



*ASSESSMENT OF CAPACITY DEVELOPMENT NEEDS OF  
PROTECTED AREA STAFF IN EASTERN EUROPE*

# SERBIA

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## ABBREVIATIONS USED IN THE TEXT

BfN	Bundesamt für Naturschutz (German Federal Agency for Nature Conservation).
CBD	Convention on Biological Diversity.
ha	Hectare(s)
GPPAM	Global Partnership for Professionalising Protected Area Management.
IUCN	International Union for the Conservation of Nature and Natural Resources (IUCN).
IUCN Cat I	IUCN Category I Protected Area (Strict Protected Area).
IUCN Cat II	IUCN Category II Protected Area (National Park).
IUCN Cat III	IUCN Category III Protected Area (Natural Monument).

IUCN Cat IV	IUCN Category IV Protected Area (Nature Reserve).
IUCN Cat V	IUCN Category V Protected Area (Protected Landscape).
IUCN Cat VI	IUCN Category VI Protected Area (Managed resource use area).
mgmt	Management.
PA	Protected Area.
Person/training day	The equivalent of one individual attending a training course for one day.
PMT	Project management team.
PoWPA	Programme of Work on Protected Areas.
SRB	Serbia
TNA	Training needs assessment.
WCPA	World Commission on Protected Areas

## 1 SUMMARY

This report is one of the outputs from surveys of capacity development needs in 23 countries in Eastern Europe.<sup>1</sup>, probably the most comprehensive assessment of competence and capacity development needs for protected areas conducted in the region. A separate General Report describes the entire regional methodology and process, and should be consulted alongside this report.

The component for Serbia included the following elements.

A **General Questionnaire** (Annex 1) was completed by 10 respondents, representing 13 protected areas and managing agencies covering over 300,000 ha, and with 455 staff. A detailed **Self-Assessment Questionnaire** (Annexes 2 and 3) was completed by 97 individuals from seven protected area managing entities. The use of three different ways of assessing capacity needs (assessment by managers, self-assessment by individuals and identification by individuals of personal preferences) offers quite different perspectives on needs and priorities. Results presented in this report have been aggregated across the whole region; results for the individual participating countries are published in supplementary reports.

The results of the surveys provide information on staffing profiles (numbers, job levels, gender, age, education and experience), training provided in the past three years and structured assessments of competence in 125 specific protected area skills across 10 categories of protected area work.

### 1.1 MAIN CONCLUSIONS

#### OVERALL

There is an overall need for improved capacity among protected area staff at all levels in Serbia. Current training provision is minimal, and although some programmes of training have taken place on a range of topics, these have been limited, have benefited relatively few staff and are mainly dependent on international support. Staff development in Serbia does not appear to be fully institutionalised and training programmes are largely dependent on external funding.

#### STAFFING

- Around 40% of personnel in PAs in Serbia are field staff (rangers), with a further 38% administrative and support staff. Serbia (78% male/22% female) has a highly unbalanced gender balance among PA staff, compared to the rest of the region (average: 66% male/34% female). This balance is affected by the large number of rangers in the system, almost all of whom are male.
- The personnel surveyed are fairly well educated, 48 % have a university education, while the majority of the rest (mainly rangers) are high school graduates.
- The age distribution of staff is skewed; only 8% are under 30 years old, indicating a lack of recent recruitment. While not an apparent problem in the short term, in the longer term this can cause a capacity problem as fewer experienced staff will be available to take over from older staff as they retire or leave.

#### TRAINING

- The overall current average of training delivered of around 0.5 training days per person per year is among the lowest in the region and completely inadequate, falling far short of the ideal amounts of annual training identified by managers in the General Questionnaire, which were in the region of five to ten days.
- Recent training topics in Serbia have covered a broad range of topics, but community work and awareness have been neglected among the technical topics.
- No systematic training programme is in place; provision has been highly dependent on project funding and international support.
- Managers preferred learning methods are study visits and short courses.

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<sup>1</sup>Albania, Armenia, Azerbaijan, Bosnia and Herzegovina, Bulgaria, Croatia, Czech Republic, Estonia, Georgia, Hungary, Kosovo, Latvia, Lithuania, Macedonia, Moldova, Montenegro, Poland, Romania, Serbia, Slovakia, Slovenia, Turkey and Ukraine.

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## SPECIFIC SKILLS CATEGORIES

### MANAGEMENT OF FINANCE AND PHYSICAL RESOURCES (FRM)

This topic appears to be a low priority, except at Level 2, where there may be a need for basic training in record keeping.

### MANAGEMENT OF HUMAN RESOURCES (HUM)

At Level 4/5 there is a need for training in general human resource management procedures, including staff capacity development. For Level 2 staff, basic supervisory skills are the second biggest need among all competences.

### COMMUNICATION, TECHNOLOGY AND INFORMATION (CTI)

Results from this category require careful scrutiny, because the skills within it mix personal communication skills with skills associated with using information technology.

With respect to IT skills needs, these rate very highly at Level 3 (advanced computing and GIS) and at Level 2 (basic computer use). With respect to the communication skills, at Level 2 communicating in other languages rated highly as a need in the self-assessments and in the personal preferences.

### FIELD CRAFT (FCR)

These are quite traditional protected area skills in which competence often rates quite highly. However, in Serbia this category is surprisingly a significant weakness at Level 3 and Level 4, suggesting that management staff are not acquiring many of the basic skills required for planning and supervision of safe and effective field work.

