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PARCS

PROTECTED AREA CONSERVATION STRATEGY

ASSESSING THE TRAINING NEEDS OF PROTECTED
AREA MANAGERS IN AFRICA



CONGO

100-1-103-736



The WILDLIFE CONSERVATION SOCIETY

**Biodiversity
Support
Program**



PARCS is funded by the United States Agency for International Development (USAID) with additional support from AWF, WCS and WWF-US.

PARCS

Country Report: CONGO

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December 1993

Country Report
Congo

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EXECUTIVE SUMMARY

CONGO

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.

Training Needs Assessment

In Congo, the Département de la Faune et de la Flore (Department of Fauna and Flora, DFF) is responsible for the management of protected areas, under the Ministère des Eaux et Forêts (Ministry of Water, Forests and Fisheries, MEF). According to the DFF and the Département des Etudes et Planification (DEP, Department of Studies and Planning) of the same ministry, there are no specific training programs for PAMs. Training is the responsibility of the DEP, and training records are kept. Formal wildlife institutes

used for the training of staff are predominantly the Institute of Rural Development in Congo, the Marien Nguabe University in Brazzaville, and the Ecole des Spécialistes de la Faune in Garoua, Cameroun. Trained staff are often assigned to posts at the departmental headquarters, rather than sent into the field. In addition, many of the protected area managers in the field have no formal education other than primary or secondary school, and the overall level of knowledge of PAMs is extremely variable as a consequence.

The Department of Fauna and Flora recognizes the need for the development of a training plan to better equip protected area managers for 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 programmes undertaken.

Nineteen PAMs and Assistant PAMs, six Regional PAMs, one Field Operations Director and one Field Associate completed questionnaires evaluating PAMs, during a workshop held over 2 days in Brazzaville in October 1992; interviews were also held with directorate staff at departmental headquarters.

Analysis of the questionnaire data provided the backbone of the training needs assessment. The levels of skill required for the job (as set by the PARCS team in the questionnaire) were first validated by respondents in order to ensure that the questionnaire truly reflected the scope of responsibilities held by PAMs in Congo. The questionnaire listed the Skills/Competencies and Main divisions of the job for a typical PAM. The Skills/Competencies 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. The Main Divisions of the Job included: 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 (as judged by PAMs and other categories of respondent) 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 skills:

Policies & Procedures (this involves the knowledge of national and institutional policies for protected areas and the official procedures through which these policies must be met)

Planning (this includes the skills required in long and short term planning, involving project and protected area planning skills)

Technical (this includes both the theoretical principles of biology, ecology and tourism, as well as the practical skills necessary in the field)

Financial & Accounting

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

Evaluation (ability to evaluate problems and situations)

Creativity

Problem Analysis

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

Resource Conservation

Interventions

Laws & Regulations

Community Conservation

Resource Conservation involves finding the balance between resource use and resource conservation, using technical skills (i.e. inventories and censuses) to determine the possibilities for and limits on resource use. Interventions includes such responsibilities as dealing with problem animals, regulating and setting burning programs or quotas for resource extraction.

Constraints on PAMs meeting their job responsibilities include the lack of a well-structured in-service training programme, as well as inadequate infrastructure and limited budgets. One of the problems in Congo is the elite nature that training has often acquired due to the expense of formal training, especially abroad. Due to the lack of affordable training programs and the lack of a training plan providing for the requirements of every individual, training is currently seen as a guarantee for a good position in an office at the Departmental headquarters. Rarely are adequately trained PAMs placed in the field. The major constraints are therefore imposed by limited financial resources and the lack of specific and structured in-service training opportunities.

Training Opportunities Assessment

A number of PAMs in Congo have only a primary or secondary school education, and have not had the opportunity to attend any specialized institutions. Those PAMs that have had specialized training attended the Institute for Rural Development, the Marien Ngouabe University Department of Biology, or the Ecole des Spécialistes de la Faune at Garoua, Cameroun. The Ecole de Faune is the only specialized wildlife school which PAMs have attended. Many of the graduates from the Ecole de Faune, however, have filled posts at the Departmental headquarters in Brazzaville and are not bringing the skills they have acquired into the field.

Recommendations

Based on discussions with Field Operation Directors and Field Associates as well as Protected Area Managers, it is obvious that there is much enthusiasm and 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 idea. This may take the form of courses given by mobile training units, or of short courses given at the direction headquarters when field staff come to the capital. The recipients of these training courses 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.

Formal training has proven too expensive and logistically complicated and as a result, few people have received it. Its rarity has led to the belief that training is a ticket to an elite position in an office, high in the hierarchy of the service. 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. In addition, 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 a PAM, and people above the position of a PAM, who will need similar skills to the field-based managers, in order to supervise, coordinate and direct protected area managers.

This study recommends the creation of a professional training officer post within the Conservation Authority in order to help staff career development and to provide an information base as a precursor to effective planning. One of the crucial first steps would be the training of trainers in order to provide the capacity to carry out in-service training. Expertise could come from a number of existing training institutions, or from technical assistance abroad. A training programme would need to be developed in order to plan and give direction to training for peoples careers. This would demand the creation of a training officer post.

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 for them to participate in regional training programs. 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. 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 by competencies identified by the "gap analysis" and should concentrate on the main divisions of the job requiring priority attention. Specifically, these skills include Policies and Procedures, Planning, Technical and Financial skills, and involve Resource Conservation, Interventions, Laws and Regulations and Community Conservation. 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.

A goal of PARCS Phase II would be to assist in the development of a "training ethic", emphasizing that training is a process and not a single incident in a career. PARCS should facilitate the development of a training plan for the department, which would allow each person's career to follow a pathway based on performance and initiative. The emphasis of training programs will be as much as possible on practical, field-based training.

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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.
- i Government departments have not kept pace with, nor appreciated, the need for training 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 attempted 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 that 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
- g Field Associates

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 would 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 Conservation Authority (CA) 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 CA 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

The Republic of Congo is covered predominantly by evergreen and semi-evergreen lowland rain forest interspersed with secondary grassland savanna. Forest ecosystems cover about 65% of the country, and the remaining 35% is savannah. In the northern part of the country most closed forests predominate, whereas inundated and swamp forests extend over the Likouala Swamps. In the southern part of the country lower montane forest and gallery forest with shrub savannah are found.

The climate is sub-equatorial in the south, and equatorial in the north. Soils are lateritic and hydromorphic. The altitude varies between 1000m and sea level.

The savanna and much of the rain forest throughout the country is disturbed and very degraded, although the northern block of forest is one of the least disturbed areas of forest in Africa. There is virtually no savanna fauna remaining, especially near urban centres, and the forest fauna is seriously threatened.

By the end of 1982, 3.9% of the country was established within protected areas, although their actual protection is still extremely limited. All ecosystems and habitat types are included within these reserves, with the exception of swamp forest (IUCN 1984).

In 1992, Congo had a total of 11 protected areas, covering about 4.4% of the national territory. Two other sites had also been identified as requiring protected status, due to their importance in terms of primary undisturbed forest and inundated forest. These were the Nouabalé-Ndoki and Lac Télé Likouala forests. Addition of these two areas would bring the total of protected area to 10%, or 3.5 million ha. In late 1993, the Nouabalé-Ndoki site was officially declared a National Park. This site is of special importance due to the fact that it could form part of a tripartite conservation area, spanning the boundaries with Cameroon and the Central African Republic, to make one contiguous conservation area with the Dzanga-Sangha reserve in CAR and the Lac Lobéké forest in Cameroon (WB, 1992).

Table 1
Protected areas in Congo

Protected area	IUCN Category	Area (ha)	Year Notified
Parc National Odzala	II/IX	126,000	1940
Parc National Nouabalé Ndoki	II	386,000	1993
Réserve de Conkouati	IV	300,000	1980
Réserve de la Léfini	IV	630,000	1951
Réserve de Lekoli-Pandaka	IV	68,000	1955
Réserve de Mont Fouari	IV	15,600	1958
Réserve de Nyanga Nord	IV	7,700	1958
Réserve de Tsoulou	IV	30,000	1963
Domaine de Chasse M'boko	IV	90,000	1955
D.C Mont Mavoumbou	IV	42,000	1955
D.C. Nyanga Sud	IV	23,000	1958
Réserve de la biosphère de Dimonika	IX	62,000	1988

2.1.2 Protected Area organizations

The management of protected areas in Congo is currently the responsibility of the Ministry of Water, Forests and Fisheries. Despite numerous changes in Congolese ministerial portfolios in the last three years, administration of the country's protected areas has always remained under the same Ministry. In 1992, this role was challenged for a few months by the Ministry of the Environment, Tourism and Natural Sites, but that particular government was not in office long enough for any changes to be made to the status quo.

The Ministry of Water, Forests and Fisheries (Ministère des Eaux et Forêts, et de la Pêche) is responsible for administering and monitoring the exploitation as well as the conservation of Congo's forests. The Ministry consists of the Minister and his Cabinet (including a Wildlife Advisor whose domain also covers protected areas), two Directions Générales (Eaux et Forêts and Pêche) and seven Departments, three of them reporting to the Cabinet: Etudes et Planification (Studies and Planning, DEP), Contrôle de Orientation (DCO) and Coopération (DCOOP). Four of the Directions report to the Direction Générale des Eaux et Forêts: Exploitation et Industrie Forestière (Exploitation and Forestry Industry, DEIF), Affaires Administratives et Financières (Finance and Administration, DAAF), Sylviculture et Aménagement Forestier (Forestry Management, DSAF), and Faune et Flore (Fauna and Flora, DFF). The management of protected areas and the enforcement of wildlife laws on a national level is the direct responsibility of the DFF, the Direction de la Faune et de la Flore. Training is managed by the DEP. Some responsibility for protected area management also lies in the hands of ten Directions Régionales des Eaux et Forêts (Regional Departments of Water and Forest, DREF), one for Brazzaville and for each of the nine administrative regions: Sangha (Ouesso), Likouala (Impfondo-Cuvette (Owando), Plateau (Djambala), Pool (Kinkala), Bouenze (Madingou), Lekoumou (Sibiti), Niari (Dolisie, formerly Loubomo) and Kouilou (Pointe Noire). Locally, the DREFs play an advisory role to the Préfet (Prefect); nationally, within the structure of the ministry, they report to the Directeur Générale des Eaux et Forêts. Within each DREF, parks and reserves are the responsibility of the Chef de Service de la Faune. The respective functions of DFF and the DREFs in protected area management are not clearly separated.

In keeping with the present trend towards decentralization, the tendency is towards a devolution of power and responsibility from the central DFF to the regional DREFs. This already includes a greater role in setting policy, on top of existing functions such as enforcing hunting and wildlife laws, monitoring the activities of logging companies, and implementing the policies of the Ministry at the local level.

From 1986 to 1991, the management of protected areas within the Direction de la Faune et de la Flore was the responsibility of the Projet d'Inventaire et d'Aménagement de la Faune (Project for the Inventorization and Management of the Fauna, PIAF). In 1989, it employed 43 agents responsible for 1,339,100 hectares of protected areas (i.e. 31,607 hectares each, as compared to IUCN's recommended norm of 1,000 hectares per agent). PIAF has now been re-absorbed into the DFF, with about 26 of its former agents currently assigned to field positions in protected areas, although in fact they report through the DREFs to the Direction Générale rather than to the DFF.

The DFF in Brazzaville consists of three departments (Services) employing a total of 56 people: Legislation et Exploitation, which is responsible for issuing hunting licenses; the Service Inventaire et Aménagement, dealing most directly with protected area management and with the preparation of management plans; and the Service Scientifique et Technique (Scientific and Technical Department), which coordinates scientific research within protected areas. More than half of the 56 DFF employees have no job-specific training and are assigned to administrative desk jobs. Given the present economic crisis in Congo and the generally low level of training, with the exception of revenue-generating activities such as issuing hunting licenses, most of these responsibilities are theoretical.

Any agents assigned in future to field positions in the protected areas will likely come either from existing DFF staff, from the DREFs, or from elsewhere in the Ministry. A moratorium on civil service recruitment makes hiring of new staff impossible in the immediate future, although the number of field opportunities is likely to increase as more and more conservation projects start up in protected areas around the country. By mid 1994, it is anticipated that such projects will be under way in the Odzala, Nouabalé Ndoki, Lefini, Conkouati, Dimonika and Lac Télé sites.

2.1.3 National Conservation Strategy and conservation objectives

Congo was one of the first equatorial countries to make a real attempt to protect its forest resources by establishing regulations controlling forest exploitation in order to aim for sustainability rather than exploitation per se. As a consequence, before any zone may be opened for logging purposes, the zone must first be the subject of a management plan (WB 1992).

A positive example of this regulation of forest exploitation is the Eucalyptus plantations established in the Pointe Noire region in the 1980's. These plantations now account for 32% of the volume of lumber produced in the country.

2.1.3.1 Major Threats to Conservation

Traditional agriculture poses one of the major threats to conservation. With its itinerant cropping and short fallow periods, it contributes to the deterioration of the soils, particularly in areas adjacent to forest zones. Extensive cropping remains predominant in most areas, however, with the exception of areas near the main cities and in the Niari valley. This is largely due to the low overall population pressure in the country.

Hunting still provides the most important form of animal protein, for both subsistence and commercial consumption. With the increase in modern hunting weapons, there is less use of traditional means of hunting, and more use of trapping and guns. For six months of the year there is an official hunting ban, but due to the ready availability of ammunition, illegal hunting continues throughout this period. Bushmeat, and to a lesser extent fish, provides the bulk of animal protein for the population. The fisheries sector is far less threatened, however, than terrestrial wildlife.

2.1.3.2 Government Strategy

The government conservation strategy can be seen from both a nation and regional perspective. On a national level, the strategy is two-fold:

1. establish a network of protected areas
2. develop and implement a nationwide natural resource management plan.

The objectives of the regional strategy are five-fold: 1. reinforcement of already existing reserves and creation of new protected areas, 2. development and implementation nationwide of a natural resource management plan, 3. development of more intensive and less environmentally damaging agriculture and agro-forestry practices, 4. strengthening of forestry services so they can provide technical assistance and enforcement of forestry laws, and 5. promotion of greater participation of local communities in conservation of the environment (WB, 1992).

Two government planning exercises were developed to aid the government in meeting its objectives. These include the Tropical Forest Action Plan (TFAP) and the National Environmental Action Plan (NEAP). Two main projects were also developed, the proposed GEF project and the Natural Resource Management Project, which is also partly financed by WB. The NEAP addresses the country's overall environmental problems and will incorporate the TFAP's conclusions into its action plan. One of the primary goals of the NEAP is to recommend the appropriate institutional arrangement for a permanent structure in charge of all conservation activities (WB 1992).

2.1.4 Existing training programs

The Direction de l'Etude et de la Planification (DEP) is the department within the Ministry of Eaux et Forêts that is responsible for training and planning. It reports directly to the Cabinet of the Minister, and is headed by a director. Discussions with the director and the Chef du Bureau de Formation (Office of Training), showed that there was no real training programme in existence and that rigorous record keeping of training is not carried out. Training is usually limited to pre-service training and any form of formal training usually results in the recipient getting an office job at the department headquarters in Brazzaville. This is due in part to the expense of formal training, which makes it relatively rare and leads to high expectations. Of the 23 individuals that have attended Garoua (see list), only 3 returned to the field, although Garoua specifically

trains people for field work. As a result, the people in the field are seriously under-trained and limited in their capacities. Any further training that people receive is on an ad hoc basis and usually results from personal initiatives taken to approach donor organizations or projects.

Formal training institutes:

- Ecole Nationale des Eaux et Forêts (ENEF), Musendjo. Participants are largely trained to the level of "techniciens moyens" in forestry. The school is no longer operational.
- Institut du Développement Rural (IDR): The emphasis is on training people to the level of "ingénieurs forestiers" for reforestation, exploitation, forest development, etc.
- University of Brazzaville, Congo; Department of Biology.
- Ecole des Spécialistes de la Faune at Garoua, Cameroon: Students are trained in biology, ecology, conservation and development of protected areas

The ENEF at Musendjo could potentially be reoriented for training for protected area managers, according to the director of the DEP.

2.1.5 In-country PAM profile

Most of the conservateurs in the field, with a few exceptions have received no formal training other than primary school. Most department employees with further education are working in Brazzaville at the departmental headquarters. Those exceptions with further education are often in the field because they are linked to donor projects and working as counterparts or otherwise with the project.

According to the director of the DEP, a conservateur should have a minimum of a secondary school education, or a level of niveau "A". Often, however, this level is much lower. Most conservateurs are "agents techniques", or ex-guards, one of whom has training from the Ecole Nationale des Eaux et Forêts (ENEF). The others have no formal training. Objectives of the Department of Planning include increasing the required educational level of recruits, and using only graduates from a formal training institution such as the Ecole des Spécialistes de la Faune in Garoua, Cameroun. They feel that there are far too few trained conservateurs in the field. A new cadre should be trained and recruited and it will also be necessary to train those already in the field. There is a great lacuna in technical knowledge and management. Due to the moratorium on recruitment, however, these are recommendations which will be difficult to put into effect in the near future.

Although a number of people have graduated from the Ecole de Faune at Garoua, only 3 of them are in the field. The others all have positions either at the department headquarters (Direction Générale), or they work for the Regional Direction.

At present, protected area managers do not do any real management or planning for the protected area. These functions are all carried out by HQ. Wardens carry out patrols and surveillance, but this is also rare due to problems of infrastructure and staffing.

2.2 Methods Used in PARCS Questionnaire and Analysis

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 questionnaires.

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 identified. 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

In Congo, the method considered most effective in terms of contact with different people and discussions with people based in different protected areas was a workshop, bringing the PAMs from a number of areas together. This was especially important given the distances between protected areas and the difficulty of travelling. One reserve was visited, in order to get a first-hand impression of the set-up in the field, and field associates were consulted to get descriptions of other field sites. The workshop organized in Brazzaville brought together 29 people from both the field and headquarters and after the questionnaire was administered discussions were held with all 29 in order to get additional information on training needs/opportunities, work constraints etc. The discussions allowed many of the problems specific to Congo with respect to Pa management to surface. The workshop took two days, with the questionnaire on the first day and discussions on the second day. Participants were invited to attend the workshop by the Directeur Général des Eaux et Forêts, Mr. Rigobert Ebondzo, and the Directeur de la Faune et de la Flore, Mr. Raphael Tsila. Mr. Tsila attended the workshop and participated in the discussion on the second day. Additional people were interviewed on a one-to-one basis outside of the workshop setting .

