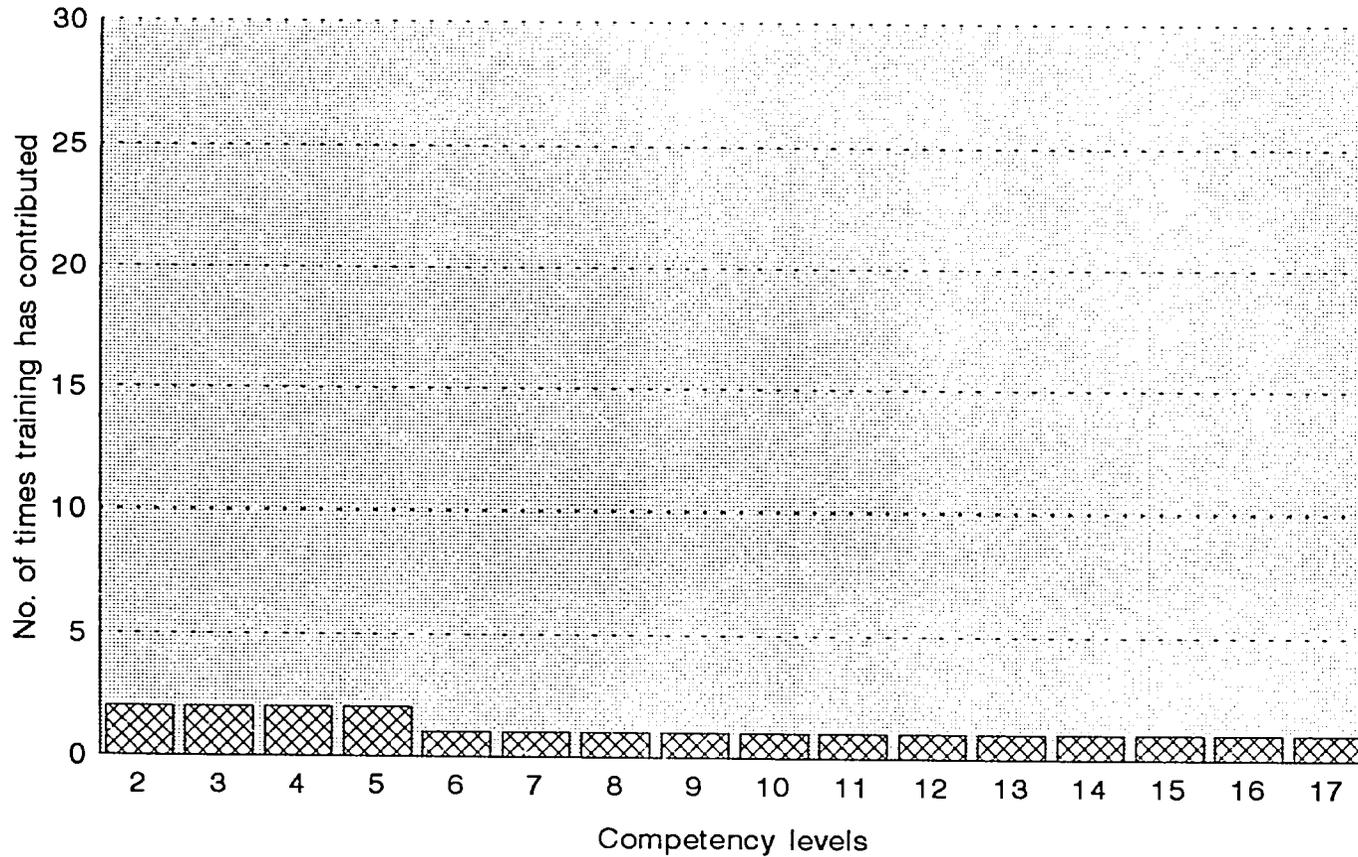
2.3.12d PAMs years since formal wildlife training recieved
Rwanda



Total Sample $n = 8$ (PAMS & Ass PAMS combined: $n=2$)

2.3.12.f. Frequency at which training has contributed to PAMs skill level.