### CONSERVATION PLANNING, ASSESSMENT AND MANAGEMENT (CMP)

Although conservation is the main foundation of protected area management, this category is the greatest weakness at Level 4/5, and a moderate weakness at the other levels. This is quite a common finding across the region. The lead author has found a similar lack of capacity in this category in most other surveys of this type, suggesting that among all the other demands on protected area managers and staff, the primary skills connected with conserving and managing diversity are being neglected or taken for granted.

### SUSTAINABLE DEVELOPMENT & COMMUNITIES (SDC)

This category is a major weakness at Level 3 and a moderate weakness at other levels. Middle management and technical staff evidently recognise the need to build their skills in working with local stakeholders, managing resource use and resolving conflicts. These results for Serbia are very similar to those for most other countries in the region.

### PROTECTED AREA POLICY, PLANNING AND PROJECTS (PAM)

This category is assessed at Level 4/5 only and appears to be a moderate need overall. However, some specific skills rated as quite high needs, including management effectiveness monitoring and project planning and implementation.

### LAW ENFORCEMENT (LAW)

This is a traditional aspect of protected area management, and capacity in Serbia appears to be quite good at Levels 2 and 3. The main need is at Level 4/5 and relates to planning and national coordination of law enforcement efforts.

#### 1.1.9 RECREATION AND TOURISM (RTO)

This category does not appear to be major priority for capacity development in Serbia at any of the levels. The main needs relate to visitor safety and the impact of visitation, rather than planning and provision of tourism opportunities.

#### 1.1.10 AWARENESS, EDUCATION AND PUBLIC RELATIONS (AWA)

The greatest need is at Level 3, where planning and delivery of awareness for schools and visitors rate quite highly.

## 1.2 RECOMMENDATIONS

Based on these conclusions, the following main recommendations are made. Each recommendation is accompanied by a set of specific recommended measures.

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### OVERALL RECOMMENDATIONS

1. Establish a basic formal staff development policy and programme for protected area staff in Serbia
  - 1.1 Protected area agencies in Serbia should develop a general overall policy, strategy and plan for capacity developments of their personnel.
  - 1.2 Protected area agencies in Serbia should establish basic norms for how much capacity development should be made available to staff.
  - 1.3 Protected area agencies in Serbia and its offices should allocate budgets for capacity development to provide the required amount of training.
  - 1.4 Records should be kept of all capacity development events, of training attended by all personnel and of the quality and impact of the training.
2. Build internal capacity for capacity development
  - 2.1 Appoint a capacity development/training officer (or small team) in protected area agencies.
  - 2.2 Establish and train a national capacity development team comprising relevant expert practitioners from within protected area institutions.
  - 2.3 Provide supervisors in protected areas with training in basic instructional techniques for working with teams and workgroups.
3. Engage with regional initiatives to improve the professionalization and profile of PA management.

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### SPECIFIC CAPACITY DEVELOPMENT RECOMMENDATIONS

4. Develop a common foundation programme for all protected areas staff
  - 4.1 All new or recently appointed protected area staff should complete a two-day induction course
  - 4.2 National curricula and programmes for the course should be developed, and a set of training materials provided.
  - 4.3 The course should be delivered by a national internal training team
  - 4.4 Completion of the course should ideally be certificated and documented in the personnel records of staff.
5. Develop and provide training for implementation of a common system for protected area planning, monitoring and reporting
  - 5.1 Protected area agencies in Serbia should prioritise development of clear frameworks and system for modern PA management planning, monitoring, reporting and adaptive management.
  - 5.2 Training and guidance should be provided for all PA administrations for the use and implementation for framework and system
  - 5.3 All donor assisted and project related capacity development programmes should be required to be integrated with, and support the national system.
6. Build capacity for working with communities
  - 6.1 Develop and a training programme for staff working in protected areas where collaborative management is an important component.
7. Build capacity for applied conservation biology and conservation management
  - 7.1 Design and deliver an updated course on applied, management-oriented conservation management
  - 7.2 Encourage universities to develop and deliver programmes in applied conservation biology and management.
8. Organise a series of facilitated seminars/learning events for senior staff OF PA agencies and administrations



- 8.1 Hold a seminar/learning event for senior staff on law enforcement and prevention of environmental crime.
- 8.2 Hold seminars/learning events for senior staff on human resource management and staff development.
- 8.3 Hold seminars/learning events for senior staff on planning, establishment and impact mitigation of infrastructure development in protected areas.
- 8.4 Hold seminars/learning events for senior staff on sustainable financing for protected areas.

## 2 BACKGROUND AND PURPOSE OF THE SURVEY

This report is a component of the project '*Capacity Building Plans for Efficient Protected Area Management in Eastern Europe*', implemented by the ProPark Foundation<sup>2</sup>, based in Braşov (Romania) and funded by the German Federal Agency for Nature Protection, the Bundesamt für Naturschutz (BfN). The project's overall objective is to support and coordinate the development of national and regional plans for capacity building for implementation of the Convention on Biological Diversity (CBD) Programme of Work on Protected Areas (PoWPA) in Eastern Europe. The expected project outputs are:

1. Two or three national and one subregional capacity building plans, accepted by the relevant national institutions, committed to take the lead in implementing and further developing them.
2. Protected area capacity development curricula proposal developed, and discussions initiated with countries on possibilities to have it standardized across the region.
3. Steps and resources identified for certification of the protected area training/capacity development programmes initiated through the project.
4. At least two training of trainers workshops (with a focus on didactic skills, resources available and objectives of the entire programme).
5. Active network of protected area specialists involved in the capacity development programmes as trainers/mentors.
6. Centres of good practice for protected area capacity development identified and promoted (if existing).
7. Funding possibilities identified in the region and recommendations developed for national authorities on possibilities to develop sustainable financing for the capacity development programmes.