Congo People contacted:

Dr. Conrad Aveling, Projet Régional CEE des Forêts de l'Afrique Centrale (ECOFAC)
Dr. Magdalena Bermejo & German, Researchers in Odzala NP
Mr. Tsila, Directeur, Direction de la Faune et la Flore
Mr. Mokoko Ikongo, Jérôme, Ministère des Eaux et Forêts, counterpari WCS
Mr. Matthew Hatchwell, WCS
Mr. Nicholas Egli, World Bank/PNAE
Mr. Kassa, Direction de l'Etude et de la Planification (DEP)
Mr. Samba, Chef de Bureau de Formation (DEP)
Ms. Nadine Grant, Administrateur Stratégique UNDP
Dr. Oko, Conservateur Odzala National Park
Ms. Graziella Cotman, JaneGoodall Institute Brazzaville
Mr. Phillip Goma, Directeur d'Ecosystèmes Protégés, Dir. Général de l'Environnement (DGE)
Mr. Pierre Oyo, Directeur Droits et de l'Education à l'Environnement, DGE
Prof. Binimbi Massengo, Chef de Département de Biologie et Physiologie Animale, Université de Brazzaville
Ms. Karen Richardson, World Bank/AF1AG
Mr. Peter Weinstabel, GTZ Regional Coordinator
Ms. Catherine Cruveillier, World Bank/AF1AG
Dr. André Biassangama, Maître Assistant en Biologie Animale
Dr. Ndinga Assitou, IUCN
Mr. Paul Aczel, JaneGoodall Institute, Pointe Noire
Mr. Mark and Ms. Helen Artwater, Gorilla Sanctuary
Dr. Donatien Nzala, Professor at IDR
Mr. Jean Massengo, Secrétaire Académique, IDR

Brazzaville Workshop, Ministère des Eaux et Forêts:

- Tsila, Raphael, Dir. Faune et Flore
- Bonassidi, Gregoire, DFF
- Nsosso, Dominique, DFF/BP
- Mabiala, Noé, DFF/SIA
- Nguimbi, Marcel, DFF/SLF
- Gankoussou, Gilbert, DFF (rep. PAFT)
- Mbani Ankangala Mankariïa, DFF/P.Die
- Nkabi, Antoinette, DFF/BG
- Mayouma, Paul, DFF/BG
- Itoua, Camille, DFF/BG
- Kibamba, Jean Pierre, DFF, Bureau Zoologique
- Banienkouna, Fulgence, DFF/BG
- Makosso Vheiyé, George, DFF/BP
- Kassa, Michel, DFF/SIA
- Amina, Albert, Dir. Rég. Brazzaville
- Nganga, Innocent, observateur
- Elenga, Jean PN Odzala, Cuvette
- Bokaka Bonanga, PN Odzala, Cuvette
- Oko, Ruffin Antoine, Ministère des Eaux et Forêts
- Mbemba, Celestin, Dir. Rég. Kouilou
- Missilou, Boukaka Roland, Dir. Rég. Kouilou
- Loemba-Loembe, Rés. Faune Conkouati, Kouilou
- Onko, Marcel, Rés. Léfini Sud, Pool
- Ossan, J. Jacques, Rés. Léfini Nord, Pool
- Bonni, André, Rés. Mont Fouari, Niari
- Kibinda, Martin, Rés. de la Tsoulou, Niari
- Banzouzi, Jean Claude, Direction de la Silviculture et Aménagement des Forêts (DSAF)
- Mokoko Ikonga, Projet Nouabalé Ndoki
- Matthew Hatchwell, WCI

Table 2
IUCN Categories Present/Surveyed

IUCN Category	No. Present in Congo	No. surveyed for PARCS
1. Strict Nature Reserve	0	0
2. National Park	2	1
3. Natural Monument	0	0
4. Wildlife Reserve	6	4
4. Hunting Reserve	3	0
5. Protected Landscape	0	0
6. Resource Reserve	0	0
7. Natural Biotic Area	0	0
8. Managed Resource Area	0	0
9. Biosphere Reserve	2	1
Total	11	5

2.2.3 FODs comments on training needs

Directeur des Eaux et Forêts, Mr. Tsila:

There are a number of problems in Congo that can be linked directly to training.

1. There are only 24 guards and protected area managers that have received any formal training, not including the people at the Direction having had formal training at universities in the former USSR, Cuba, France, etc. There is great lack of adequately trained personnel.
2. People having received training are almost always placed at the Direction headquarters. Only 3 have been placed in the field, and only one is currently in the field.
3. There exists no form of evaluation or even follow-up to training.
4. There is an enormous need for repeated in-service training.

The primary priority is for repeated in-service training, available to all protected area personnel.

The Département des Eaux et Forêts employs about 400 people, the majority of which are in the Direction d'Exploitation Forestière.

Ideally, the Direction de la Faune et la Flore should have 5 technical services placed in the different regions, with trained and efficient staff. These five services should include:

1. Fauna and Flora
2. Silviculture
3. Agroforestry
4. Enhancing Forest Products
5. Fisheries Resources

Each park or reserve should have experts on hand for each of these 5 domains.

Direction de l'Etude et de la Planification (DEP):

There are a number of issues which underlie the problems of training in the Direction des Eaux et Forêts:

1. There are far too few people to satisfy the needs in protected areas; it is absolutely necessary to increase the numbers of staff. There is often only 1 conservateur, and 4-5 guards in the field to protect a whole protected area. They usually have no mode of transport, no means of communication, etc.
2. Those people who are in the field have had no training specific to their job at all.
3. Those who have had specific training, be it at university or at Garoua, are all absorbed by the direction générale and never go into the field.

An additional problem is the tendency towards centralization in Congo. All decisions, plans, programs etc are made in Brazzaville without going into the field and without any information from the field.

Director of Protected Ecosystems, Direction Général de l'Environnement (DGE), Mr. Phillip Goma

The most important training needs are:

1. Conservation training, not just forestry training. People need environmental studies, and technical knowledge about the natural environment.
2. Community extension methodologies
3. Legislation
4. Management

The need for training in community extension methodologies is evident in the Mayombe project (Dimonika MAB) where the project is failing due to problems with the population and high levels of poaching. People need to study the development of alternative activities for the population to replace the activities forbidden by the authorities. People also need to study the traditions and culture of the local populations.

Pierre OYO, Director of Rights and Environmental Education (DGE)

Managers should be in the field. There is a crucial lack of manpower and expertise in the protected areas. At present, there is only about 1 guard per 30,000 ha of forest, given that there are about 1,300,000 ha of protected areas in Congo. The IJCN norms are for 1 guard per 1000 ha of forest. In general, guards only have a primary school education. Of the conservateurs (protected area managers), some have been to Garoua, ENEF or IDR, and they have a level of "ingénieur". Far too few have been trained sufficiently, however.

2.2.4 Analysis of 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 to devise 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. Only given sufficient (adequate) sample sizes for each gender group, however, could any link be made.

2.3 Results

The results of the PARCS survey in Congo 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.

Out of the PAMs that participated in the workshop, six were field-based. Two of these PAMs have only received primary school education, and have not profited from any training specific to their job as a PAM. One of them has been working in the service for 30 years (the other did not respond to that question). These two PAMs considered that for a large number of questions no knowledge was needed. These questions referred to Legal, Policy and Financial skills and to activities involving visitors (of which there are none in their reserves), ensuring harmonious relationships with neighboring communities, research activities (of which there are also none in their reserves) and ensuring an appropriate balance between resource conservation and use in the protected area. It is probable that these two people, having received very little education or training beyond primary school, have little experience with the concepts brought out in the questionnaire and little understanding of what they mean. Many of the older wardens have become PAMs after having served as guards in these parks, with no additional training, and have only profited from primary school education. Their experience with questionnaires is extremely limited and the language and concepts used are probably not easily, if at all, understood. This is one of the problems that must be taken into account when using a questionnaire, and a reservation that must be kept in mind. The discussions held after completion of the questionnaire enabled the people who did not fully comprehend the questionnaire to express their views and the older, field-based wardens participated actively in these discussions. I personally feel that these people appreciated having an opportunity to express their views and be listened to. Many of them had been in Parks or Reserves for many years and have a lot of experience. Their points of view are valuable, but a questionnaire is only frustrating to them and does not allow their experience to be appreciated.

2.3.1 Data Collection Table

From the table it can be seen that the workshop setting, in which respondents filled out the questionnaire individually with the Regional Manager nearby was the way in which the questionnaire was administered in most of the cases. The questionnaires given to the Field Operations Director, both when assessing PAM training needs and their own training needs, and the Field Associate questionnaire were completed in the respondent's own time, after having had the questionnaire explained to them by the RM.

2.3.2 Background Information Sheets

Annexed

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

The majority of PAMs and Assistant PAMs in Congo have been in the service for more than 6 years, and a large proportion of them longer than 10 years. Unfortunately the question on how many years they had worked as a PAM was not asked. A few individuals volunteered the information nonetheless, and of the 8 responses, 5 had worked for less than 6 years as a PAM, and 3 for 6 years or more. From a qualitative

personal assessment of the people attending the workshop, I would suggest that the people based in the field were older, on average, than those based at headquarters. Of the 11 people having worked as PAMs in the field, 10 (91 %) had been recruited before 1981. In other words, they had more than 10 years of service with the department. It must be pointed out that many of the so-called PAMs and Assistant PAMs attending the workshop were working in the Headquarters at Brazzaville at present. They were either waiting for assignments in the field, or based at headquarters due to lack of positions in the field. One of the great difficulties in Congo at present is the lack of field-based staff, and the large numbers of people based in Brazzaville without clearly defined responsibilities. There is a serious lack of funds and infrastructure for field-based personnel and as a consequence few people are willing and able to live in or near the protected areas. Of the 29 people attending the workshop, 11 only have had field experience as a PAM. Of those 11, six are based in the field at present. This is one of the problems that arose in the discussions: too many people are based at headquarters and the protected areas are seriously understaffed. This is principally due to lack of infrastructure and funding. In addition, those individuals having received training are usually not sent to the field, but remain at headquarters. Many of the PAMs attending the workshop were therefore people with very limited, if any, field experience.

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:

Any variation from the PARCS score tended to increase the level considered necessary. In most cases, this brought the level up to "in-depth knowledge". There was a small amount of disagreement in favour of decreasing the level considered necessary, but rarely more than 20%. The one exception was question No. 5, in which 40 % of respondents considered the level "in-depth" too high. This question refers to knowledge

of protected area infrastructure techniques, site design and analysis. Some respondents evidently did not consider this such an important task. Looking at the gap analysis (2.3.5), however, most respondents did consider that they needed more skills in this, and identified it as a training need. Relative to their own score as standard (2.3.5.b), more than 60% considered that their skill levels were too low, even if only "some" or "working" knowledge was considered necessary.

ii. Management Knowledge:

Again, where there was variance with the PARCS score, respondents considered higher levels necessary than identified by PARCS. Only question No. 25 could be considered an exception to this, as about 37% considered that a lower level of skill was necessary. This question refers to protected area vs people conflict management. Almost 80% of respondents considered themselves as lacking in skill in this aspect, however, and identified it as one of the highest training needs in management skills. Although people may not consider that it needs in-depth knowledge, they do agree that their level of knowledge in people management is lacking.

iii. Planning Knowledge:

Although the overall level of agreement was high, with 92% of responses not varying more than one point from the PARCS level, there were some interesting differences. In questions 30,31,35,36 and 37, less than 50% of respondents felt the PARCS score was completely accurate (difference of 0). In question 30, referring to financial planning, respondents usually felt that in-depth knowledge was required, but three felt that no knowledge was required. Two of them admitted they had no knowledge and one felt that he had some knowledge. Two were field-based PAMs and one a HQ-based PAM. In question 34, a large proportion of respondents (about 59%) felt that a PAM need only have working knowledge of job planning, whereas the rest agreed that in-depth knowledge was accurate. The greatest level of disagreement was in question No. 36 where almost 90% felt that the level required was greater than that set by PARCS. In this question, which refers to the development of research plans, almost 60% felt that in-depth knowledge was necessary, and about 30% felt working knowledge necessary. This question also jumps out as indicating a very high training need/gap in skill level, both when compared to the PARCS standard, or the respondent's own standard. Questions 38 and 39, where PARCS considered in-depth knowledge necessary (protected area management plans and zoning systems) were considered by at least 20% of respondents to need lower levels of knowledge. One respondent even considered that no knowledge was needed. This respondent was one of the three who considered that no knowledge of financial planning was needed either. This same respondent did not feel that any knowledge of how to develop a research plan was required (nor does he feel he have any knowledge in these three areas).

iv. Legal Knowledge:

Most (5 out of 9) questions were considered to require higher levels of knowledge than set by PARCS. There is only 77% agreement with the PARCS scores in this section (2.3.4.c). Although one or two individuals felt that lower levels were necessary, most respondents felt that a PAM requires in-depth knowledge about all legal matters concerning the PA. The one question in which more than 20% felt that a lower skill level was acceptable dealt with laws related to collecting/exporting materials and specimens.

v. Policies and Procedures Knowledge:

Again, almost all disagreement concerning this skill was in favour of increasing the required skill level to "in-depth knowledge". It must be pointed out that the two PAMs who felt that no knowledge of Policies and Procedures was necessary influenced this histogram in some degree, lowering the level required. A few other PAMs also felt, however, that the level could be lowered somewhat and that working knowledge could be adequate in some cases. This is the case in questions 50, 54, 56 and 58. The first deals with maintenance/construction policies as well as procurement procedures, the second question deals with visitor policies, the third with community conservation procedures and the fourth with public relations policies, procedures and practices. All four of these activities are probably rarely, if at all relevant in parks and reserves in Congo.

vi. Financial Knowledge:

About 50% of respondents agreed with the levels set by PARCS, and where there was disagreement, it usually favored an increase in the level to "in-depth knowledge". Only on question 62, referring to record-keeping for disbursements, financial or in-kind, to local communities, did the level drop to "working" or even "some" knowledge. This is not a concept which is known in Congo. Most people had doubts about this question and needed further explanations. Local communities do not participate in the management of protected areas and rarely profit from their protection in direct financial means.

2.3.4.c Measure of Agreement for PARCS Validation Score

On the whole, the measure of agreement between the level of skill considered necessary by PARCS and by respondents is very high, 91%. Only in Legal knowledge was there less agreement, with respondents considering a higher level of skill necessary. PARCS considered "some" knowledge sufficient in many aspects of the job, whereas respondents felt that at least "working", if not "in-depth" knowledge was required. 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 and Assistant 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 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.

In general, the level of knowledge required for PAMs by the FOD and the Field Associate was slightly higher than the level set by PARCS. Variation between the three levels was not very great, but on the whole, they tended to consider a greater level necessary than PARCS. The level set by FODs was not unlike the level PAMs considered necessary, although the latter may have been just slightly less demanding.

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.

2.3.5 Gap Analysis of Training Needs for Knowledge

In general, the three categories of respondents identified gaps for all knowledge skills (competencies), although the gaps were not equally large over all competencies. The same competencies were identified as having the greatest training needs for all categories of respondents, and these were: Policies & Procedures, Planning and Technical Knowledge. FODs and Field Associates felt that the PAMs level of knowledge was lower, on average, than PAMs did themselves, although they all identified gaps.

2.3.5.a/b Relative to PARCS/Respondents' 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 a and b.

What variation did occur, however, tended to favour higher levels of skill 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.

i. Technical Knowledge:

Some degree of training need was identified in all aspects of technical knowledge. The least training was determined necessary for questions No's 8 and 9, referring to knowledge of extension methodologies and the cultural and historical context for the location of the protected area (H). The greatest needs for training were in sections J and K, involving the representation of the meeting in public meetings and ensuring an appropriate balance between resource conservation and use in the pa. Up to 80% of respondents identified training needs in technical knowledge for 11 out of 17 questions. When the respondents validation scores are also taken into consideration (2.3.4.b), it is clear that technical knowledge is considered very important and PAMs require in-depth knowledge for most of them, and their actual skill levels range between "working" and "some" for most of them. 15-20% consider that they have no technical knowledge (score of 1) in these tasks.

ii. Management Knowledge:

The gaps in knowledge between what respondents feel they have compared to what they ought to have are slightly more marked when compared to the standards they set than when compared to the PARCS standard, but they do not differ qualitatively. The same questions surface as needing training. Both questions in Main Division B, involving the management of infrastructure within budget, showed gaps in skill levels. Management of intervention programs and Ensuring harmonious relationships with neighboring communities also showed gaps in skill levels. Respondents did not feel that protected area vs people management required in-depth knowledge, and many felt that working knowledge would suffice, yet they did identify training needs of 2 and even 3 for this skill. In other words, they considered themselves as having none, or only some knowledge in it. Community participation is not, at present, invited in the management of protected areas in the Congo. Protected areas are generally protected from encroachment by force. They are, however, severely understaffed and under-equipped and PAMs recognize their inability to satisfactorily ensure protection. For this reason, PAMs consider it crucial to be trained in how to maintain harmonious relationships with neighboring communities, although they may not necessarily recognize what this entails. In the post questionnaire discussion, a lot of time was spent in a debate on whether the priority for protection of pa's was law enforcement or community education. Many PAMs were of the opinion that law enforcement and training in paramilitary techniques was of greater importance in effective protection than community education and involvement in pa management. All PAMs did agree that training in community education and the management of protected area vs people conflicts was necessary. This was the highest gap identified by the PARCS standard. The highest gap identified by the respondents' standard was how to apply preventative maintenance. This is very important when equipment and infrastructure are a rare luxury.

iii. Planning Knowledge:

There were some very clear training needs identified in this skill. Respondents felt very marked training needs in resource conservation management planning techniques, implementing protected area management objectives and how to develop and maintain protected area management zoning systems (K). For the last question, the training gap was identified by 100% of respondents. Also with respect to patrol planning (E), visitor planning (F) and planning intervention programs (G) was a great need identified. In this section the gaps identified tended to be very large, meaning that individuals ranked their own levels as very low. In other words, in general, respondents felt that their planning skills were very low, compared to what is required (generally less than 40% considered the difference to be 1).

iv. Legal Knowledge:

As mentioned in Section 2.3.4.b, respondents felt that a much higher skill level in Legal knowledge was required than that set by PARCS. The greatest training needs as determined by PARCS were in laws & regulations within the protected area, contract law as applicable to concessionaires and visitors, collecting/exporting materials and specimens and in legislation regarding protected areas with respect to the public. The greatest training needs as determined by respondents were in contract law with respect to

subcontractors, laws and regulations within the pa, laws related to community development and laws of slander and libel. Legal knowledge was required throughout, however, and the gaps identified were very large. PARCS did not identify the needs to be as great due to the fact that the required standard set by PARCS was frequently lower (some or working knowledge sufficed in many instances).

v. Policies and Procedures Knowledge:

The training need identified by PARCS neared 100% in many questions. The gaps were also very large. This is also the case using the respondents' own standard of comparison. This is obviously an area, like Planning, where respondents ranked themselves as having low skill levels. The only two questions in which the training need was relatively small was in C and D, namely knowledge of accounting policy and knowledge of the national conservation policy. On all other questions the training need was very high.

vi. Financial Knowledge:

As in Planning and in Policies & Procedures, Financial knowledge skills showed large gaps. Especially in question 62, with respect to keeping records of resource use or resources shared-both financial and in-kind distributions, was the training need great. In the validation analysis, this question showed the most disagreement with PARCS in that several people did not find that in-depth knowledge was necessary. Again, this is not something which occurs in Congo, and it is probably for this reason that PAMs often did not find it as important. They did identify a very marked training need in it however, even when using their own standard of comparison. Relative to their own scores, however, almost every question showed very high training needs, except for question No. 60, which refers to keeping records of visitor numbers and keeping receipts. Evidently this is one area in which more than 50% consider themselves as having sufficient knowledge.