Rwanda

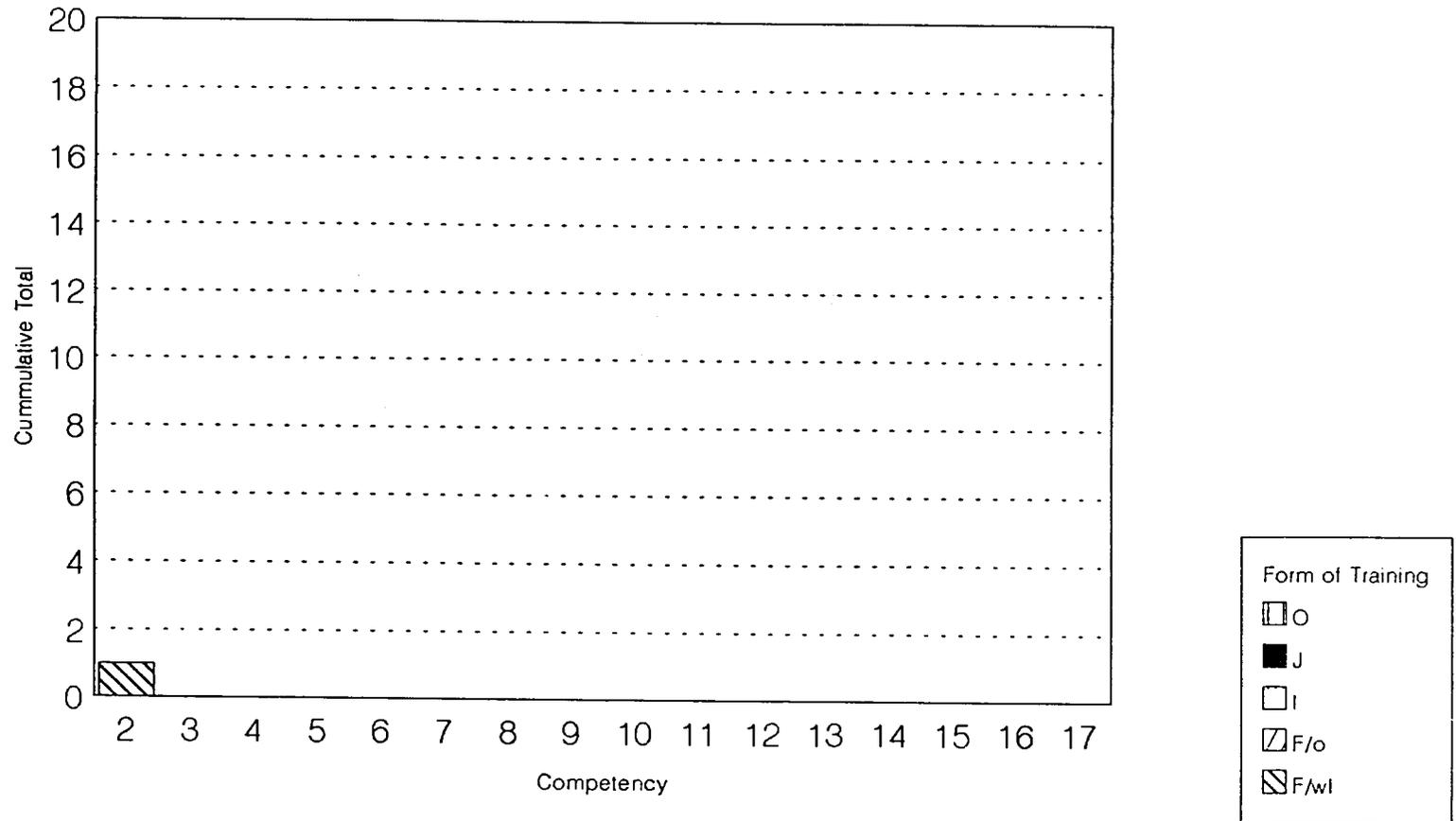


Total Sample: n = 8 (Ass PAMs & PAMs: n=3)