As a foundation for these outputs, a detailed analysis of capacity development needs was required from all participating countries. A general report has been prepared with information gathered from surveys conducted in 23 countries in Eastern Europe by local consultants employed by the project. This report focuses in detail on the results from Serbia.

## 3 METHOD

### 3.1 SELECTION OF PARTICIPATING COUNTRIES

Of the 23 participating countries<sup>3</sup>, Serbia was selected as one of nine 'first level countries' where two questionnaires would be used

- i. A General Questionnaire to be completed by senior staff members representing protected areas and managing agencies across the country.
- ii. A detailed Self-Assessment Questionnaire to be completed by individuals within a selected sample of protected areas.

The other countries in this 'first level' group were Croatia, Estonia, Georgia, Latvia, Romania, Slovakia, Slovenia and Ukraine. See General Report for details.

### 3.2 DESIGN OF THE QUESTIONNAIRES

Two questionnaires were used in Serbia.

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<sup>2</sup> ProPark Foundation for Protected Areas is designed as a social business. Its commercial arm is established with the purpose to generate money to support capacity building programmes and protected area management activities.

<sup>3</sup> Albania, Armenia, Azerbaijan, Bosnia and Herzegovina, Bulgaria, Croatia, Czech Republic, Estonia, Georgia, Hungary, Kosovo, Latvia, Lithuania, Macedonia, Moldova, Montenegro, Poland, Romania, Serbia, Slovakia, Slovenia, Turkey and Ukraine.

### 3.2.1 GENERAL QUESTIONNAIRE

The General Questionnaire was designed to be completed by senior staff members representing protected areas or managing agencies and to provide a national overview of protected areas and capacity development. The questionnaire has three main sections, as shown in Table 1. See Annexe 1 for the full questionnaire.

Table 1 Sections of the General Questionnaire

Main Section	Subsection
A. General information	A1. Country. A2. Full name of protected area or institution. A3. IUCN category of the protected area (if known). A4. Area of the protected area (hectares). A5. Name and position of person completing the questionnaire. A6. Date of completion of questionnaire. A7. Staff numbers.
B. Current situation for training and capacity development	B1. Previous training. Time and resources allocated to formal training and capacity development for staff or local stakeholders in the past 3 years. B2. Resources and budget for training. If the institution has its own special budget for training, total allocations for the past 3 years are indicated. B3. Skills and experience. Competence assessments for each level of staff. B4. Future needs and priorities. Three most important capacity development need(s) of each category of staff (personal preferences).
C. Modes of training and learning	C1. Modes of learning. C2. Allocation of time for training and development.

In the questionnaire, respondents were asked to distinguish between five levels of personnel in their organisations.

- Directors/Deputy Directors/Senior Managers.
- Mid-level Managers/Professional Technical Staff.
- Field Staff/Rangers.
- Support staff (labourers, cleaners, drivers etc.).
- Administrative Staff.

In Section B3 of the questionnaire, respondents were asked to assess the competence of five levels of staff in the protected area(s) he/she represented against each of 11 skills categories shown in Table 2.

Table 2 Skills categories used in the questionnaire

Code	Category	Description
<b>GEN</b>	<b>GENERAL SKILLS</b>	General skills require for any job in a protected area. Commitment, motivation, positive attitude, honesty, teamwork etc.
<b>FRM</b>	<b>FINANCIAL &amp; RESOURCES MANAGEMENT</b>	Management and organisation of finances, assets and equipment for the protected area.
<b>HUM</b>	<b>HUMAN RESOURCES MANAGEMENT &amp; DEVELOPMENT</b>	Directing, managing, organising and capacity building for staff and others working in the PA.
<b>CTI</b>	<b>COMMUNICATION TECHNOLOGY AND INFORMATION</b>	Communication skills. Presentations, reports, negotiations, conflict resolutions. Use of computers and technology.
<b>FCR</b>	<b>FIELD CRAFT AND PRACTICAL SKILLS</b>	Skills for field work: navigation, health and safety, basic construction and maintenance and good environmental practice in the field.
<b>CMP</b>	<b>CONSERVATION ASSESSMENT PLANNING &amp; MANAGEMENT</b>	Identifying, surveying and monitoring species and ecosystems. Identifying the need for and carrying out specific actions for the protection and conservation of species, habitats and ecosystems.
<b>SDC</b>	<b>SUSTAINABLE DEVELOPMENT &amp; COMMUNITIES</b>	Conducting social and economic assessments in local communities. Working with communities in the Protected Area and Buffer Zone to

<b>PAM</b>	<b>PROTECTED AREA POLICY, PLANNING AND PROJECTS</b>	promote sustainable resource use and development. Preparing strategies, master plans and management plans for managing protected areas. Designing and applying for special projects to support the work of Protected Areas.
<b>LAW</b>	<b>LAW ENFORCEMENT</b>	Law enforcement: understanding the law and conducting activities to enforce the law in protected areas.
<b>RTO</b>	<b>RECREATION AND TOURISM</b>	Planning and managing environmentally sensitive recreation and tourism for visitors to protected areas.
<b>AWA</b>	<b>AWARENESS, EDUCATION AND PUBLIC RELATIONS</b>	Planning, designing and carrying out awareness, education and public relations work with visitors and local people. Promoting and publicising the Protected Area through the media.

Competence assessments were carried out using a standard numerical scale, as shown in Table 3.

Table 3 Assessment scale for competence

Scale	Definition
<b>0</b>	Staff at this level do not need these skills
<b>1</b>	Staff at this level need these skills, but have little or no competence in them: extensive training and development are needed.
<b>2</b>	Staff at this level need these skills and have some competence in them: Further training and development are needed.
<b>3</b>	Staff at this level need these skills and have good competence in them: Periodic updating only is needed.
<b>4</b>	Staff at this level need these skills and are highly competent in them. They could train and instruct others in these skills.