Overall, the gap analysis shows that respondents identified the greatest areas of training need, over all the skills combined, in ensuring an appropriate balance between resource conservation and use in the protected area. This is followed by ensuring optimum levels of visitor satisfaction (F), ensuring agreed intervention programs are completed to budget and timetables and representing the pa in public meetings and ensuring harmonious relationships with neighboring communities. Research activities, financial accounting, and the development of tactical plans and budgets did not figure highly in this analysis. Each key area did rank high at least once, however, in one skill or the other, for representing a training need. It can be concluded, therefore, that training is needed in each key area of the job of a PAM, and that although there are differences in priorities for each skill, no task of a PAM is felt to be satisfactorily backed by training.

The following table (Table 3) demonstrates that the skills in which respondents felt their training needs were the greatest (percentage of questions in which at least 60% of respondents felt training was needed) are Planning skills, with all other skills following closely behind. Only Management skills seemed to be considered the least acute in requiring training.

Table 3
 Percentage of Questions in which at least 60% of Respondents Identified a Training Need, using the PARCS standard of comparison

Skill	Percentage
Technical knowledge	82
Management knowledge	70
Planning knowledge	92
Legal Knowledge	78
Policies & Procedures knowledge	80
Financial knowledge	83

2.3.5.d Comparison of Average PAM and Assistant 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). This will enable comparison of the training needs 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 the point of this exercise.

The greatest training needs, or gaps, were identified by the Field Associate, followed by the FOD. Both were rather more critical of PAMs abilities than PAMs themselves. The following table shows, however, that the skills in which gaps were identified are the same, and that the skill requiring the most urgent training was Policy & Procedures. The Field Associate also felt that Financial & Accounting skills needed a great deal of training. The table lists the percentage of questions for each competency in which a gap of more than 1.6 was identified (or a gap of about 2 or 3). Interestingly, in the questions where PAMs identified no training need (either their knowledge was sufficient or more than adequate than the level required) the Field Associate and the FOD often also identified no training need (gap of 0). On some of these questions, however, the required level was "some knowledge", in which case a gap of 1 would mean they had no knowledge. These questions involved: in the Technical knowledge section: working knowledge of extension methodology and knowledge of the cultural and historical context of the pa; Management knowledge: knowledge of human resource techniques and knowledge of the PAM's role at meetings, etc; Legal knowledge: some knowledge of employment laws, and some knowledge of laws related to community development.

Table 4
 Percentage of Questions in which an average gap of about 2 or more was identified for each competency

Competency	PAM	FOD	Field Associate
Technical knowledge	18	5	53
Management knowledge	10	10	50
Planning knowledge	42	42	67
Legal knowledge	0	33	44
Policy & Procedures knowledge	70	70	70
Financial & Accounting knowledge	17	17	100

Overall, the greatest training needs are in Policy and Procedures, for each category of respondent (apart from Financial knowledge for FA's), followed by planning knowledge. The lowest needs are in Legal and

Management knowledge, although the FA did consider the gaps large in all competencies.

The importance of Policies & Procedures and the fact that it ranks highest as the 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 nonetheless have a number of questions demonstrating large gaps in knowledge. It is evident that according to all categories of respondent assessed, there are large 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). From this analysis their priority training needs are in Technical, Management and Planning skills. Policy & Procedures rarely figures in this list of respondents' 3 priority training needs although it is uniformly found to represent the greatest gaps in knowledge over all Central African countries assessed.

Table 5
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	Percentage
A. Staffing	17
B. Infrastructure	17
E. Laws and Regulations	40
F. Visitors	33
G. Interventions	40
H. Community Conservation	38
J. Public Relations	29
K. Resource Conservation	57

The above table shows that the division of the job in which training was most required was K, ensuring an appropriate balance between resource conservation and use in the protected area. This holds for all the skills required to do so, including technical, management, planning, etc.

Laws and regulations (E), intervention programs (G) and harmonious relations with neighboring communities (H) follow. These are all aspects of a PAM's job that respondents considered very important and in which they felt they needed knowledge skills, in order to be able to do the job properly.

2.3.5.f Average Technical Knowledge skill level with respect to Biome

This table presents the average gap size (or training need) for each question in Technical knowledge, relative to biome. In other words, each column represents a biome, and it is subdivided into three columns for gaps of 1, 2 or 3. A gap of 3 represents the greatest training need. Column "R" represents those people based in Brazzaville (Regional) who are not at present in charge of a protected area, but who could potentially be placed in one at any point in time. Column "S" represents protected areas with a predominantly savanna habitat, (i.e. Lefini Reserve), and column "W" represents protected areas with a predominantly moist forest habitat (i.e. Odzala National Park). Responses under column R show that regionally based PAMs (meaning Brazzaville, for the large part) felt their training gaps to be usually in the order of 1, and very rarely 3. Savanna based PAMs felt somewhat less confident in their skills and identified a gap of 2 or 3 more frequently. Moist forest-based PAMs, usually further from Brazzaville than the other PAMs, and therefore with even less contact with headquarters, felt gaps of 3 to be appropriate more frequently than the other two. This data should not be analyzed too deeply as the numbers of respondents in the three categories (R,S and W) are not equal and this would bias the figures.

2.3.6 Validation Analysis of Social & Mental Skills

In general, respondents agreed with PARCS with respect to the mental and social skills needed to do the job of a PAM.

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 validated.

There is about 80% 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 overall accuracy score is 84.5%. 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 the cases that PAMs considered the question not to be relevant to the job of a PAM. The figures shown represent the percentage of respondents that felt that a particular question did not relate to the job of a PAM.

The disagreement was spread out relatively evenly over all questions, with never more than 9 people disagreeing on any one question (question 14-E, "gaining cooperation of wrongdoers"). This question was worded rather unfortunately and I believe many people misinterpreted it. It was misunderstood and queried by many respondents, in which case I was able to explain its meaning. Those respondents who did not ask me about it, however, may well have misunderstood it. Frequently, respondents thought it meant cooperating with wrongdoers, rather than getting wrongdoers to change their ways and cooperate with authorities. In any repeated use of the questionnaire, this question would have to be reworded. There was also relatively high disagreement with the validity of question 14-E, which deals with determining true causes of incidences and trends in incidences with respect to activities complying with laws and regulations in the protected area. In question 9-H, "understanding the underlying causes of conflict with neighboring communities both in the long and short term", 7 people felt this was not relative to the job of a PAM. The disagreement on this one particular question is surprising given the importance of the question. It is also an aspect of the job which is considered important by PAMs and in which they recognized a need for increased knowledge skills (see section 2.3.5.d). It is therefore surprising that with respect to problem analysis (competency 9), they did not feel it was relevant. They did consider other questions in division H to be relevant, however. In general, few questions solicited a great deal of disagreement and most PAMs felt they were all relevant to their job.

2.3.7 Current Mental & Social Skill Level

In general, there were gaps identified in all mental and social skills, by all categories of respondents. The skills in which training was required the most were Written, Creativity, Evaluation and Oral. PAMs tended to feel, unlike FODs and Field Associates, that their Oral skills were adequate.

2.3.7.a Low Skills Levels

Table 2.3.7.a 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.

There was not a great deal of variation in the amount of times a low skill level was identified for each competency. On the whole, between 35 and 52% of responses identified a low skill level (1 or 2). The following table lists the percentage of times a low skill level was identified for each competency.

Table 6
Percentage of times a score of 1 or 2 was given for each competency

Mental & Social Skills (Competency)	Percentage
Comprehension	42
Problem Analysis	52
Creativity	52
Evaluation	57
Oral	35
Written	49
Working with Others	49

Interestingly, although several PAMs felt that the question (see table 2.3.6.b) referring to problem analysis skills in dealing with conflicts with neighboring communities, was not relevant to their job, they did identify low skill levels for this question. Out of 19 respondents, 13 felt they had no, or poor skills in this question (see Table 2.3.7.a.i). In otherwords, it would be a gap needing to be addressed in training, as most PAMs did consider it relevant.

Table 7
Percentage of times a score of 1 or 2 (low skill) was given for each main division of the job

Main Division of the Job	Percentage
A. Staffing	49
B. Infrastructure	54
C. Finance/Accounts	40
D. Tactical Plans	59
E. Laws and Regulations	37
F. Visitors	50
G. Interventions	42
H. Community conservation	47
I. Research	54
J. Public Relations	52
K. Resource Conservation	37

As with the different competencies, there is very little difference between the different main divisions with respect to the areas needing training in mental and social skills. The skill levels of the PAMs are low throughout, and they could profit from any training in these skills.

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

The lower the average scores, the greater the need for training in these skills.

According to FODs, PAMs most frequently overestimate their mental and social skills with respect to Divisions E and F, with respect to laws and regulations and visitor satisfaction respectively. They also most frequently overestimate their oral and written skills, and to some extent their skills in working with others. They sometimes underestimate their skill levels, but not consistently in any one division or competency.

The following table demonstrates the competencies in which target validators felt the greatest gaps in mental and social skills were. The percentages represent the percentage of times a score of 1 or 2 was recorded for each competency. According to PAMs themselves, their largest training needs were in Evaluation, followed by Problem Analysis and Creativity. Their lowest need was in Oral skills. According to both FODs and Field Associates, the greatest needs were in Written skills, as well as Creativity and Oral. The lowest training need was in Problem Analysis and Working with others. It is clear that there are differences in perceptions with respect to how skilled PAMs are. There is little variation between how FODs perceive PAMs skills and how Field Associates perceive them. The lack of evaluation of PAM's work, both in the field and in their "office" (i.e. report writing, etc.) could be the cause of this misconception and feedback on the efficacy of their work in mental and social skills could help. It is also clear that PAMs need to work on both their written and oral skills as these are important aspects of their job, and probably quite easily rectified.

Table 8
Percentage of times a score of 1 or 2 was identified for each competency

Mental & Social Skills (Competency)	FOD	FA
Comprehension	58	75
Problem Analysis	55	55
Creativity	80	90
Evaluation	89	78
Oral	100	78
Written	100	100
Working with Others	60	40

The Divisions that have the lowest skill levels deal with visitors (i.e. tourism) and research. This is not surprising as there are very few tourists to protected areas in Congo, and very little research is carried out in them.

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 favored 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, as well as maintaining dialogue and communication.

2.3.8.a Methods to Instil Work Ethics

Quite a large number of methods to instil work ethics were given, and only 4 were given by three or more people. These include numbers 4 (acknowledging good work in others while positively criticizing bad work), 5 (showing tolerance to other's point of view), and 7 (providing attentive supervision to staff's work, especially when new responsibilities are given). There does not appear to be any link to the way in which

people chose to instil work ethics and the number of years in which they had worked in the service.

2.3.8.b Methods to Instil Commitment to Conservation

The largest response was for number 1 and 3 in the list. These include showing dedication to national, regional and local conservation objectives and demonstrating the importance of conservation in relation to human needs. Again, there does not appear to be a link to years of service.

2.3.8.c Methods to Instil Healthy Attitudes to Adjacent Communities

There does appear to be some convergence in responses to this question, with the greatest proportion going to listening to and demonstrating willingness to understand community problems (2), followed by taking an active role in conflict resolution (4) and accepting the validity of community participation in protected area management (1). In other words, PAMs are aware of the need to have healthy attitudes with adjacent communities and agree on the way in which this should be fostered. There is no community participation, at this point, in protected area management, although there are efforts being made to this goal in some protected areas (eg. Odzala, Nouabale Ndoki)

2.3.9 Language skills of PAMs and Assistant PAMs

The data shows that 74% of PAMs speak the language spoken by the local community, and the other 26% did not answer the question. In general, therefore, PAMs speak the language of the neighboring communities in Congo. Although there are different languages spoken in the country, PAMs recognize the need to be able to communicate with these communities and as a consequence speak the language required to do so. In general people are multilingual in Congo and would already speak the local language before being assigned to a certain region. It is unlikely that they would have to learn the language in order to communicate with neighboring communities as a PAM. 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 Computer skills

In general, PAMs have no experience with computers and do not know how to use them. They certainly would not have any opportunity to learn how to use them unless they were associated with a project in which a computer was made available to them, or unless they attended a course abroad in which computer use was part of the curriculum.

2.3.11 Training Priorities Identified by Respondents

In general, PAMs still felt that their greatest training needs were in Technical skills, followed by Planning and Management skills. None identified Policies & Procedures skills.

The following table presents the training priorities PAMs listed after having completed the questionnaire. These are listed by main division of the job, and by competency. The first row and the first column are "blank", where the response did not link a competency with a main division.

Table 9
Competencies 2-17 and Main Divisions of the Job A-K

Main Div	Competencies																	
	Blank	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	T
Blank		5	12	10	3		2		1	2		1						
A			1	4														5
B		2	1															3
C																		
D				1														1
E		2					1											3
F		1																1
G		1																1
H	3	2																5
I	2	2																4
J																		
K		7																7
TOT		22	14	15	3		3		1	1		1						

From this analysis it is evident that respondents still feel that their greatest training needs are in technical knowledge skills, followed by management and planning. These are not the skills in which their greatest training needs were identified by the gap analysis (section 2.3.5.d). Gap analysis showed that Policies & Procedures had the highest training need, followed by Planning, and to a lesser extent technical knowledge (as well as financial & accounting knowledge). Management had one of the lowest training needs relative to the other skills. The most obvious forms of training, and perhaps also the most obvious skills to PAMs are technical and management skills, and it is for this reason that they are always listed as priority training needs. The fact that other skills may be relatively more important in the changing job of a PAM, and that they may need to precede other forms of training is not always obvious. The value of the questionnaire as an exercise and a point of discussion (dissemination) is very clear in this instance where PAMs are not fully aware of what their training needs are, despite the fact that they identified them themselves with the aid of this questionnaire.

2.3.12 Training Received

2.3.12.a,b,c Knowledge, Mental & Social, Attitudes

Training in the different competencies is considered to have come mainly from on-the-job experience, and training at the Ecole des Spécialistes de la Faune à Garoua, in Cameroun. Some training, mainly in Knowledge skills, and some Mental & Social skills comes from training in other Formal institutes. These are, in general, universities abroad, which respondents attended before being recruited by the department. In-service training is only considered to have contributed once, in comprehension. This is probably included because the respondent did not distinguish it properly from on-the-job training. In reality, there is no in-service training, as defined by this project, in Congo. For the purposes of PARCS, in-service training was defined as meaning training that is developed by the department for staff, post-recruitment. "Other formal" training is also only mentioned once, for technical skills. It is clear from this analysis that training other than formal wildlife and informal, on-the-job training rarely, if ever, occurs and these are therefore not techniques used to contribute to preparing PAMs for their job.

2.3.12.d Years since Formal Wildlife Training Received

The majority of PAMs received their formal training more than 5 years ago (93%), and 33% received their training more than 10 years ago. It must not be forgotten, however, that of the PAMs that have been trained at Garoua, only a very small minority are actually in the field, and most are working at Headquarters, due to lack of the financial and infrastructure means to send them in the field. Of those few Garoua graduates that are in the field, most have been trained more than 10 years ago.

2.3.12.f Frequency of which training has contributed to PAM skill levels

The histogram shows that PAMs feel they have received some sort of training in most skills, even if it is only on-the-job training. Most training seems to have been in technical knowledge and comprehension. The former is certainly due to formal training either at university or at Garoua.

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

This question was not frequently responded to (it was not formally asked), but where it was responded to, it was always Formal Wildlife Training. It is considered, by most people, to be the best source of training for a PAM. This was evident especially during the discussions held after completion of the questionnaire. Although many skills were acquired only with on-the-job experience, formal wildlife schools were considered to be the best source of training, largely due to the fact, however, that this is the only officially recognized training available. In other words, if training is to count in one's ability to move up the hierarchy of an organization, formal wildlife training is the only type of training currently available. It is therefore highly desired and considered the summum of achievement.

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) 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 indicated relatively rarely identified gaps. 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 and Procedures) and 4 (Planning) for knowledge skills, and 11 (Evaluation), 10 (Creativity) and 9 (Problem Analysis). 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. Compared with the table in the preceding section 2.3.12.h, there is evidently not a great deal of overlap between the priority training needs identified by gap analysis and the training needs listed by respondents. On occasion, however, some overlap does occur, as indicated by the asterisk.

2.4 Summary and Conclusions

The Protected Area Conservation Strategy (PARCS) was devised in order to address two important questions: 1) what is needed in respect of Protected Area Manager(PAM) training 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 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 Congo, there were no changes made at all to the description proposed by PARCS, and the overall level of agreement was 91%. In other words, very few people, of all categories, queried any aspect of the questionnaire and its relevance to a protected area manager in Congo. Although not all aspects of the job as described in the questionnaire were put into effect in Congo (i.e. very little tourism or research carried out in most of the protected areas), respondents did feel that they were skills required of a PAM, especially as it would be desirable to strive towards including these activities in the future.

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

There are a large number of constraints in Congo which make it difficult for protected area authorities to carry out all their responsibilities. One of the major constraints is a budgetary one, which limits not only infrastructure and logistics, but it limits the staffing possibilities in protected areas, and it limits the training available to staff. This is a constraint which is of particular importance in Central Africa where protected area management is not a priority, and where funding is very limited. It also has bearing on all other constraints in Congo.

Financial constraints are not the only ones, however. There is a very inefficient use of resources, both human and otherwise, in protected area management. Expertise is not utilized to its full advantage. There are a number of very qualified people in Brazzaville who are not being utilized to their full potential. There

are far too many people working with protected area management authorities based in the central office in Brazzaville, who have received training enabling them to work in the field. Training is still seen, to some extent, as a stepping stone to an office at headquarters. It is generally expensive and rare, due to the fact that there is little training outside of formal training at a university or wildlife training institute, and recipients tend to find themselves in elite positions. One of the great difficulties in Congo at present is the lack of field-based staff, and the large numbers of people based in Brazzaville without clearly defined responsibilities. There is a serious lack of funds and infrastructure for field-based personnel and as a consequence few people are willing and able to live in or near the protected areas. Of the 29 people attending the workshop, 11 only have had field experience as a PAM. Of those 11, six are based in the field at present. This is one of the problems that arose in the discussions: too many people are based at headquarters and the protected areas are seriously understaffed. This is principally due to lack of infrastructure and funding. In addition, those individuals having received training are usually not sent to the field, but remain at headquarters. Many of the PAMs attending the workshop were therefore people with very limited, if any, field experience. In addition, it is probable that many of them were recruited into the department during the period that Congo was earning a lot of revenue in the 1980-85 oil boom. The oil boom was accompanied by a rapid growth in the urban job market. The oil crisis in 1985 brought the government to halt the growth of public spending, but many government agencies were saddled with large numbers of employees, and limited funds. 12 out of 28 respondents at the workshop were recruited between 1980 and 1985 (43%), during the oil boom.