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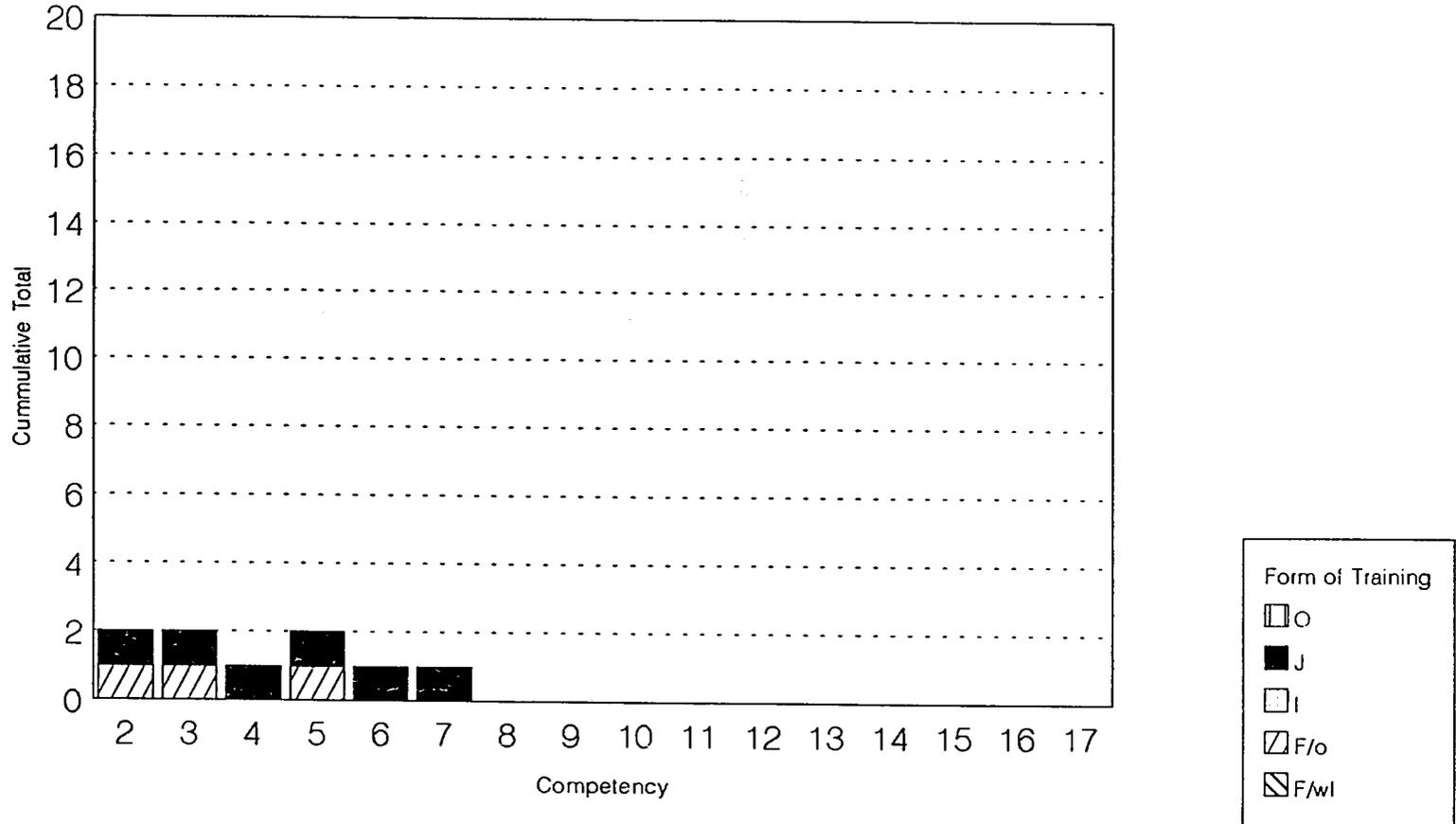
2.3.12.g.1 PAMs training that has contributed most: n=1-5

Rwanda



Total Sample n=8 (PAMs & Ass PAMs n=3)

2.3.12.g.2 PAMs training that has contributed most: n=6-10 Rwanda



Total Sample n=8 (PAMs & Ass PAMs n=3)

2.3.12h Greatest training needs identified by gap analysis for PAMs & asst PAMs Rwanda.

MAIN DIVISIONS	COMPETENCIES													
	Knowledge (Gaps 2 or 3)						Mental & Social skills (Scores 1 or 2)							
	2	3	4	5	6	7	8	9	10	11	12	13	14	
A Staffing					.			.						
B Infrastructure					.		.							
C Accounts								.						
D Tactical Plans									.		.	.		
E Laws & Regulations									
F Visitors					.							.		
G Interventions			.											
H Comm Conservation		.												
I Research														
J Public Relations														
K Resource Conservation							o							

Key
 . ≥ 1
 o 2

Total sample: n=8

Asst PAMs & PAMs combined: n=3

2.3.12i Identified training priorities for PAMs & Asst PAMs
Rwanda.

MAIN DIVISIONS	COMPETENCIES													
	Knowledge						Mental & Social skills							
	2	3	4	5	6	7	8	9	10	11	12	13	14	
A														
B														
C														
D														
E														
F		I												
G														
H														
I														
J														
K														

Total sample: n=8

Asst PAMs & PAMs combined: n=3

* Indicates areas of overlap with gap analysis

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