The uses, advantages and limitations of this type of questionnaire are discussed in the General Report.

### 3.2.2 DETAILED SELF-ASSESSMENT QUESTIONNAIRE

This questionnaire was designed to be completed by individuals working for a selected sample of protected areas. This assessment involved the use of 125 standard skills in 10 categories (the same categories as those used for the General Questionnaire except that the Category 'General Skills' was not included; see Table 2). These skills are derived from a set of widely used competence standards developed by the author originally for protected areas in Southeast Asia<sup>4</sup>. A full list of the skills is included in Annexe 2. This assessment distinguished four staff levels as shown in Table 4, although for analysis, Levels 4 and 5 were combined because: a) It was very difficult for respondents to distinguish between Levels 4 and 5; and b) Combining the two levels made the personnel categories analogous to those used in the General Questionnaire.

Table 4 Occupational levels for protected areas staff

Level	General responsibilities	Typical Protected Area Job at this Level
<b>5</b>	<b>Directorial.</b> Strategic and programmatic responsibilities	Head of a complex/high profile park, park complex or national/provincial protected areas agency.
<b>4</b>	<b>Senior Management, Higher Technician.</b> Project, departmental management and/or high level technical responsibilities	Head of a protected area. Deputy head or section head of a large, complex and/or high profile protected area. Leader of technical section.
<b>3</b>	<b>Middle Management Supervisor/Technician.</b> Supervisory/mid-level technical responsibilities	Head of a protected area subunit or section. Head of nature reserve/sanctuary. Senior/supervising member of sections or work teams.
<b>2</b>	<b>Skilled worker.</b> Technical practical responsibilities with some team leadership	Ranger. Established and experienced worker/team leader. Experienced local community member.

Each questionnaire included the following.

<sup>4</sup>Appleton, M.R., Texon, G.I. and Uriarte, M. (2003) *Competence standards for protected area jobs in SE Asia*. ARCBC, Los Banos, Philippines.

- 1 A cover page, requesting general details about the respondent and including information about the time and location of the assessments (See Annexe 2).
- 2 A list of competences identified as being relevant to the work of the respondent group (see Annexe 3).

Respondents were asked to complete the relevant information on the cover sheet and then to provide a numerical self-assessment for each skill listed as follows:

- 0 I do not need this skill in my work
- 1 I need this skill in my work, but I have little or no competence in it. I require extensive training and development.
- 2 I need this skill in my work, and I have some competence in it. I require advanced training and development.
- 3 I need this skill in my work, and I have good competence in it. I only require periodic updating.
- 4 I have high competence in this skill and could train others to do it.

Respondents were then asked to select up to 5 of the competences in which they, as individuals, would particularly like to improve their skills.

The uses, advantages and limitations of this type of questionnaire are discussed in the General Report.

### 3.3 CONDUCT OF THE SURVEYS IN SERBIA

The surveys were supervised and facilitated by a national consultant engaged by the project management team. The main tasks of the consultant were:

- To prepare background information and a plan for the implementation of the task in their countries (including a list of protected area by types, a list of their administrations and administrators/custodians, the number of staff and their contact details, the management system, etc.). Based on this a sample of PAs would be identified (where it was not possible or practical to approach all PAs) for completion of the questionnaires.
- To participate in a brief online training session concerning the questionnaires and how they should be applied.
- To translate the questionnaires and the project description in the national language.
- To conduct field visits and/or phone interviews and collect information for the training needs assessment.
- To collect and compile information concerning the previous and existing capacity building initiatives, the actors playing a key role in this field, the overall context and main issues for capacity building for PA staff, etc.
- To collate and submit the collected information to the project management team.

Before starting the fieldwork, the consultant was asked to prepare an overview of their national PA system. Based on this, the PAs to be included in the study were selected to constitute a relevant sample, and plans for fieldwork developed. The templates of the questionnaires, result sheets and reports, as well as written instructions on how to conduct and supervise the field phase of the TNA were then provided by the project management team. Training for consultants was conducted via Skype and was designed to clarify how to organize the field activity and how to fill in the questionnaires. The final details of the plan and the costs were discussed and agreed separately. To support the consultant, official Letters of Introduction were supplied by ProPark, introducing the project and certifying the role of the consultant in the project. During the fieldwork period, the activities of the consultants were monitored through continuous communication and periodic status reviews. Assistance and advice were provided where required. To ensure a common format and a similar content of the reports, a template was provided to the expert, to guide her in structuring the information.

### 3.4 SELECTION OF SAMPLE PROTECTED AREAS AND PERSONNEL

The protected areas where the survey would be conducted were selected using the background information provided by national consultants concerning the types of PAs, their management and, where available, the number of staff working in each PA management body. The selection aimed to form a sample that included the most complex types of PAs (those having their own management body), a diversity of PA managing authorities (where relevant), as well as a relevant and representative sample of PA staff.

### 3.5 COMPLETION AND PROCESSING OF THE QUESTIONNAIRES

The national consultant, with support from the project management team, supervised the completion of the questionnaires. This happened in a number of ways:

- The consultant visited the protected area, directly explained the questionnaires, and supervised their completion.
- Questionnaires were conducted as interviews over the telephone or by Skype (for the General Questionnaire only).
- Personnel in protected areas were trained and supported remotely (by phone, email or Skype) to supervise completion for the questionnaires, which they then returned to the national consultant.
- All questionnaires were collected and the results entered into a pre-prepared Microsoft Excel spreadsheet and forwarded to the ProPark for analysis.