One of the major constraints on effective use of human resources is this notion of training leading to elitist positions. Training is not seen as something that should be available to every one, and which should be repeated as frequently as possible. Training is still seen as something which prepares one for recruitment, or a specific position, and then never repeated. Training is therefore not seen as part of the process of movement throughout a person's career. In addition, this form of training is very limited in that it is not flexible and adapted to the needs which arise during the process of a person's career. As a consequence there are gaps which arise in the skills and knowledge required to do the job successfully.

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 required for the job. And it was clear to them that in a large majority of those skills, they had never received any form of training. After filling in the questionnaire, however, they still tended to list, as their three training priorities, those competencies which were the most obvious, and frequently addressed ones. 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 (in other words, in which the greatest training needs were identified), from the perspective of protected area managers, field operations directors and field associates, were "policy and procedures", "planning" and "technical knowledge". The field associate also felt that "financial and accounting knowledge" showed a large training need. Training was felt to be necessary in all the main divisions of the job, with little variation between them.

With respect to the mental and social skills, the greatest gaps in skill level were identified in their skills in "Evaluation", "Creativity", "Problem Analysis" and "Working with others". PAMs felt their oral skills to be more or less adequate, but this was an area in which FODs and Field Associates did not agree. In general, however, there was a high degree of overlap between the areas considered by PAMs to require the most training, and those considered by FODs and Field Associates to require the most training.

There did appear to be a link between training needs and biome. PAMs working in the field, and especially in protected areas of moist forest, had greater training needs than PAMs based in Brazzaville. This is not because the PAMs in the field had needs specific to their biome which had not been addressed, but because,

as mentioned previously, people having received training tended to expect jobs in offices at headquarters. Due to the fact that in the past 20 years many more people had been recruited into the Direction des Eaux et Forêts than there were currently jobs for, many PAMs were in Brazzaville, without a protected area to work in. These PAMs tended to be the ones that had profited from formal training, and who felt their training needs to be less extreme than those in the field. The PAMs that were in the field, and especially those in remote forested parks and reserves, who rarely had the opportunity to meet other PAMs or to come to Brazzaville to speak with people at headquarters, felt they had very large training needs. Many of them had never profited from any schooling beyond primary school, and they had certainly not received any training in protected area management. They were very aware of their training needs and, in general, were extremely interested to participate in the needs assessment, with the hope that training would become available to them in the near future.

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 regularly list as having received is formal wildlife training at a wildlife institute or at university. Rarely are conferences, seminars or workshops listed, although they do constitute a form of training. A few PAMs recognized the latter as a form of training, but they did mention that it was considered less important because recipients did not get any certificate or other form of recognition for having attended or participated. In other words, to make other forms of training more effective, it would be important to address this issue and to officially recognize participation in them. Some form of assessment would also be desirable so that mere attendance would not be sufficient.

As mentioned above, a large number of PAMs, and especially those actually based in protected areas, have not received any formal wildlife training, and all their learning has been on the job. In general, the skill levels of these PAMs are very low. In all competencies apart from technical knowledge most respondents did not feel they had been trained at all. A few respondents felt that they had been trained in all competencies during their formal wildlife training at the Ecole des Specialistes de la Faune at Garoua in Cameroon. An assessment of the Ecole de Faune, however, showed that many skills are not covered there, and even those that are not always adequately covered. Skills such as those necessary in Policies and Procedures, Planning and Technical knowledge are not often sufficiently covered. The one competency in which the lowest training needs are identified is Management. The problem facing the Ecole de Faune is that they train people to work in the field, and not necessarily at the level of a manager. The courses given at the school are very much field-oriented. This is not to say that they involve a very large proportion of field-work, but rather that they address subjects such as ecology, monitoring and patrols, veterinary medicine, development of protected areas, and some administration. These skills, albeit very useful and important, are not the only skills required of a manager.

Most protected area managers have received their formal wildlife training more than 6 years ago, and many more than 10 years ago. Since that time, they have received no additional training, nor any form of refresher courses. This is due to the lack of in-service training, and the expense of sending people to training institutes. Repeated training and refresher courses are forms of training that can most easily, effectively and cost-efficiently be organized by the department so that all candidates get equal opportunities for training and so that training is frequent and meets the needs of the job. The actual training need not be carried out in the department or by trainers from the department, as long as the department is ensuring that the courses meet the needs of its staff and that all members of the staff get equal opportunities for training.

e. Assessments of Field Operations Directors

Although not based in the field, the field operations directors has responsibilities not unlike those of a PAM. The difference is that the scale of responsibilities is much larger for a FOD. In other words, whereas the PAM is responsible for tactical plans and budgets and for contributing to the protected area strategic plan, the FOD is responsible for strategic planning of the whole protected area system. The FOD must also set policies, procedures and standards for the whole of the system and answer to the Ministry for all of the department's activities.

The Field Operations Director, in general, has a higher level of training, both in terms of formal wildlife training as well as other forms of training, such as workshops, conferences and seminars. Appointment to

this position, however, is often a political move and it is not always a candidate's training background which makes him/her eligible for the position. People often move from one ministry to the other, and it would not be unthinkable that a person with very little wildlife training background would end up in the position of a FOD.

If PAMs were trained to successfully meet the requirements of the job, it would not be so important that a FOD have a wildlife background. The PAMs could provide much of the needed expertise, and it would be possible to consult other experts for the overall system approach. At present, however, due to the lack of expertise of PAMs, FODs have to maintain a strong supervisory position.

The Field Operations Director also felt that he could profit from additional training, especially in the fields of management and planning. It is possible that policies and procedures would also be included in this list, but it is a far less obvious category to most respondents. It was never listed by PAMs as a training priority, although it did come up, during the gap analysis, as a very important training need.

f. What further training is required?

Further training is required in most of the skills mentioned in the questionnaire. The most important gap in knowledge skills was in Policies and Procedures, followed by Planning and Technical knowledge. The most important gaps in Mental and social skills were in Evaluation, Creativity and Problem Analysis. The main divisions of the job that required training the most frequently were Resource Conservation (ensuring an appropriate balance between resource conservation and use in the protected area), Interventions, Laws and Regulations and Community Conservation. This would indicate a need for training in sociological skills as well as technical and legal skills. Skills in dealing with the community and involving them in protected area management are important, as well as skills in determining their needs and cultural practices, so as to avoid conflict wherever possible, and to ensure that their needs and interests are also being met. An important focus is promoting local participation in forest management through the strengthening of community rights, and social skills should be developed in the government services for forestry and protected areas.

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 technical knowledge training, followed by management and planning. Although planning figured as a high training need from the gap analysis, technical knowledge was not among the highest needs, and management was generally the lowest. These are skills which PAMs often think about, however, and they are the skills for which training is very obvious. For many of the respondents, training in any skills other than these three was not obvious. This is due, in part, to their inexperience with any form of training other than formal wildlife training. Not all PAMs had received formal wildlife training, but they were all aware of it as a training opportunity. Given the lack of any in-service training programs, most PAMs had never given short courses as part of such a programme any thought. The idea of a mobile training unit, organized by the department, providing training to all field personnel, was a very new one. For this reason, when respondents were asked about further training requirements, they tended to list formal wildlife training (university or the Ecole de Faune in Garoua), in the skills mentioned above. During the discussions held after the questionnaire was completed, however, the idea of in-service training, in the form of short-term refresher courses was discussed and participants all felt that this would be the ideal form of training. It was more realistic, given the usual financial constraints on training, as well as given the difficulty of pulling people out of their jobs for lengthy training programs.

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

The list of training opportunities for Congo is far from exhaustive. The Ecole Nationale des Eaux et Forêts at Musendjo was no longer operational at the end of 1992. A visit was made to both the Institut du Développement Rurale and the University of Brazzaville Biology Department. Neither training opportunity is currently being used to train PAMs. The former is aimed more at foresters and higher level technicians, and the latter is aimed at a much higher level of academic training. None of the training opportunities

include courses in policies and procedures for protected areas and conservation, nor include Legal training. It would be possible to adapt some of the courses available at these institutes/university to fit the requirements for PAMs. Another possibility would be to use the training and technical expertise available as a resource in order to develop the courses required to bring PAMs to the necessary level, and to help the Direction d'Etudes et de la Planification and the Direction de la Faune et la Flore develop training programs for their staff. Other training opportunities could also be included in order to be able to develop the courses required for all skills and competencies.

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

There will unquestionably be many training opportunities that have not been utilized, outside of the ones mentioned above. There are a number of resources in Congo, and people with expertise in a number of fields, that could be approached to help develop specific training programs. There are also unquestionably a large number of training opportunities that have not yet been assessed which could contribute to developing training programs. At present, none of these are being used. Formal training tends to be abroad, and there is very little training going on in the country. Any training outside of the country will have very important budgetary constraints. Attempts must be made to identify opportunities within the country, and to develop training programs which will not prove to be an enormous financial burden on a Department with enough financial constraints as it is.

i. What kinds of training should be recommended?

Based on discussions with Field Operation Directors and Field Associates as well as Protected Area Managers, it is obvious that there is much enthusiasm and 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, or of short courses given at the direction headquarters when field staff come to the capital. The recipients of these training courses 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.

Formal training has proven too expensive and logistically complicated and as a result, few people have received it. Its rarity has led to the belief that training is a ticket to an elite position in an office, high in the hierarchy of the service. 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. In addition, 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 a PAM, and people above the position of a PAM, who will need similar skills to the field-based managers, 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

This study recommends the creation of a professional training officer post within the Conservation Authority in order to help staff career development and to provide an information base as a precursor to effective planning. One of the crucial first steps would be the training of trainers in order to provide the capacity to carry out in-service training. Expertise could come from a number of existing training institutions, or from technical assistance abroad. A training programme would need to be developed in order to plan and give direction to training for peoples careers. This would demand the creation of a training officer post.

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 for them to participate in regional training programs. 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. 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 by competencies identified by the "gap analysis" and should concentrate on the main divisions of the job requiring priority attention. Specifically, these skills include Policies and Procedures, Planning, Technical and Financial skills, and involve Resource Conservation, Interventions, Laws and Regulations and Community Conservation. 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.

A goal of PARCS Phase II would be to assist in the development of a "training ethic", emphasizing that training is a process and not a single incident in a career. PARCS should facilitate the development of a training plan for the department, which would allow each person's career to follow a pathway based on performance and initiative. The emphasis of training programs will be as much as possible on practical, field-based training.

Section 3. Training Opportunities Assessment

3.1 Introduction

In addition to trying to assess the training needs for protected area managers in Congo, an attempt was made to assess the training opportunities in the country as well. This involved visiting existing training opportunities, and trying to identify opportunities which are not being utilized at present. Although some data was gathered on both these questions, it was not possible in the limited time available during the assessment to do an extensive study of either of the two questions. It is therefore necessary to continue the training opportunities assessment throughout the second phase of the PARCS project, in order to be able to compile an evaluative list of training opportunities to be used both by protected area authorities and donors.

3.2 Methods

Based on responses given by PAMs and other people contacted during the assessment, the training opportunities mentioned were visited by the regional manager, where possible. Most of the training opportunities, however, were out of the country, and in general fell under the category of formal training institutions. These institutions included universities and the Garoua Ecole de Faune in Cameroon. Two institutions mentioned, however, were in Congo. These were the University of Brazzaville, Department of Science and the Institut du Développement Rurale (IDR). Both have trained people who have then moved into the Ministry of Water and Forests.

When these institutions were visited, contact was made with the administrative personnel as well as with professors and trainers. A tour was made of the facilities, although it was not possible to see everything at the IDR because they were not opened. The questions listed in the methodology were asked although all the information was not always available.

3.3 Results

Institut du Développement Rurale (I.D.R.)

This institute, which is responsible for training Congolese agronomists and foresters was established in 1975 under the Ministry of Education. It is currently aided by the French Cooperation, both financially as well as technically. There are two teachers supported by the french cooperation. The institute has two courses, conferring a degree of "Ingénieur agronome" and "Ingénieur de travaux", the former having a duration of 5 years and the latter 3 years. To be eligible for either of the two courses, applicants must have a baccalauréat and then pass the entrance exam. Participants in the long cycle (5 years) are expected to write a thesis in their last year.

About 60 students enroll each year. Most of them receive a scholarship from the government. Foreign students pay about 150,000 FCFA per year to enroll. Assessment is both through exams and through in-term assessment. In general, about 60% of students reach their final year and graduate.

The institute employs about 30 permanent training staff, and 20 are available through the ministry. Trainers have an "ingénieur agronome" background, which is often accompanied by a doctorate.

Courses given at the institute include agroforestry, silviculture, reforestation and forestry exploitation; fisheries and pisciculture; ethology, management of natural resources and hunting; economics; administration and accountancy; sociology and some general biology. Courses which are not included are community education and extension work and tourism. There is an attempt to include legislation and policy and procedures in the courses.

A major problem facing the institute is decreasing funds each year, so that field work is being cut back. It is for this reason also that an entrance exam was established to limit the numbers of students enrolling in the courses.

In general, the institute is understaffed and underequipped, and is therefore running below capacity. With increased funds, many more students could participate. No short term courses are at present given at the institute, outside of the established curriculae, but the people contacted at the school said that there would be no problems with this in principle. In other words, the school would be open to possibilities of using the facilities for training outside of the two diploma courses given. At present, however, funds would have to come from outside sources, as well as training materials.

Brazzaville University, Faculty of Sciences

The University falls under the Ministry of Education and depends both on funding from the government and from the French Cooperation. Technical assistance (i.e. teachers) is also provided by the French and the Chinese government.

The department with which contact was made was the Biology department. Students enroll in the "Maîtrise" for Animal Biology or Plant Biology. The course work includes Animal Ecology, Plant Ecology, Ecophysiology, Ethology and "aménagement du territoire". The courses include both theory, practical (lab) work and field work. About 7 people graduate per year. The students must attend a minimum of 3 modules, each with about 30 hours of course work.

Teachers and professors have a minimum of a post-bachelors degree and most have attended university abroad. They must have a minimum of 15 years of experience, including their tertiary education (this figure, although quoted to me by the head of the department, seems rather high).

A module in Protected Area Management has recently been added to the curriculum, but no student had yet elected to take this course. As a result, it will probably not be included in next year's programme.

The department is seriously lacking in funds and equipment. Few students chose to enroll in Animal Biology and the employment situation for graduates is far from hopeful. As a result, the head of the department was quite pessimistic about the programme. Some of the most basic equipment, including books and periodicals was not available to students. Although not normally prepared to become involved in extracurricular programs, it may be possible to run short term training courses at the university if it will prove a way to help build up the capacity and equipment of the department.

Donor funded projects offer an additional form of training, albeit not formalized, which in Congo have provided expertise to a number of protected area staff. The number of projects currently underway in Congo are providing specific on-the-job training to the project counterparts and staff. Although projects are generally not long-term and not all protected area managers get equal opportunities to profit from working with donor projects, those PAMs working in association with such projects have received informal training in a number of skills relevant to their jobs.

3.4 Discussion

The financial situation for both institutes visited could probably be considered representative of most training institutes in the country. The sources of outside funding are decreasing and the government is not able to provide all the funding necessary to run the institutes effectively. Both the IDR and the University Biology department are aware of what their needs are in order to run their courses efficiently, but these needs are not being met. Both could be effective sources of training, albeit formal and theoretical, for protected area managers, but they are not being used to their potential at present. In the future, however, these training opportunities could be used to develop specific courses for training in protected area management. They need not necessarily fall into existing curriculae and could be designed with very specific purposes in mind. Experienced trainers would be available as resources. It may be more cumbersome, however, to try to fit courses into these existing institutes, due to administrative and political considerations, and it may prove much simpler to run them completely separately. It is possible that the institutes would be able to provide consulting-type services to develop the training expertise of any outside organization/institute/group actually doing the training.

This opportunities assessment is limited and it would be necessary to continue the assessment throughout the second phase of PARCS in order to provide a more exhaustive list of training opportunities. There may be other opportunities which are less obvious sources of training, and which may be more adapted to the needs in Congo.

Expertise in legal aspects of protected area management, and international as well as national laws concerning wildlife, exists in Congo and there are people who could be contacted in order to help develop short courses. This would be an important resource to draw upon for training as 78% of PAMs identified a training need in over 60% of questions about legal skills. There is also expertise in other aspects of protected area management available, and although much of this has not previously been tapped as a resource, it would be possible to do so, once contact has been made with the people concerned.

Section 4: Recommendations

Based on discussions with Field Operation Directors and Field Associates as well as Protected Area Managers, it is obvious that there is much enthusiasm and 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 idea. This may take the form of courses given by mobile training units, or of short courses given at the direction headquarters when field staff come to the capital. The recipients of these training courses 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.

Formal training has proven too expensive and logistically complicated and as a result, few people have received it. Its rarity has led to the belief that training is a ticket to an elite position in an office, high in the hierarchy of the service. 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. In addition, 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 a PAM, and people above the position of a PAM, who will need similar skills to the field-based managers, in order to supervise, coordinate and direct protected area managers.

This study recommends the creation of a professional training officer post within the Conservation Authority in order to help staff career development and to provide an information base as a precursor to effective planning. One of the crucial first steps would be the training of trainers in order to provide the capacity to carry out in-service training. Expertise could come from a number of existing training institutions, or from technical assistance abroad. A training programme would need to be developed in order to plan and give direction to training for peoples careers. This would demand the creation of a training officer post.

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 for them to participate in regional training programs. 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. 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 by competencies identified by the "gap analysis" and should concentrate on the main divisions of the job requiring priority attention. Specifically, these skills include Policies and Procedures, Planning, Technical and Financial skills, and involve Resource Conservation, Interventions, Laws and Regulations and Community Conservation. 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.

A goal of PARCS Phase II would be to assist in the development of a "training ethic", emphasizing that training is a process and not a single incident in a career. PARCS should facilitate the development of a training plan for the department, which would allow each person's career to follow a pathway based on performance and initiative. The emphasis of training programs will be as much as possible on practical, field-based training.

Acknowledgements

I would like to thank the Director of the Direction de la Faune et la Flore, Mr. Raphael Tsila, and Mr. Kassa, the Director of the Direction de l'Etude et de la Planification for their help in the training needs assessment for protected area managers in Congo. All the participants of the workshop and discussion groups for the assessment and also thanked for their hard work and enthusiasm in the assessment. Matthew Hatchwell and Jerome Mokoko, of the WCS Noubalé Ndoki Project were also invaluable. The Ministry of Water and Forests is kindly thanked for accommodating the workshop and facilitating the training needs assessment, as well as the staff of the Institut du Développement Rural, the Marien Ngouabi University Biology Department and the international agencies and projects based in Congo, including UNDP, World Bank, Jane Goodall Institute, Brazzaville Gorilla Orphanage, ECOFAC, IUCN and WCS.

I would also like to thank my colleagues in the PARCS project from BSP, WWF and WCS, and especially AWF for their help and input into this project.

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Annexes

Annexe 1	Questionnaire
Annexe 2	Background Information Sheets
Annexe 3	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.

eg. 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 (I.) 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 F9):

determining true causes of visitor dissatisfaction & behaviour	<input checked="" type="radio"/> Y	<input type="radio"/> N	<input type="checkbox"/>
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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	I. 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 recommendation 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, sitings, 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 hudget 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"/> 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 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"/> ↓	↓
Working knowledge of principles of stock control and procurement 21 <input type="checkbox"/> <input type="checkbox"/> Working knowledge of how to apply preventative maintenance 22 <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 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 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., firearms, 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"/> 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"/>		In-depth knowledge of the legislation regarding protected areas 47 <input type="checkbox"/> <input type="checkbox"/> Some knowledge of the laws of slander and libel 48 <input type="checkbox"/> <input type="checkbox"/>	In-depth knowledge of the public relations policies, procedures and practices 58 <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 a 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	I. 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			
10. Creativity	11. 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"/> 37	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	1. 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 	Instils 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 	Must have an open mind to research findings Must support role of research as a component of protected area management		
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 	Honesty, Integrity Must make clear when representing the protected area or a personal view Must never criticize the organisation openly	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				

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

As a manager how do you instil:

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?

Handwritten mark

TRAINING PRIORITIES

Having completed this 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:

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

Annexe 2

Background Information Sheets

Discussions were held with as many protected area managers as possible, in addition to the assessment of training needs with the questionnaire. In many cases, one-on-one discussions took place during the workshops and interviews. These discussions helped the PARCS Regional Manager (RM) understand how well the participants grasped the issues in the questionnaire, and helped place the responses into a context. A number of questions about the reserve were listed and handed out to respondents. These questions were discussed, and in some cases written out by the PAMs. Responses to the questions gave an indication of the PAMs' familiarity with the protected area and its wildlife, as well as its status and management. The following questions were used as guidelines for these discussions.

For each reserve:

Name of reserve

Size

Years in existence

Last change in protected status

Predominant habitat types

Governing institution/department (Ministry)

Funding sources

Source/type/amount of technical assistance

Does the reserve have: protection force? No. of employees

Biological monitoring programme? No. of monitors

Community liaison programme? No. of employees

Tourism programme? No. of employees

Safari Hunting programme? No. of employees

Research programme? No. of researchers

Reserve-level training programme? No. of trainers

Funding?

Other? (specify)

Are any of the above services provided by institutions or individuals not formally part of the reserve's organization? Describe

Describe infrastructure present in Reserve

Personnel information at Reserve level:

Describe personnel structure (with organigramme if possible)

For each staff position, give number of persons, responsibilities and minimum requirements for hiring

Actual qualifications for each staff person in position

Need for more/different personnel and describe why

Need for more training, whom and why

Indicative information

Technical:

1. Are there endangered species in the reserve? What and where are they? By whom are they threatened?
2. Does tourism have any impact on wildlife?
3. Are there species present in the reserve that are important ecologically? Describe.

Management:

1. What do you look for in hiring a good guard?
What procedure is followed if an employee is not working satisfactorily?

2. What kind of contact do you have with the public?
3. Do you personally write annual reports/program reports/budget reports/accounting/personnel supervision reports?

Strategic Planning:

1. Does the reserve have a management plan? How is it used? Is it effective?
2. What plans/reports are regularly produced?

Legal:

1. What is the legal status of the reserve?
2. What activities are illegal within?
3. Is any extraction legal? Which?

Financial:

1. Are regular reports compiled?
2. Are procurement and accounting done by the same or different people?
3. Who must sign for disbursement/payments? How is it recorded?

These discussions and written responses confirmed the results from the questionnaire assessment. Although there are deficiencies in the skill levels, and lack of knowledge of key questions, in many of the areas covered by the discussions, the respondents felt the least confident of their knowledge in Planning, Legal, and Technical questions. They knew little about the specifics of the funding sources for the protected area, or the technical assistance. Yet their knowledge of the personnel structure and general management questions within the reserve was quite good.

The discussions enabled many of the respondents to see why the questionnaire had such a strong emphasis on skills/competencies other than technical and management skills. They realized that as a protected area manager, they required skills/competencies in a large number of fields, and that they had received insufficient training in many of them.

Annexe 3:

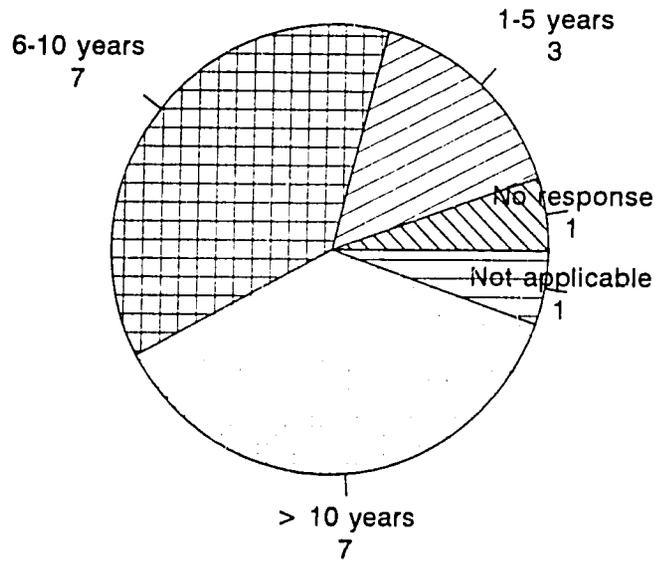
2.3.1 Data Collection Table: Questionnaires
Congo

POSITION	METHOD							Total
	1	2	3	4	5	6	7	
1. Assistant PAM			4					4
2. PAM			15					15
3. Regional Manager		1	5					6
4. FOD (for PAMs)		1						1
5. FOD (for own job)			1					1
6. Trainer								
7. Researcher			1					1
8. Field Associate		1						1
9. Private Sector PAM								
Total		3	26					29

Total sample: n=29

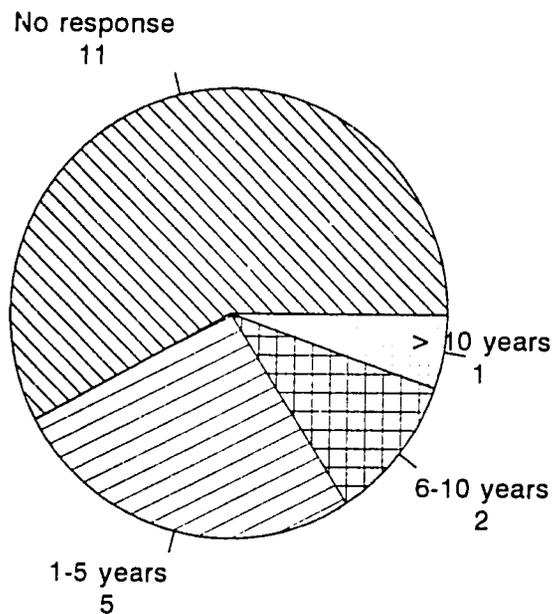
- Methods:
1. Explain Questionnaire and fill out with Regional Manager nearby
 2. Explain Questionnaire and fill out in own time
 3. Explain questionnaire at workshop and fill out with RM nearby
 4. Consultant explain Questionnaire and fill out with consultant nearby
 5. Consultant explain Questionnaire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

2.3.3.a Respondents years in service Congo



Total Sample n = 29 (PAMS & Ass. PAMS combined: n=19)

2.3.3b Respondents years as a PAM Congo



Total Sample n = 29 (PAMS & Ass PAMS combined: n=19)

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

COMPETENCY	Question No	Total % of combined scores of -1,0,1	
		Question	Competency average
Technical	1	100	95.3
	2	100	
	3	100	
	4	100	
	5	88.9	
	6	100	
	7	100	
	8	100	
	9	73.7	
	10	100	
	11	89.5	
	12	100	
	13	89.5	
	14	94.7	
	15	94.7	
	16	94.7	
	17	94.7	
Management	18	100	94.5
	19	83.3	
	20	100	
	21	100	
	22	94.1	
	23	100	
	24	94.7	
	25	94.7	
	26	94.7	
	27	83.3	
Planning	28	100	92.0
	29	100	
	30	84.2	
	31	100	
	32	100	
	33	94.7	
	34	100	
	35	100	
	36	42.1	
	37	100	
	38	89.4	
39	94.1		
Legal	40	36.8	77.3
	41	44.4	
	42	100	
	43	94.7	
	44	89.5	
	45	63.2	
	46	94.7	
	47	100	
48	72.2		
Policy and Procedures	49	94.7	94.7
	50	94.4	
	51	100	
	52	94.7	
	53	94.7	
	54	94.7	
	55	100	
	56	94.7	
	57	89.5	
	58	89.4	
Financial and Accounting	59	94.7	91.9
	60	94.7	
	61	94.4	
	62	94.2	
	63	88.9	
	64	94.7	

Overall % accuracy score

91.0

Total sample: n = 29

Asst PAMs & PAMs combined: n = 19

2.3.4d Own score validation analysis: Knowledge average scores
Congo

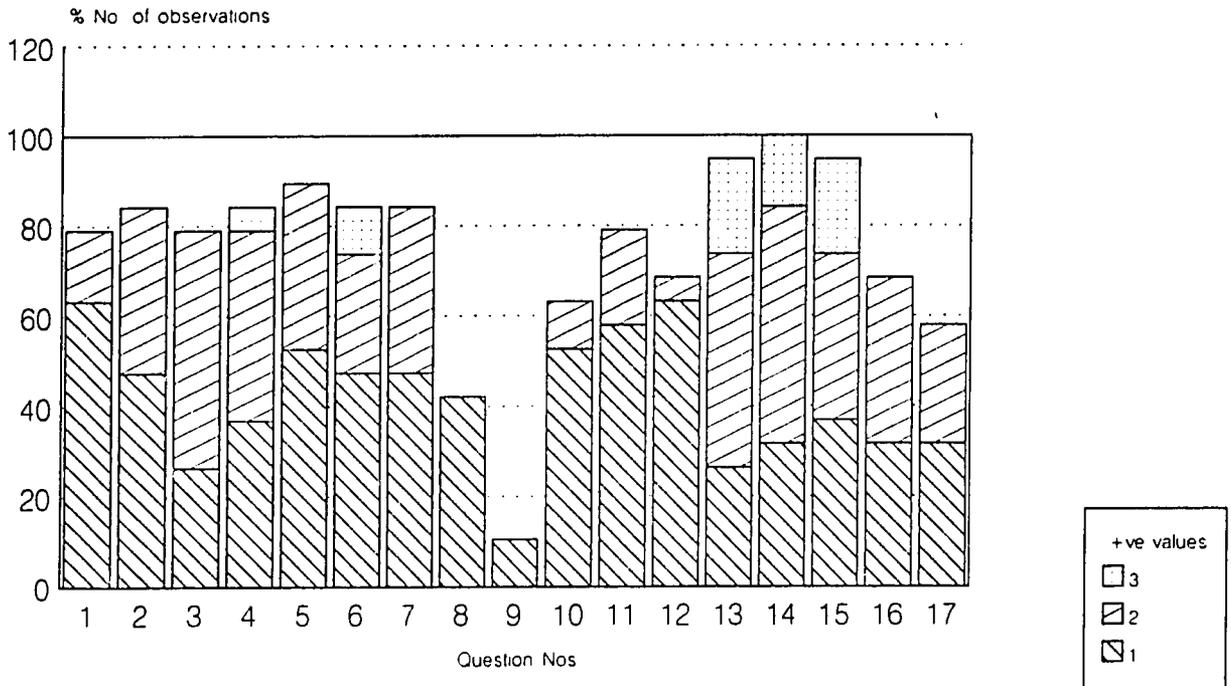
COMPETENCY	Qs No.	Box No.	PARCS Score	Average Country / Org. Score	POSITION								
					1 n=4	2 n=15	3 n=6	4 n=1	5 n=1	6 n=	7 n=1	8 n=1	9 n=
Technical	1	B	3	3.3	3	3.3	3.3	3			3	4	
	2	E	4	3.9	4	3.9	4	4			4	4	
	3	E	4	3.8	3.8	3.8	3.8	4			4	4	
	4	F	4	3.8	4	3.7	3.8	3			4	3	
	5	F	4	3.5	3.8	3.4	3.7				3	3	
	6	F	4	3.8	4	3.7	3.7	4			4	3	
	7	G	4	4	3.8	4	3.8	4			4	4	
	8	H	3	3.4	2.8	3.3	3.2				4	4	
	9	H	2	2.9	3	2.9	3	4			3	4	
	10	I	3	3.3	3.8	3.3	3.5	3			3	4	
	11	I	3	3.5	3.3	3.4	3.7	4			4	4	
	12	J	3	3.4	4	3.4	3	4			4	4	
	13	J	4	3.7	4	3.6	3.8	3			4	4	
	14	K	4	3.7	4	3.7	4	4			4	4	
	15	K	4	3.7	4	3.7	4	3			4	4	
	16	K	3	3.2	3.3	3.2	3.2	3			4	4	
	17	K	3	3.3	3.3	3.3	3.5	3			4	4	
Management	18	A	3	3.3	3.5	3.3	3.2	4			4	4	
	19	A	2	3.1	3.3	3	2.7	3			3	4	
	20	A	3	3.1	3	3.1	2.8	3			3	4	
	21	B	3	3	3	3	3.5	3			4	4	
	22	B	3	3.2	3.5	3.1	3.3	3			4	4	
	23	F	3	3.3	3.5	3.2	3	3			3	3	
	24	F	3	3.3	3.8	3.1	3.5	4			4	4	
	25	H	4	3.6	4	3.5	4	4			4	4	
	26	J	3	3.1	3	3.1	3	4			4	3	
	27	J	2	2.8	2.5	2.9	2.8	3			3	3	
Planning	28	A	3	3.2	3.3	3.1	3	4			3	4	
	29	B	3	3.3	3.5	3.1	3	4			3	4	
	30	B	3	3.2	3.8	3.2	3.2	3			4	4	
	31	C	3	3.3	3.5	3	3.3	4			4	4	
	32	D	4	3.7	3.8	3.2	3.8	4			4	4	
	33	E	4	3.8	4	3.7	3.8	4			4	3	
	34	F	4	3.6	4	3.5	3.3	4			3	3	
	35	G	3	3.4	3.8	3.3	3.7	4			4	4	
	36	H	2	3.4	3.8	3.3	3.5	3			4	3	
	37	I	3	3.4	3.8	3.3	3.7	3			4	4	
	38	K	4	3.6	3.8	3.6	4	4			4	4	
39	K	4	3.6	3.8	3.5	4	4			4	4		
Legal	40	A	2	3.5	3.5	3.5	3	3			3	4	
	41	B	2	3.3	3.5	3.3	3.2	3			3	3	
	42	E	4	3.9	4	3.9	3.8	4			4	4	
	43	F	3	3.3	3.3	3.3	3	3			3	3	
	44	F	4	3.7	3.5	3.8	3.7				4	4	
	45	H	2	3.1	3.3	3.1	3.5	4			4	4	
	46	I	4	3.7	4	3.7	4	4			4	3	
	47	J	4	3.9	4	3.9	4	4			4	4	
	48	J	2	2.9	3	2.9	3	4			3	3	
Policy and Procedures	49	A	4	3.7	4	3.6	4	3			4	3	
	50	B	4	3.6	4	3.4	4	3			4	4	
	51	C	3	3.2	3.3	3.2	3	3			4	4	
	52	C	3	3.6	3.8	3.6	3.5	4			4	4	
	53	D	4	3.7	4	3.7	3.8	3			4	4	
	54	E	4	3.7	3.8	3.7	3.8	3			4	4	
	55	F	4	3.8	4	3.7	3.8	4			4	3	
	56	H	4	3.5	3.8	3.5	4	4			4	4	
	57	I	3	3.4	3.8	3.3	3.8	3			4	3	
	58	J	4	3.6	4	3.5	3.8	3			4	3	
Financial and Accounting	59	C	3	3.3	3.5	3.2	3	3			4	4	
	60	C	3	3	3	3	3	3			4	3	
	61	H	3	3	3.5	2.9	3	3			3	3	
	62	H	4	3.5	4	3.3	3.8	3			4	3	
	63	I	3	3.2	3.5	3.1	3.5	3			4	3	
	64	K	3	3.4	3.8	3.3	3.7	4			4	4	