The method used depended on the resources and time available for visiting the protected areas. Throughout the process, the project management team was available to provide support and answer questions.

Once the questionnaires had been completed, they were collected and checked by the national consultants, who then collated and entered the results into pre-prepared Excel spreadsheets provided by the PMT. The overall numbers of questionnaires completed in Serbia are shown in Table 5.

Table 5 Completion of questionnaires in Serbia

Survey	Number of questionnaires completed	Number of PAs covered by questionnaires	Staff numbers	Dates of survey
<b>General Questionnaire</b>	10	13	Total 455 personnel reported as working in PAs covered by the questionnaires	April-May 2013
<b>Self-Assessment Questionnaire</b>	97	7	97 individual self-assessments	April-May 2013

## 4 RESULTS

### 4.1 OVERVIEW OF PROTECTED AREAS AND CAPACITY DEVELOPMENT IN SERBIA

Information from the report of national consultant Goran Sekulić.

#### 4.1.1 PROTECTED AREAS IN SERBIA

At the time of the survey (May 2013) in Serbia there were 5 National Parks, 16 Nature Parks, 16 Protected Landscapes, 20 Special nature Reserves, 48 Strict Nature Reserves and 247 National Monuments (mainly small sites). See Table 6.

#### 4.1.2 MANAGEMENT OF PROTECTED AREAS

Protected areas in Serbia are managed by a range of administrative bodies. Only National Parks have special administrative units established by the government. Other PAs are managed by (1) various public enterprises (e.g. water/forest management, construction & roads); (2) limited companies established by the government; (3) public utility companies; (4) NGOs; (5) private companies; (6) the military enterprise; and (7) by the Church. See Table 6.

Table 6 Protected Areas of Serbia

No	PA Administrations (PE = Public Enterprise)	PAs under administration	IUCN Category	No of staff
<b>NATIONAL PARKS</b>				
1	Public enterprise (PE) National Park Djerdap	NP Djerdap	V	70
2	PE National Park Tara	NP Tara	V	200
3	PE National Park Kopaonik	NP Kopaonik	V	50
4	PE National Park Sara	NP Sar Mts (area within Kosovo)	V	30
5	PE National Park Fruska Gora	NP Fruska Gora	V	160

<b>TOTAL</b>				<b>510</b>
<b>NATURE PARKS</b>				
<b>1</b>	Public enterprise for water management "Tamis-Dunav"	Nature park "Ponjavica"	V	<5
<b>2</b>	Public enterprise for water management Vodevojvodine	Nature park "Jegricka"	V	ca.5
<b>3</b>	Public utility company	Nature park "Stara Tisa kod Novog Beceja"	V	2-3
<b>4</b>	Public enterprise "Palic –Ludas"	1 nature park, 1 protected landscape, 2 special nature reserves	IV,V	Ca 40
<b>5</b>	Ltd company "DTD Ribarstvo" - fishery	Nature park "Begecka jama"	V	<5
<b>6</b>	Ltd company "Mokra Gora" - company established by government	Nature park "Mokra Gora"	V	29
<b>TOTAL</b>				<b>~ 90</b>
	PE for forestry Srbijasume [not established exclusively for PA management but for forest management in general]	3 nature parks, 3 protected landscapes, 2 special nature reserves, 20 nature reserves, 5 natural monuments	I-V	Around 100 people deal with PA management.
	PE for forestry Vojvodinasume [not established exclusively for PA management but for forest management in general]	5 special nature reserves, 3 natural monuments	III,IV,V	Around 50 people deal with PA management.
<b>TOTAL</b>				<b>ca 150</b>
<b>PROTECTED LANDSCAPES</b>				
	Vranjska Eparchy (orthodox church)	Protected landscape "Dolina Pcinje"	V	2-3
	Public utility company "Zelenilo Beograd"	3 protected landscapes	V	ca. 10
	PE "Varos"	Protected landscape "Vrsacke planine"	V	<5
	PE for construction and roads of the Municipality of Surdulica	Protected landscape "Vlasina"	V	<5
	Ecological society "Gradac"	Protected landscape "Klisura reke Gradac"	V	<5
<b>TOTAL</b>				<b>&lt; 25</b>
<b>SPECIAL NATURE RESERVES</b>				
<b>1</b>	Center for natural resources "Natura"	Special nature reserve "Klisura reke Tresnjice"	IV/V	2-3
<b>2</b>	Society of sport fisherman "Deliblatsko jezero"	Special nature reserve "Kraljevac"	IV/V	2-3
<b>3</b>	Company for fish production "Ecka"	Special nature reserve "Carska bara"	V	ca. 10
<b>4</b>	Nature Conservation Movement Sremska Mitrovica	Special nature reserve "Zasavca"	V	ca 10
<b>5</b>	Hunting society Perjanica	Special nature reserve "Pasnjaci velike droplje"	V	<5
<b>6</b>	Hunting society Becej	Special nature reserve "Slano Kopovo"	V	<5
<b>7</b>	Public enterprise Titelski breg	Special nature reserve "Titelski breg"	V	2-3
<b>8</b>	Limited company "Uvac" - company established by government	Special nature reserve Uvac	V	15
<b>9</b>	Military enterprise Karadjordjevo	Special nature reserve "Karadjordjevo"	V	<5
<b>TOTAL</b>				<b>&lt;50</b>
<b>NATURAL MONUMENTS</b>				