Total sample: n=29

Asst PAMs & PAMs combined: n=19

2.3.5.a₁ PAMs gap analysis relative to PARCS

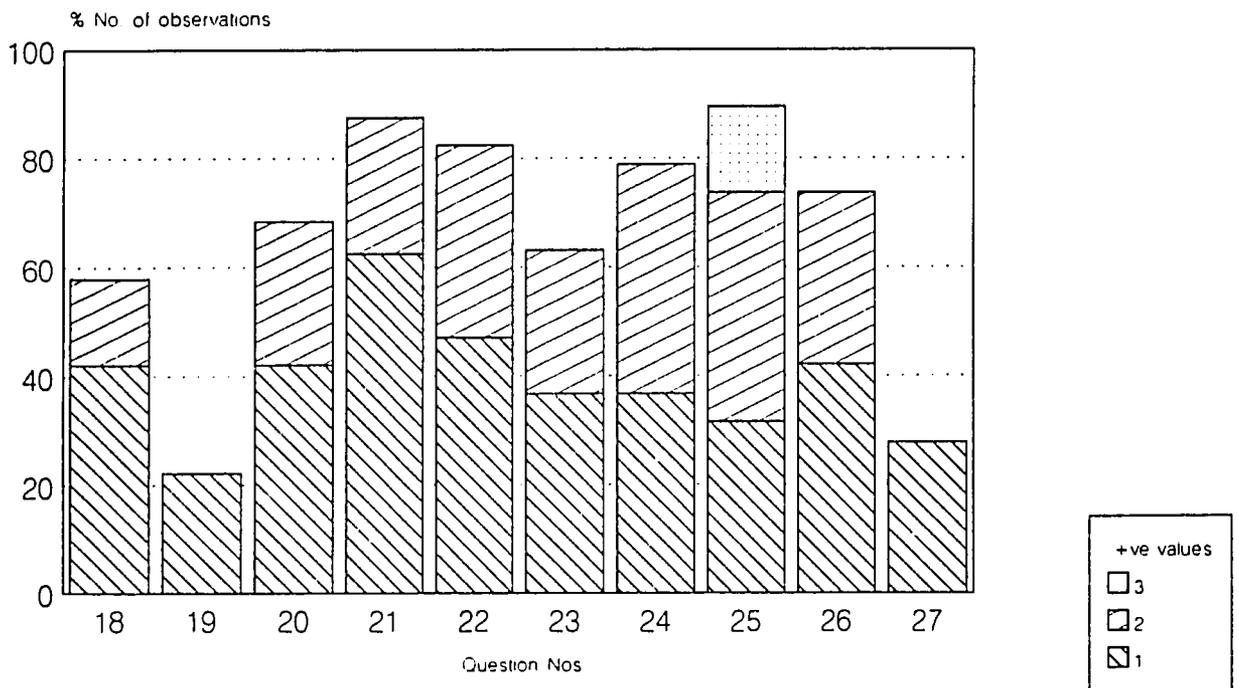
Technical Knowledge: Congo



Sample n=28

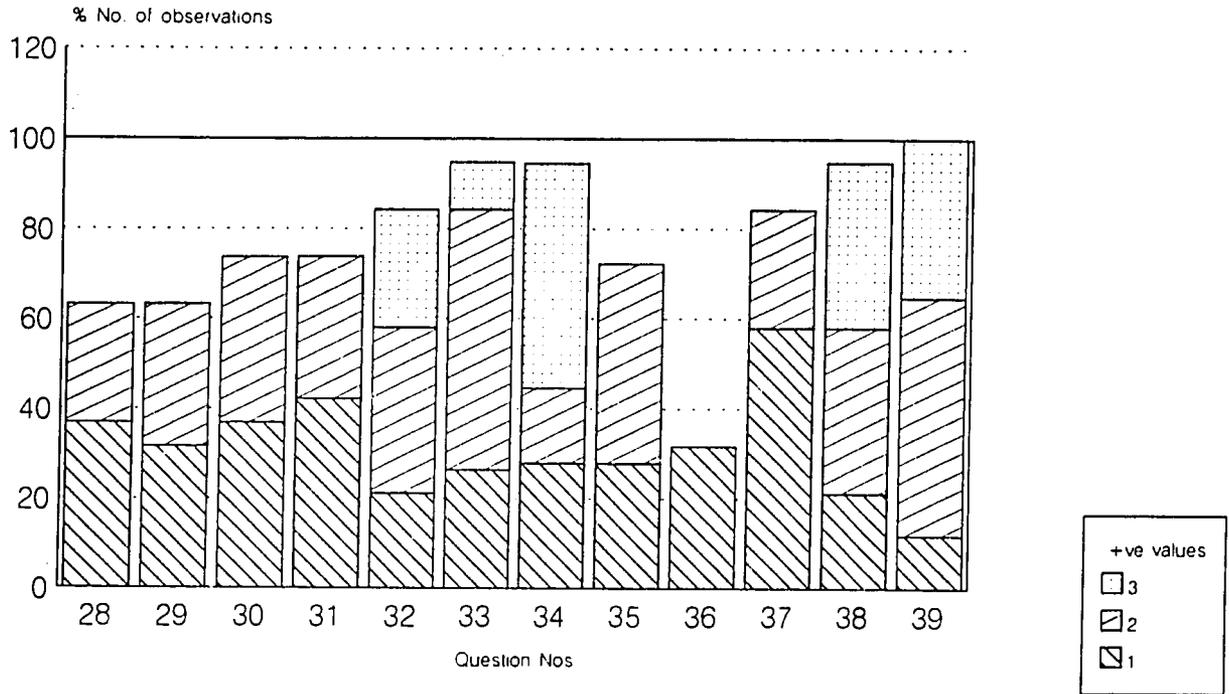
2.3.5.a₂ PAMs gap analysis relative to PARCS.

Management Knowledge: Congo



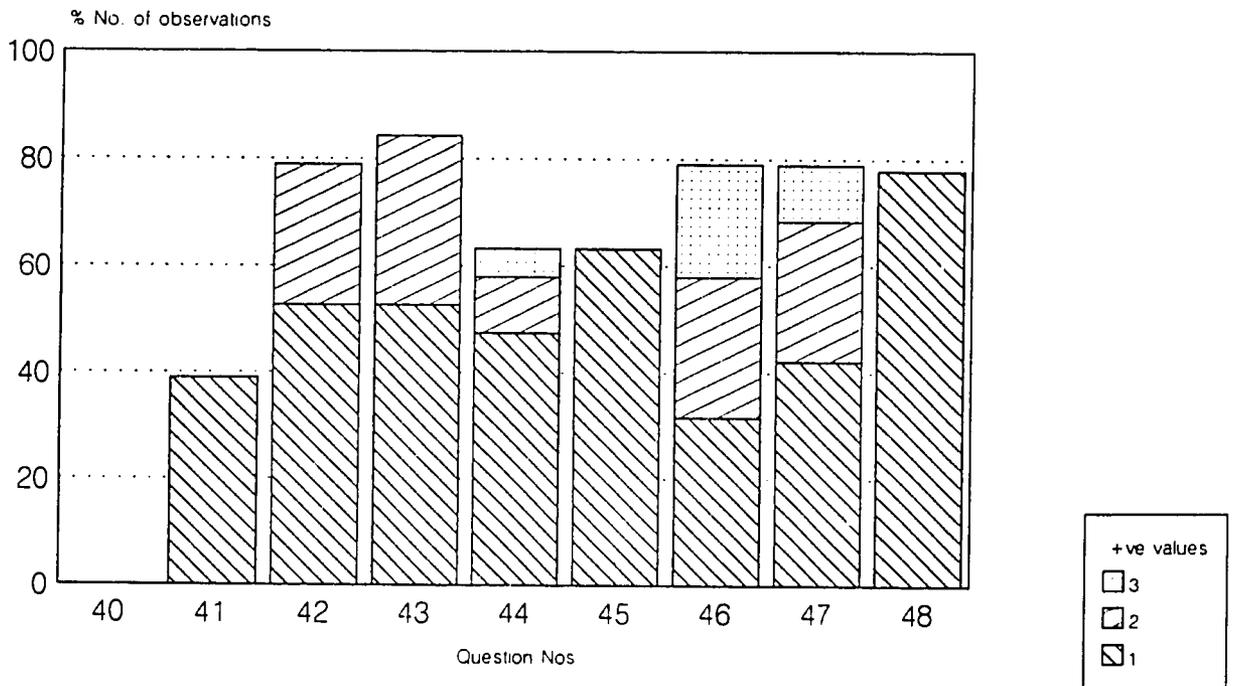
Sample n=28

2.3.5.a₃ PAMs gap analysis relative to PARCS. Planning Knowledge: Congo



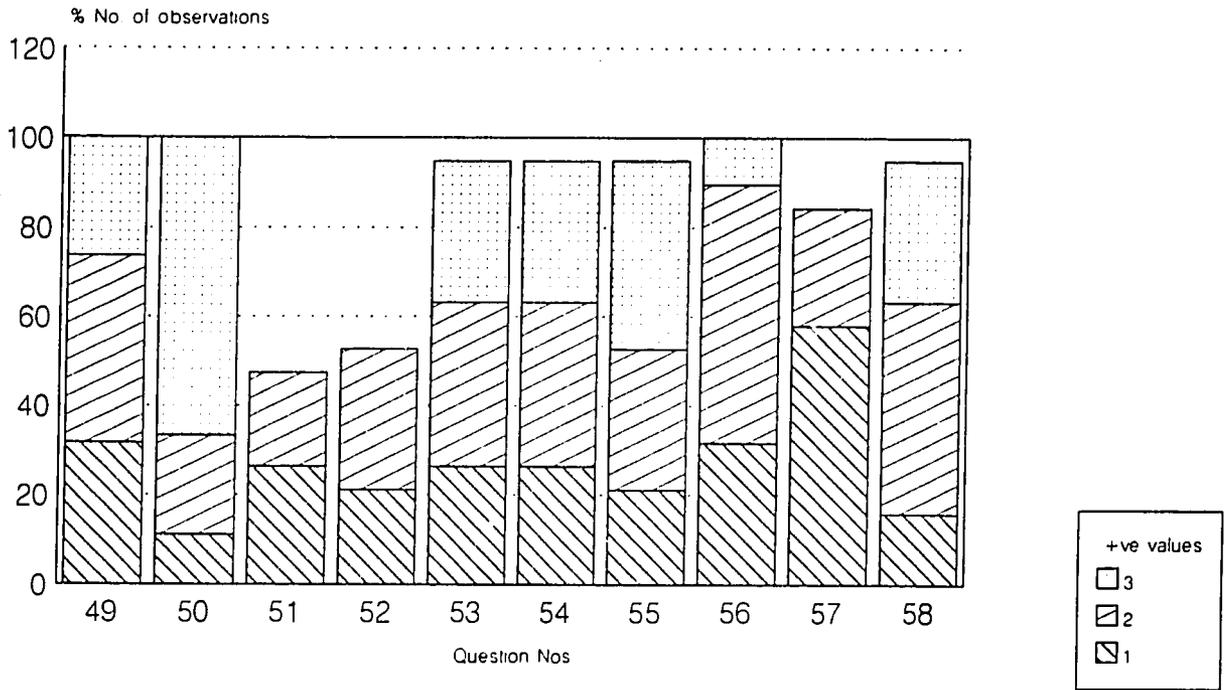
Sample n=28

2.3.5.a₄ PAMs gap analysis relative to PARCS Legal Knowledge: Congo



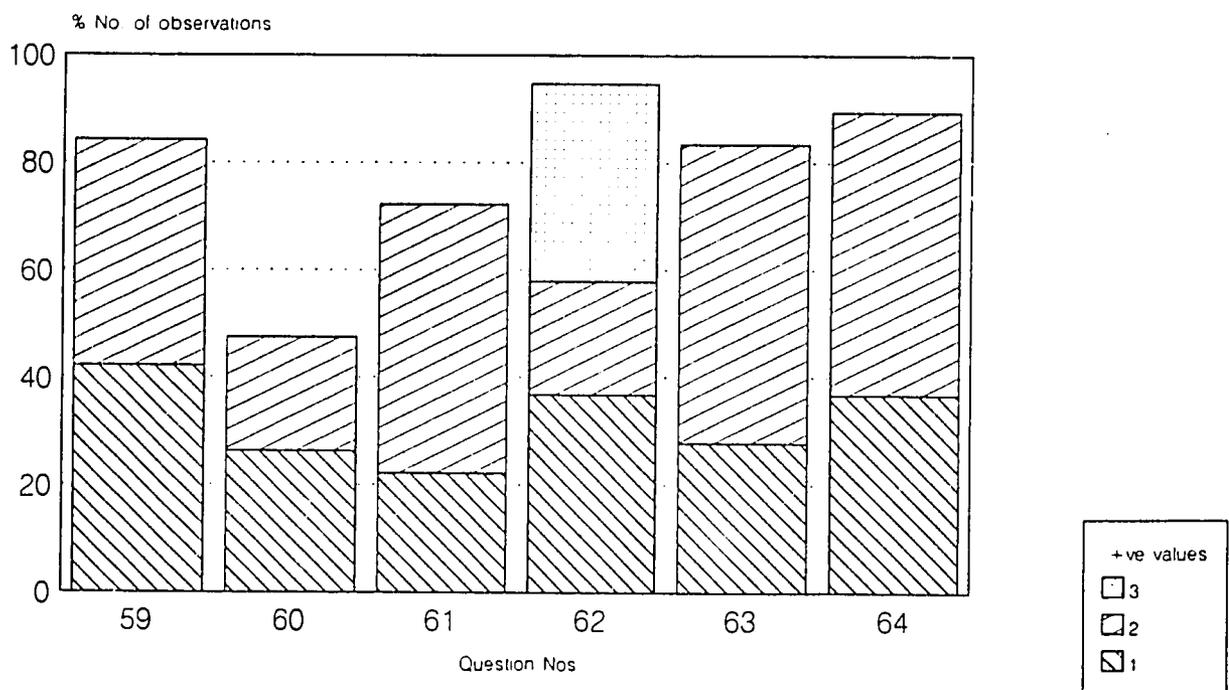
Sample n=28

2.3.5.a₅ PAMs gap analysis relative to PARCS Policies & Procedures Knowledge: Congo



Sample n=28

2.3.5.a₆ PAMs gap analysis relative to PARCS. Financial Knowledge: Congo



Sample n=28

100

2.3.5d PARCS score gap analysis: Knowledge average scores
Congo

COMPETENCY	Qs No.	Box No.	PARCS Score	Average Country / Org. Score	POSITION								
					1 n=4	2 n=15	3 n=6	4 n=1	5 n=1	6 n=	7 n=1	8 n=1	9 n=
Technical	1	B	3	0.95	1.3	0.9	0.2	1			0	1	
	2	E	4	1.21	1.5	1.1	0.8	2			0	1	
	3	E	4	1.32	1.8	1.2	0.7	2			0	2	
	4	F	4	1.37	1.5	1.3	0.5	2			1	3	
	5	F	4	1.26	2	1.1	0.5				1	3	
	6	F	4	1.32	1.5	1.3	0.7	2			1	3	
	7	C	4	1.21	1.5	1.1	0.7	2			1	1	
	8	H	3	0.42	0.5	0.4	0.7				2	1	
	9	H	2	0.11	0	0.1	0.2	1			0	0	
	10	I	3	0.74	1.3	0.6	1	2			0	1	
	11	I	3	1	1	1	1.3	1			0	1	
	12	J	3	0.74	1	0.7	0.3	1			0	1	
	13	J	4	1.84	1.5	1.9	1	1			2	2	
	14	K	4	1.84	2	1.8	1.8	2			1	2	
	15	K	4	1.74	2	1.7	1.3	3			1	2	
	16	K	3	1.05	1.5	0.9	1	2			0	2	
	17	K	3	0.84	1	0.8	0.3	1			0	2	
Management	18	A	3	0.74	1.3	0.6	0.5	1			0	1	
	19	A	2	0.22	0.3	0.2	0.3	0			0	0	
	20	A	3	0.95	1	0.9	0.7	1			0	1	
	21	B	3	1.13	0.8	1.3	0.8	1			0	1	
	22	B	3	1.18	1	1.2	0.8	1			0	2	
	23	F	3	0.89	0.5	1	0.8	1			0	2	
	24	F	3	1.21	1.8	1.1	0.8	1			0	2	
	25	G	4	1.63	1.8	1.6	1.5	2			1	3	
	26	J	3	1.05	1.8	0.9	1	1			1	2	
	27	J	2	0.28	0.3	0.3	0.2	0			0	0	
Planning	28	A	3	0.89	1	0.9	0.3	1			1	1	
	29	B	3	0.95	1	0.9	0.5	1			0	1	
	30	C	3	1.11	1	1.1	1	1			0	2	
	31	D	3	1.05	1	1.1	1	1			1	2	
	32	E	4	1.74	2.3	1.6	1.5	2			1	2	
	33	F	4	1.74	2.3	1.6	1.8	2			1	3	
	34	G	4	2.11	2.5	2	1.5	2			1	2	
	35	H	3	1.17	1.5	1.1	0.8	1			1	2	
	36	I	2	0.32	0.3	0.3	0.3	0			0	1	
	37	K	3	1.11	1	1.1	1	1			1	1	
	38	K	4	2.05	2.5	1.9	1.5	2			2	3	
39	K	4	2.24	2.3	2.2	1.7	2			1	3		
Legal	40	A	2	0	0	0	0.2	0			0	0	
	41	B	2	0.39	1.5	0.4	0.2	0			0	0	
	42	E	4	1.05	1	0.9	0.8	2			1	1	
	43	F	3	1.16	1.3	1.2	0.7	1			1	2	
	44	C	4	0.84	0.8	0.7	1.2			1	2		
	45	H	2	0.63	2.5	0.6	0.2	0			0	0	
	46	I	4	1.47	1.5	1.2	1.7	2			1	3	
	47	J	4	1.26	0.8	1.2	1	2			2	2	
48	J	2	0.78	2	0.8	0.7	0			1	1		
Policy and Procedures	49	A	4	1.95	2	1.9	1.7	2			2	2	
	50	B	4	2.56	2.8	2.5	1.8	2			2	3	
	51	C	3	0.68	1.3	0.5	0.8	1			0	1	
	52	D	3	0.84	1.3	0.7	0.5	1			1	2	
	53	E	4	1.95	2.5	1.8	1.3	2			1	1	
	54	F	4	1.95	2	1.9	1.3	2			2	3	
	55	C	4	2.11	2.3	2.1	1.5	2			2	2	
	56	H	4	1.79	1.8	1.8	1.2	2			2	2	
	57	I	3	1.11	1	1.1	1.2	1			1	1	
	58	J	4	2.05	2.5	1.9	1.8	22			2	3	
Financial and Accounting	59	C	3	1.26	1.3	1.3	1.2	1			0	2	
	60	C	3	0.68	0.8	0.7	0.2	1			1	2	
	61	H	3	1.22	1	1.3	0.8	1			1	2	
	62	I	4	1.89	2.3	1.8	1.4	2			3	3	
	63	I	3	1.39	1	1.5	1.4	1			2	2	
	64	K	3	1.42	1.5	1.4	1.2	1			1	2	

Total sample: n = 29

Asst PAMs & PAMs combined: n = 19

2.3.5.f Frequency of which a Gap of 1,2 or 3 for Technical Knowledge was Identified with respect to Biome

Question #	BIOMES																													
	A			F			M			O			R			D			S			W			X					
	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3			
1													7	2	0							3	0	0	3	1	0			
2													4	4	0							3	1	0	2	3	0			
3													1	7	0							4	0	0	1	3	0			
4													6	2	0							1	3	0	0	4	1			
5													5	5	0							4	0	0	2	2	0			
6													5	3	1							2	1	0	2	1	1			
7													5	3	0							4	0	0	1	4	0			
8													4	0	0							1	0	0	3	0	0			
9																									2	0	0			
10													6	0	0							3	0	0	2	2	0			
11													6	0	0							3	2	0	3	2	0			
12													7	0	0							3	1	0	3	0	0			
13													4	5	0							1	3	1	0	1	4			
14													4	6	0							2	2	1	0	2	3			
15													5	5	0							1	1	2	1	1	3			
16													5	2	0							1	1	0	0	0	5			
17													4	1	0							2	0	0	1	4	0			