1	Tourist organization of the Municipality of Uzice	Natural monument "Potpecka pecina" / cave	III	1-2
2	Tourist organization of the Municipality of Kucevo	2 natural monuments- caves	III	1-2
3	Tourist organization of Zlatibor	Natural monument "Stopica pecina"	III	1-2
4	Mountaineering society Kamena Gora	Natural monument "Slapovi sopotnice"	III	1-2
5	Public enterprise "Resavska pecina"	2 natural monuments	III	ca. 15
<b>TOTAL</b>				<b>ca. 20</b>
<b>OVERALL TOTAL</b>				<b>ca 845</b>

#### 4.1.3 TRAINING

##### EXISTING TRAINING PROGRAMMES FOR PROTECTED AREA STAFF

There are no permanent and regular capacity building programmes specifically developed for managers of protected areas in Serbia. A few universities offer single courses/subjects related to protected area management mainly as elective courses:

1. University of Novi Sad, Department for Geography, Tourism and Hotel Management- *Management of protected areas* as elective course (5 ECTS). Singidunum University, Faculty of Applied Ecology - *Management of protected areas* as elective course (5 ECTS).
2. Faculty of Occupational Safety- *Management of natural resources* as elective course (5 ECTS)
3. University of Belgrade, Faculty of Geography- there are no specific courses for management of protected areas but some subjects in the department for Geospatial Foundations of Environment refer to the topic.

There is no an organization in Serbia which is specifically dealing with education of PA staff for specific purposes like management plan development or communication in nature conservation. NGOs usually have only temporary educational programs within individual projects and they usually contract foreign experts for trainings.

The Association of National Parks and protected areas of Serbia works to create a national network of PA managers and to help managers in all aspects of their work. It is not primarily focused on education of PA staff but has organized some short term educational programs.

In 2011 some high schools (Forestry School Kraljevo and Forestry and Food Technology School Sremska Mitrovica) developed programs for rangers in protected areas. The program is mainly based on education for forestry technician. The programmes are cancelled now and curricula are not available.

The Ministry responsible for nature conservation organizes short, one-day courses for protected area managers. Courses are irregular, upon demand, but usually 1-2 per year. Lecturers are mainly from the Ministry and the structure of courses is flexible, more in a form of discussion. The number of participants is around 20-30. Typical topics are development of management plans and financing in protected areas.

These trainings are usually very technical and do not reflect the complexity of modern PA managers. The Ministry focuses on the formal and legal requirements and usually do not try to bring PA managers to innovative and integrative issues of PA management especially in the field of communication, participatory management, work with local communities etc.

In 2012. Association of National Parks and Protected Areas of Serbia organized a serial of workshops specifically developed for people working in protected areas, with the title "Management of project cycles, funding sources and proposal mobilization and development". The workshops were facilitated by the experts from Serbian Management Centre (<http://www.smc.org.rs/index.php?Lang=EN>). The number of participants was around 20.

A number of irregular events aimed at capacity building of people working in protected areas have been organized within international projects. These were mainly 1 or 2 day workshops with specific topics, such as Natura 2000, development of management plans, communication etc. The lecturers were mainly international experts and they usually present modern method and techniques of PA management



Some protected area managers organize courses for general skills, such as: safety at work, foreign language, and specific skills, for example speleology, alpinism, fire-fighting.

Individual employees in protected areas used the opportunity of short-term courses provided by international organizations like Alfred Toepfer Academy, Japan development Agency, UNDP.

Internal trainings are organized in two public enterprises for forestry, Vojvodinašume and Srbijašume, which manage a large number of protected areas in Serbia. The trainings are organized irregularly, mainly upon demand and take the form of a short workshop or discussion, facilitated by internal experts from the directorates of the enterprises.

Capacity building of PA staff is included in relevant national strategies (e.g. Biodiversity strategy), but without specific objectives and targets. Usually, capacity building is included in PA management plans, but without specific objectives. PA managers mainly rely on project based workshops and short-term trainings organized by other, mainly international organizations.

Feedback from training events often includes the following remarks:

- Trainings are often general and not relevant to Serbian context.
- Trainings are often too short and condensed.
- Visits to other PAs are always appreciated and seen as very useful.
- Experts working “in the field” are appreciated as trainers.
- Language barrier is often a problem.

## 4.2 COVERAGE OF THE SURVEYS

### 4.2.1 COVERAGE OF THE GENERAL QUESTIONNAIRE

The national consultants collected information from 10 respondents representing 13 protected areas and managing agencies covering over 300,000 ha, and with 455 staff.

### 4.2.2 COVERAGE OF THE SELF-ASSESSMENT QUESTIONNAIRE

Self-assessments were completed by 97 individuals from 7 protected areas as shown in Table 7.

Table 7. Source of the self-assessment questionnaires

Institution	
1	Special Nature Reserve “Zasavica”
2	National Park “Djerdap”
3	Special Nature Reserve “Uvac”
4	Public Enterprise k Palić-Ludaš*
5	Special Nature Reserve “Koviljsk-Petrovaradinski Rit”
6	Special Nature Reserve “Obedska Bara”
7	National Park “Tara”