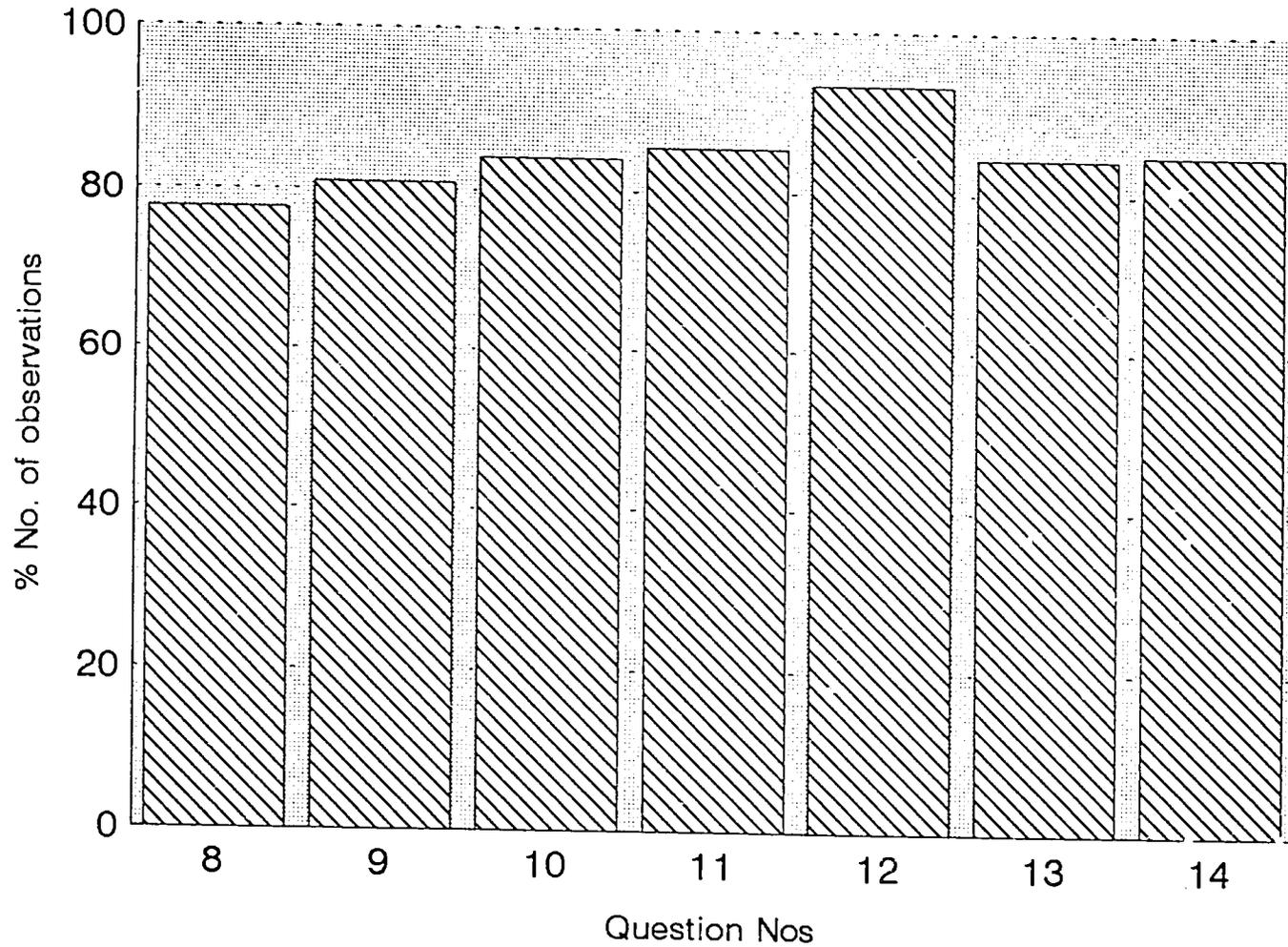
Total sample: n=29 PAMs and Assistant PAMs combined: n=19

A=Aquatic F=Dry Forest M=Montane O=Marine R=Regional/National
W=Moist Forest X=Trainer D=Desert S=Savanna

47

2.3.6a Validation analysis of Mental and Social Skills

PAMs Yes responses: Congo



Overall % accuracy score

84.46

▣ % Score

Total Sample n=29 (Ass PAMs & PAMs combined: n=19)

65

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

MAIN DIVISIONS	COMPETENCY (% of respondents)						
	8	9	10	11	12	13	14
A	10.5	21.1	10.5	5.3		5.3	
B	10.5	5.3	15.8	33.3		15.8	44.4
C	33.3	23.5			10.5		
D	21.1	26.3	11.1		10.5	31.6	15.8
E		5.3	36.8			5.3	47.1
F	26.3	15.8	11.1	27.8		31.6	
G	5.3	15.8		10.5	21.1		
H	15.8	38.9	5.3	16.7			11.1
I	15.8	21.1	31.6	31.6		17.6	15.8
J	15.8	21.1	15.8	5.3	16.5	16.7	10.5
K	21.1	15.8	10.5				5.3

Total sample: n=29

Asst PAMs & PAMs combined: n=19

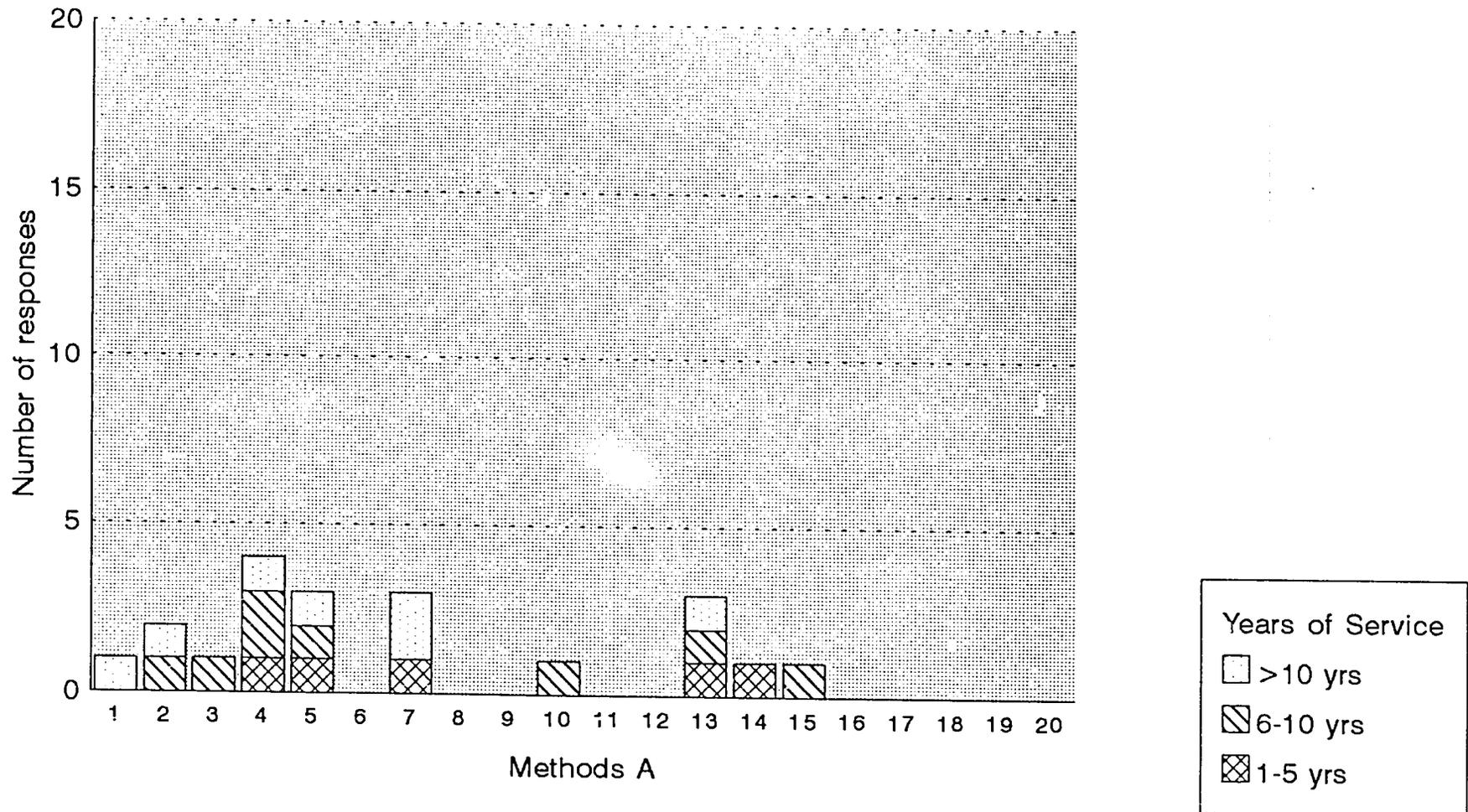
2.3.7a.1 Current Mental and Social Skill Level of Asst PAMs & PAMs: Low Skill Levels Congo

MAIN DIVISIONS	COMPETENCY (cumulative score of all 1&2 responses)							Total
	8	9	10	11	12	13	14	
A	13	10	6	11	6	12	7	65
B	9	7	10	13	6	14	13	72
C	10	13						23
D	14	10	11	10	12	11	11	79
E	1	8	5	8	10	5	12	49
F	9	9	12	11	3	12	11	67
G	7	9	12	14	4	5	5	56
H	8	13	8	8	9		8	54
I	9	11	11	12		8	10	61
J	5	12	12	11	10	8	11	69
K	11	7	12				5	35
Total	96	109	99	98	60	75	93	630

Total sample: n=29

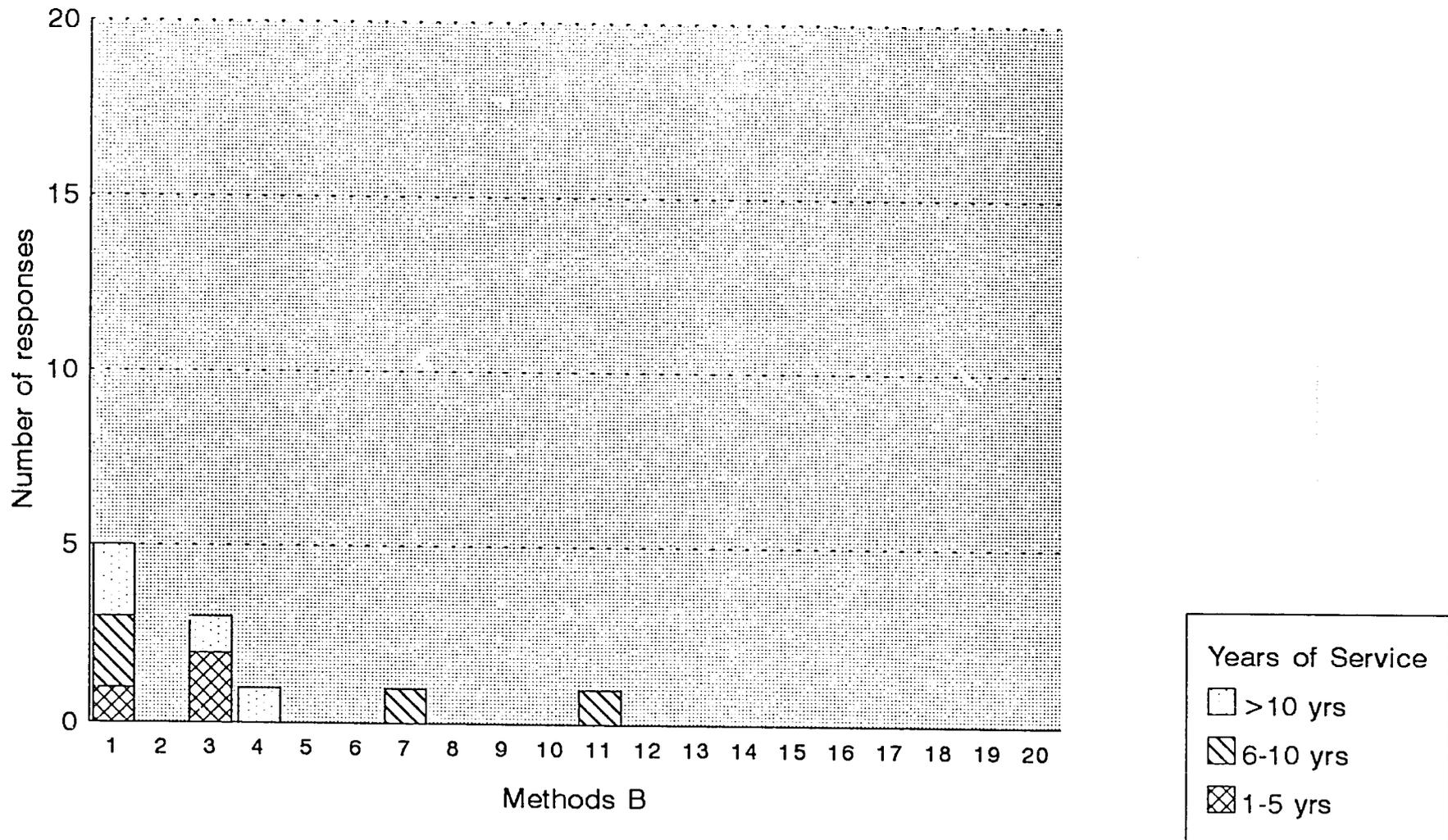
Asst PAMs & PAMs combined: n=19

2.3.8a PAMs Methods To Instill Work Ethics Congo



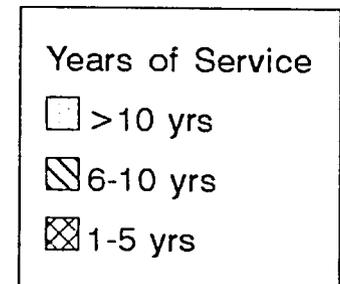
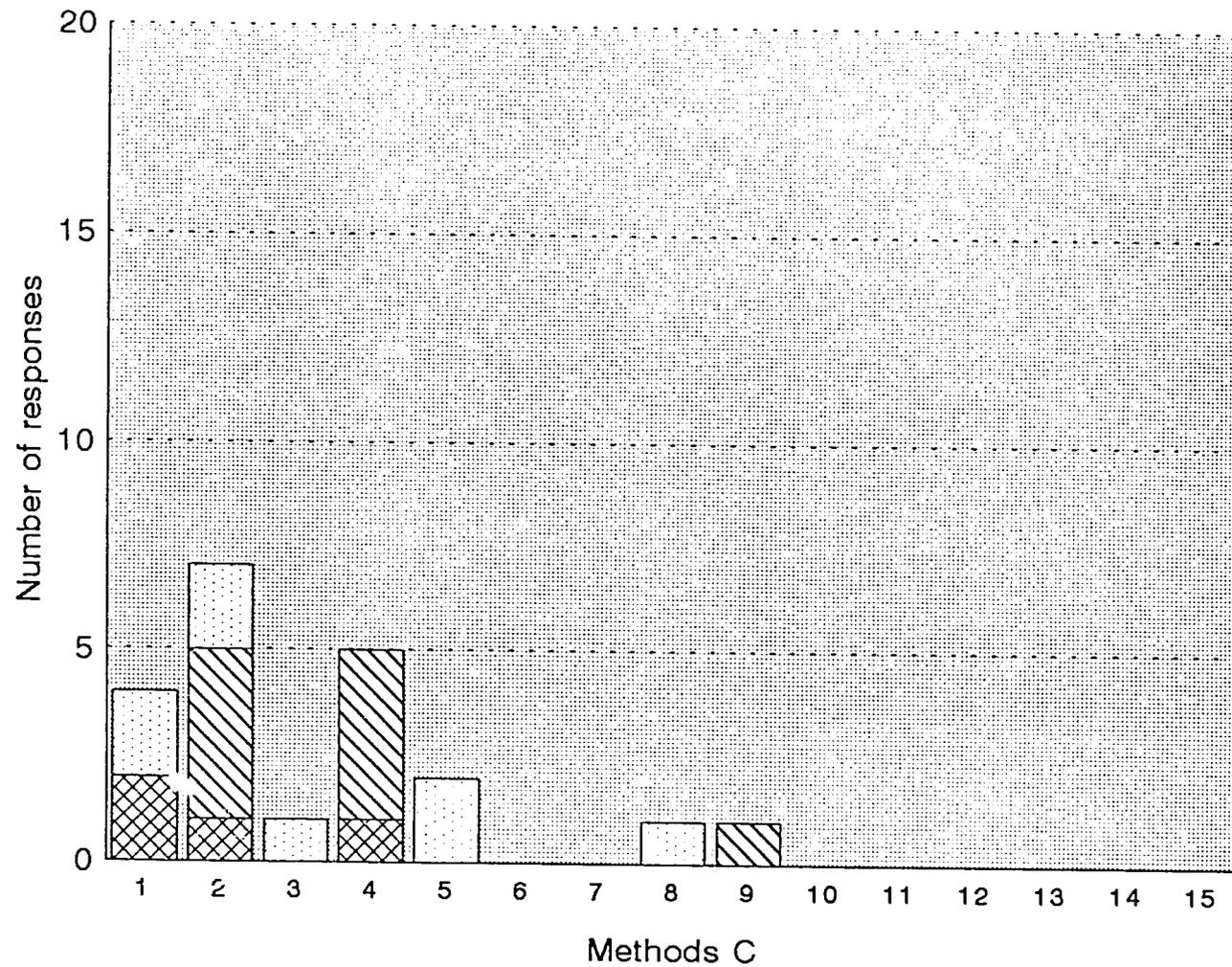
Total Sample:n=29 (Ass PAMs & PAMs:n=19)

2.3.8b PAMs Methods To Instill Commitment to Conservation Congo



Total Sample:n=29 (Ass PAMs & PAMs:n=19)

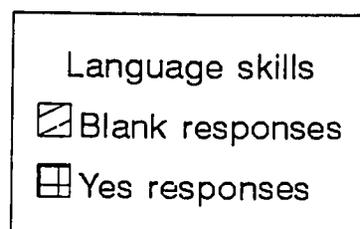
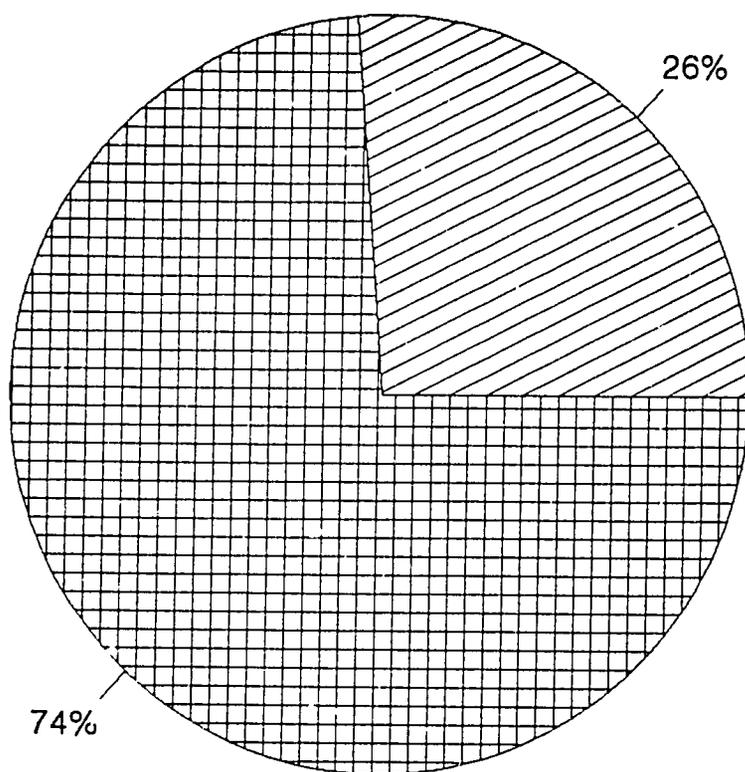
2.3.8c PAMs Methods To Instill Healthy Attitudes to Adjacent Communities Congo



Total Sample: n=29 (Ass PAMs & PAMs: n=19)

20

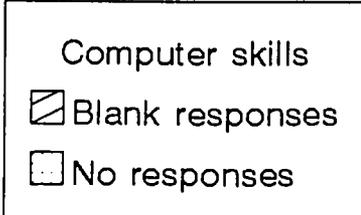
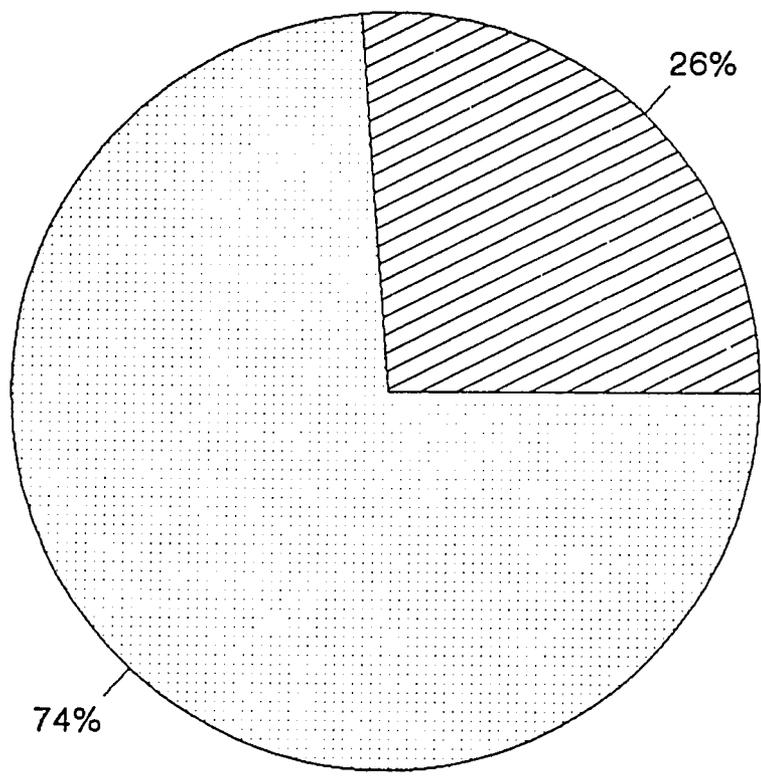
2.3.9. PAMs Language Skills Congo



Total Sample: n = 29 (Ass PAMs & PAMs: n = 19)

2.3.10a PAMs Computer Skills

Congo



Total Sample: n = 29 (Ass PAMs & PAMs: n = 19)

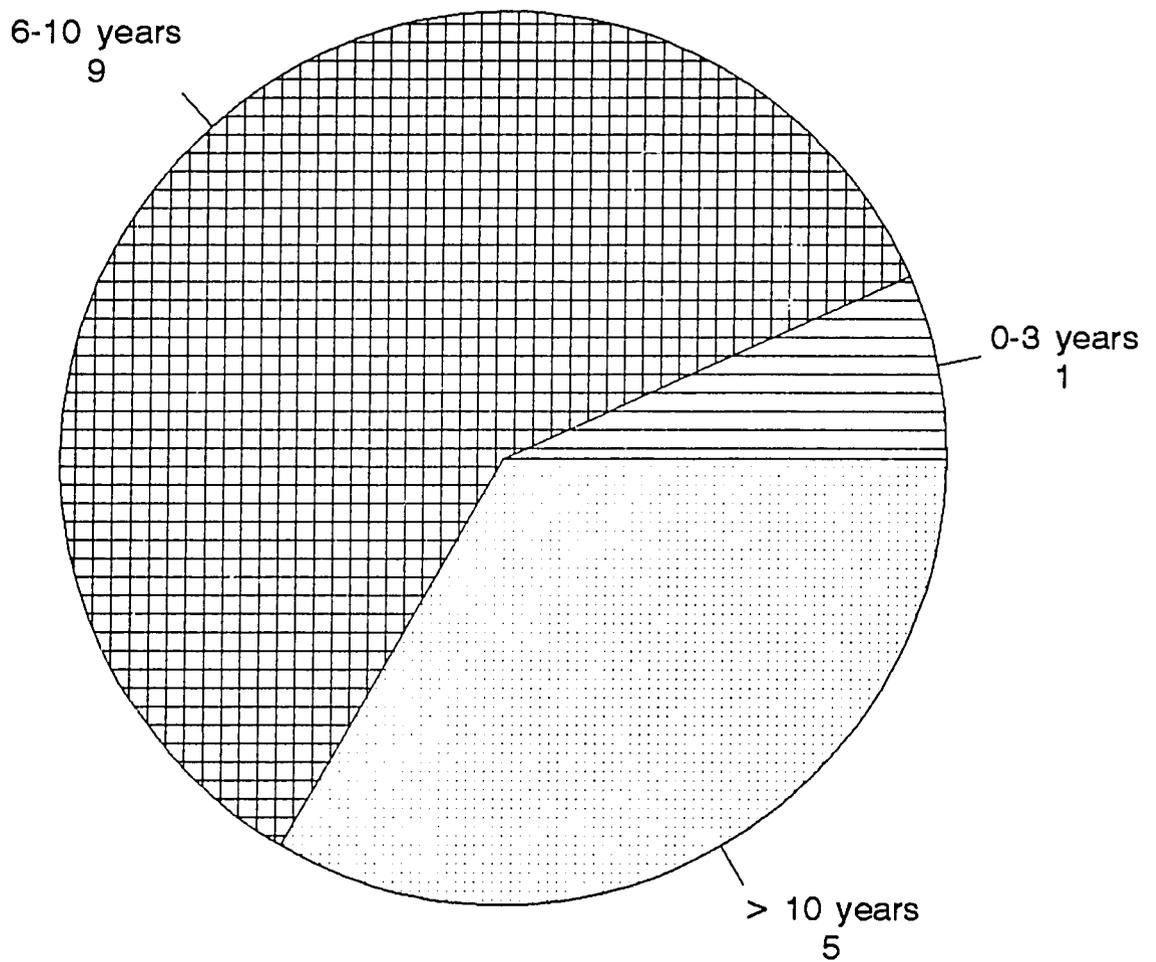
2.3.12 PAMs training received:
Congo

	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=29

Asst PAMs & PAMs combined: n=19

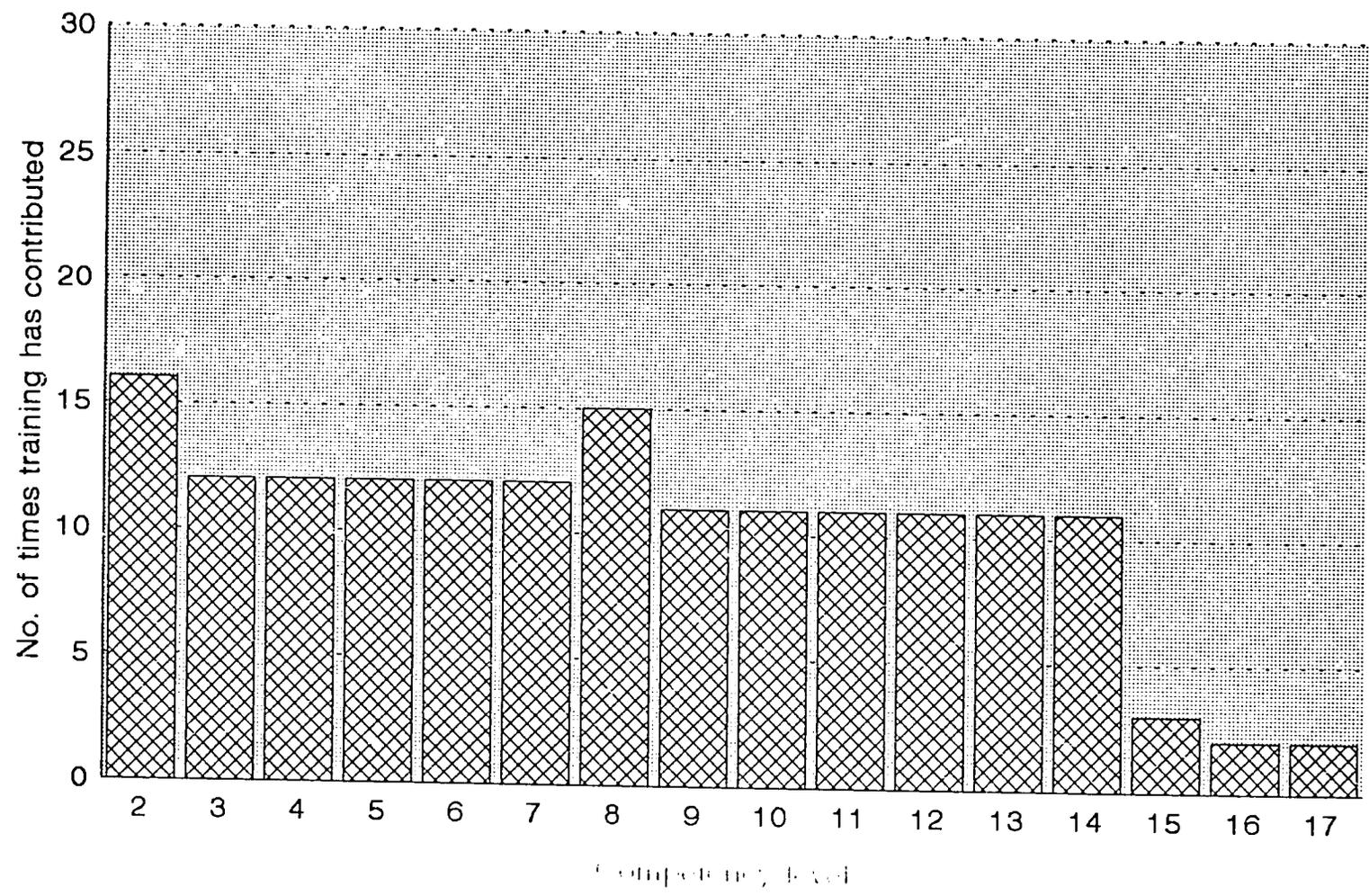
2.3.12d PAMS years since wildlife training received Congo



Total Sample n = 29 (PAMS & Ass. PAMS combined: n=19)

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

Congo

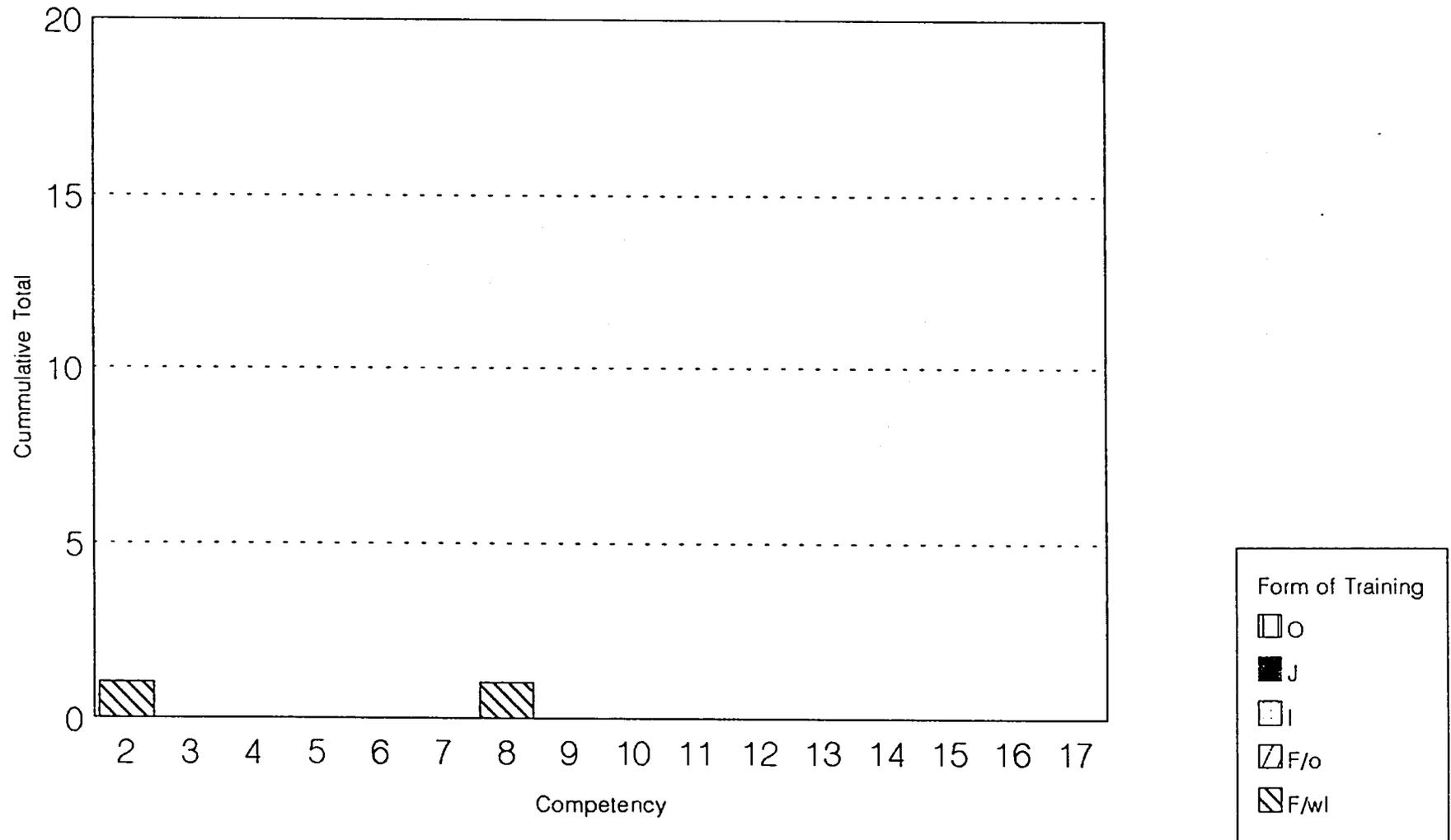


Total Sample: n= 29 (Ass PAMs & PAMs: n=19)

51-

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

Congo

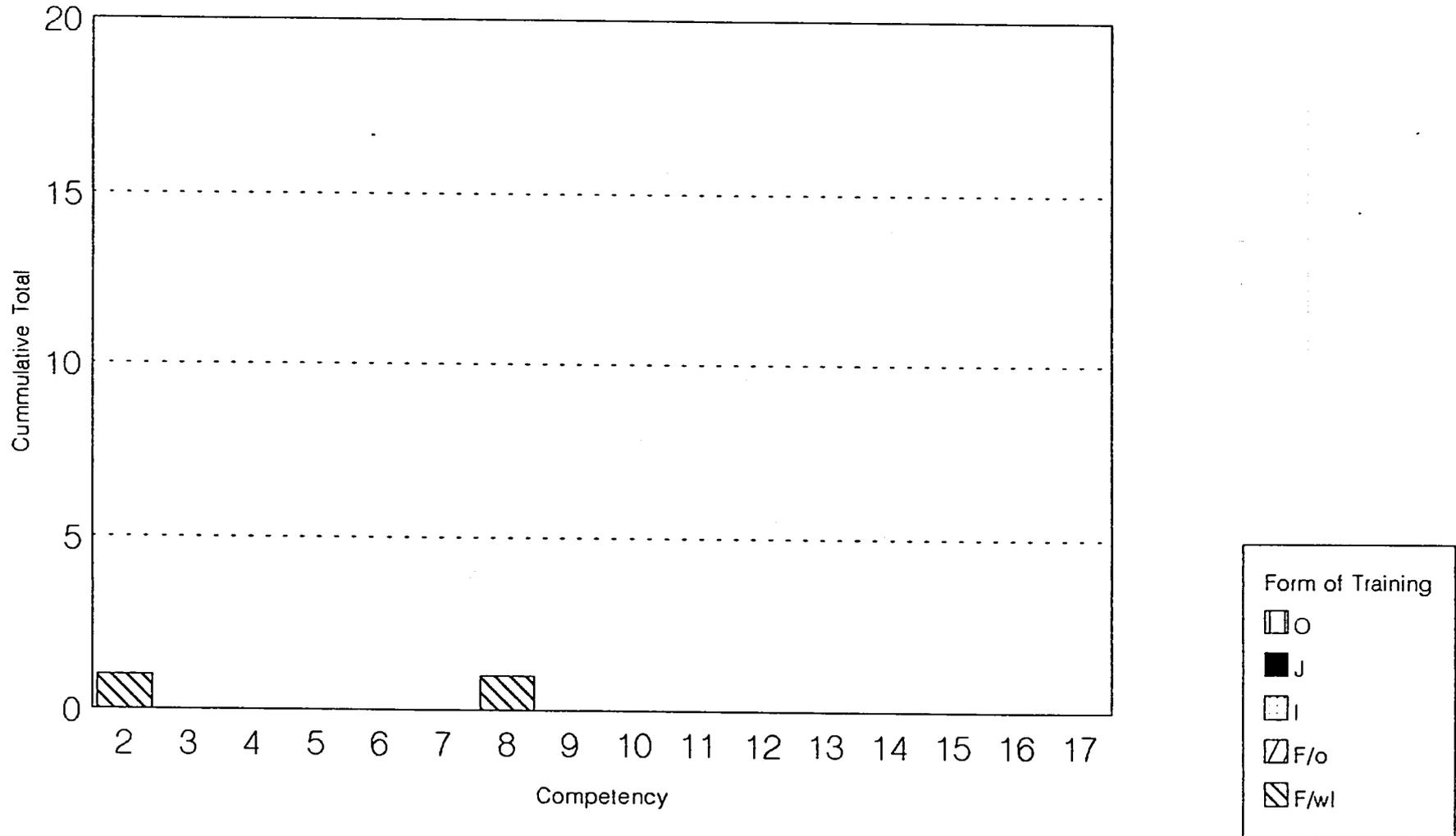


Total Sample n=29 (PAMs & Ass PAMs n=19)

9/10

2.3.12.g.3 PAMs training that has contributed most: n>10

Congo



66 Total Sample n=29 (PAMs & Ass PAMs n=19)

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

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	.	.	o		o		o	o	o	o	o	o	o
B Infrastrucure	.	o	o		o		o	o	o	o	o	o	o
C Accounts			o		.	o	o	o					
D Tactical Plans			o		.		o	o	o	o	o	o	o
E Laws & Regulations	o		o	o	o		.	o	o	o	o	o	o
F Visitors	o	o	o	o	o	.	o	o	o	o	o	o	o
G Interventions	o	o	o	.	o		o	o	o	o	.	o	o
H Comm Conservation		o	o		o	o	o	o	o	o			o
I Research	.			.	o	o	o	o	o	o		o	o
J Public Relations	o	.		.	o		o	o	o	o	o	o	o
K Resource Management	o		o			o	o	o					o

Key:
 . ≤ 4
 o 4-10
 o > 10

Total sample: n=29

Asst PAMs & PAMs combined: n=19

11-

2.3.12i Training priorities for PAMs & Asst PAMs
Congo.

MAIN DIVISIONS	COMPETENCIES													
	Knowledge						Menta. & Social skills							
	2	3	4	5	6	7	8	9	10	11	12	13	14	
A		1/*	1/*											
B														
C														
D			1/*											
E	1/*													
F						1								
G	1													
H	1													
I														
J														
K	6													

Total sample: n=29

Asst PAMs & PAMs combined: n=19

* Indicates areas of overlap with gap analysis

66