### 4.2.3 STAFF DENSITY

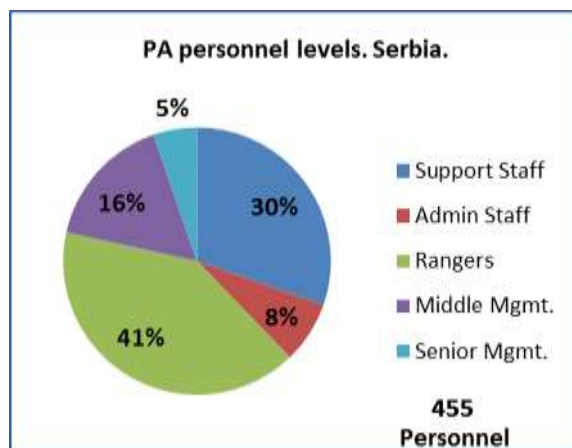
Based on the areas of the protected areas and the numbers of staff reported in the General Questionnaire, there is a staffing density of approximately 0.91 personnel (excluding support staff) per thousand hectares of protected area, and 1.46 staff per thousand hectares including support staff. The calculated staffing density is less than the regional average of 1.16 staff per 1,000 hectares. However, the General Report concludes that staffing density in this region is not necessarily a reliable indicator of management capacity or management effectiveness, and that it is quite possible in some cases for a protected area system to be managed by a relatively small number of professional well-supported staff. It is therefore not possible to make meaningful recommendations about ideal numbers of staff or staffing densities in protected areas in the region; the optimum number depends on many factors, such as the system of governance, the size of the area, the terrain, accessibility, staff capacity, the objectives of the site and the severity of the threats it faces.

## 4.3 STAFF PROFILES

### 4.3.1 GENERAL QUESTIONNAIRE

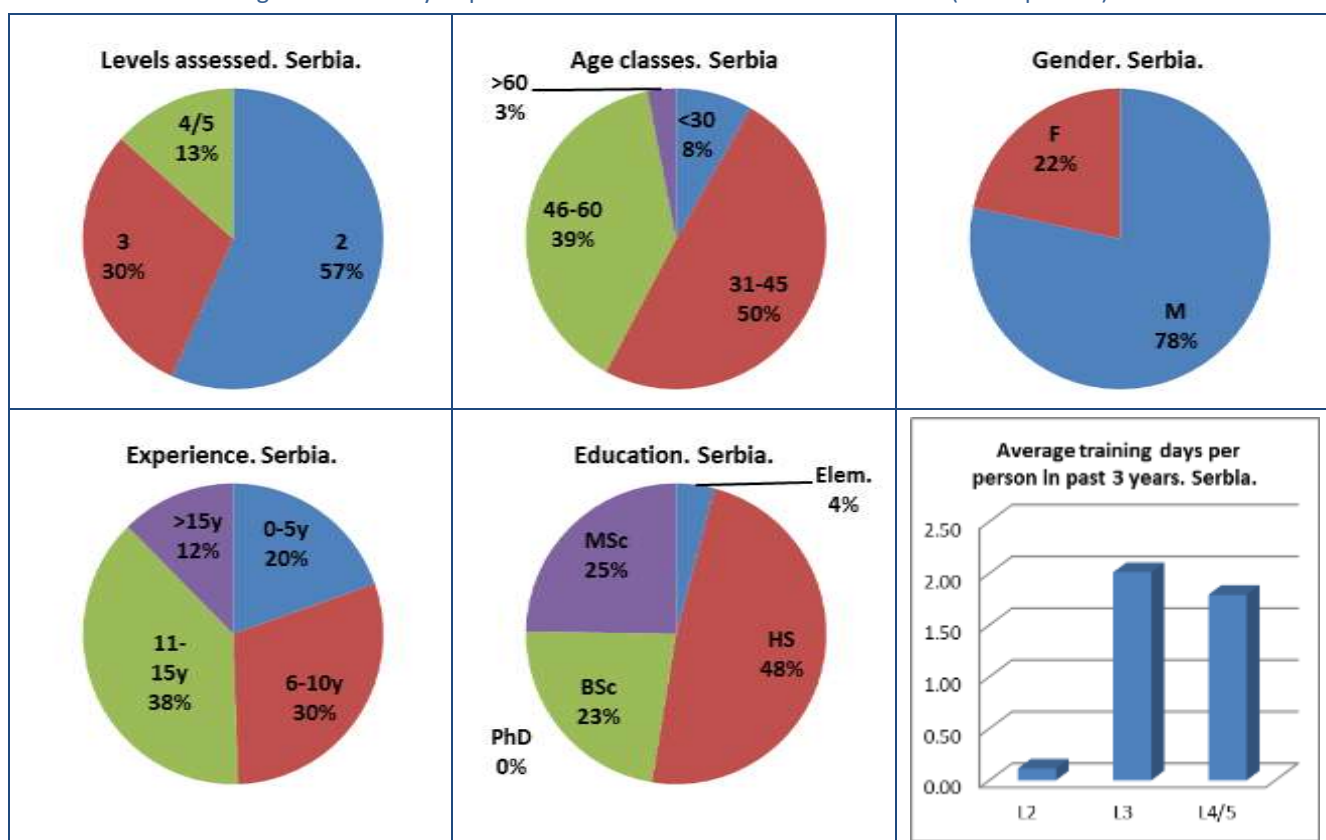
The responses to the General Questionnaire list 455 personnel, whose distribution between job categories is shown in Figure 1. This provides an indication of the overall balance of staff levels in the system.

Figure 1. Personnel of protected areas covered by the General Questionnaire according to job level



The Self-Assessment Questionnaire provided much more details about specific individuals in the protected areas covered. Figure 2 shows the aggregated results from the personal information section of the questionnaire.

Figure 2 Summary of personal information from self-assessments (97 responses)



## 4.4 TRAINING

### 4.4.1 RECENT TRAINING PROVISION

In the General Questionnaire, respondents were asked to provide details of training provided for personnel in their organisation in the past three years. From this, it could be calculated that the personnel (excluding support staff) in

Serbia received on average an almost negligible 0.43 training days per person per year. This is around 20% of the regional average of 2.04 days per year, which is itself very low.

#### 4.4.2 TOPICS OF TRAINING REPORTED IN THE GENERAL QUESTIONNAIRE

Figure 3 shows the proportions of different training topics reported in the General Questionnaire, classified according to the standard skills categories used in the survey. This suggests that the training that has been delivered covers a wide range of topics, but that no training has taken place on working with communities and very little on awareness.

Figure 3 Training topics reported in the General Questionnaire



#### 4.4.3 TRAINING PROVIDERS REPORTED IN THE GENERAL QUESTIONNAIRE

Figure 4 shows that most of the training has been provided by international agencies and supporting donors, with some provided by government services and private companies. No training by national NGOs was recorded.

Figure 4 Training providers reported in the General Questionnaire



#### 4.4.4 IDEAL TRAINING PROVISION

Respondents to the General Questionnaire were asked to suggest an ideal number range of annual training days for personnel at different levels. The results are shown according to ranked preferences in Figure 5 and are quite unclear. Certainly it is agreed that staff need more training than the minimal amount that they get now. The requirement for rangers is up to 10 days, but opinions vary widely on the requirement for senior and middle managers.

Figure 5 Numbers of training days recommended by respondents to the General Questionnaire

1 = Most preferred 6= Least preferred					
Training Days	Senior Mgmt.	Middle Managers	Rangers/ Field Staff	Admin Staff	Support Staff
0	5	2	4	1	1
1-5	1	3	1	2	2
6- 10	3	5	1	2	3
11- 15	2	1	3	4	3
16-20	3	3	4	4	3
>20	5	5	4	4	3

#### 4.4.5 FUTURE TRAINING PRIORITIES

Respondents to the General Questionnaire were asked to identify what they personally considered priorities for future training for staff in their organisations. Figure 6 shows the result for Serbia, compared with the aggregated result for the entire region. See Figure 3. The high ranking of Sustainable Development and Communities reflects the fact that little or no training has been delivered on that topic.

Figure 6 Ranked preferences of senior managers for priority future training topics

		SERBIA	OVERALL FOR THE REGION
GEN	GENERAL SKILLS	7	3
FRM	FINANCIAL & RESOURCES MANAGEMENT	11	10
HUM	HUMAN RESOURCES MANAGEMENT & DEVELOPMENT	10	11
CTI	COMMUNICATION TECHNOLOGY AND INFORMATION	7	6
FCR	FIELD CRAFT AND PRACTICAL SKILLS	5	4
CMP	CONSERVATION ASSESSMENT PLANNING & MANAGEMENT	1	2
SDC	SUSTAINABLE DEVELOPMENT & COMMUNITIES	2	8
PAM	PROTECTED AREA POLICY, PLANNING AND PROJECTS	3	1
LAW	LAW ENFORCEMENT	9	7
RTO	RECREATION AND TOURISM	4	5
AWA	AWARENESS, EDUCATION AND PUBLIC RELATIONS	5	9

#### 4.4.6 MODES OF LEARNING AND TRAINING

Respondents were asked to rank in order of importance eight modes of learning and training for personnel at different levels. The results are shown in Figure 7. They indicate a preference for study visits and short courses for most staff. There is little interest in more 'modern' forms of learning such as e-learning, workplace learning and self-directed study.

Figure 7 Preferred modes of training

Ranked preferences for modes of capacity development. Serbia.					
1 = Highest Ranked. 8 = Lowest Ranked	Senior Mgmt.	Middle Managers	Rangers/ Field Staff	Admin Staff	Support Staff
Informal learning in the work place with more experienced colleagues	3	2	3	2	1
Short training sessions provided by supervisors & managers in the work place	7	6	3	3	2
Short Formal Training Courses (<1 week)	2	3	1	3	3
Longer training courses (1-4 weeks)	4	4	5	1	4
Long Term Study for Formal Qualifications (e.g. University Courses)	7	4	6	8	5
Informal individual learning using training manuals and study materials	4	6	7	5	6
Formal individual study through distance learning, internet etc.	6	6	7	5	8
Exchanges and study visits with other Protected Areas	1	1	1	5	7

#### 4.4.7 FUNDING FOR TRAINING

Respondents to the General Questionnaire were asked to detail budgets for training in the past three years. Most countries did not report expenditure, but four protected areas from Serbia reported expenditure, averaging around 700,000 RSD per protected area per year (around 5,750 Euros).

#### 4.5.1 GENERAL ASSESSMENTS OF COMPETENCE BY MANAGERS OF PERSONNEL IN THEIR ORGANISATIONS (GENERAL QUESTIONNAIRE)

These assessments were conducted by the Director of the Administration for each protected area/institution and are therefore based on the opinion and judgment of that person of the average, overall levels of competence in their organisation.

Each set of assessments is summarised in three graphics.

**Graphic A** shows the proportions of self-assessments for each skills category, according to the numerical scale described in the previous section (see Table 3). Colour coding is used to aid understanding of the results (see Table 8). These graphics exclude assessments of '0' (not relevant), and therefore only represent proportion of responses which considered the skills category to be relevant. The author has found that a rapid assessment of competence can be made by considering the boundary between the two weakest categories (indicated in red and yellow) and the two strongest categories (green and blue). The yellow-green boundary therefore, provides a quick indication of comparative competence of the different categories.

Table 8 Colour coding used for competences

Rating	Definition	Colour code
0	Personnel in my organisation do not need this skill.	
1	Personnel in my organisation need this skill, but overall have little or no competence in it. Extensive training and development are required.	
2	Personnel in my organisation need this skill and overall have some competence in it. Advanced training and development are required.	
3	Personnel in my organisation need this skill and overall have good competence in it. Periodic updating only is required.	
4	Personnel in my organisation need this skill and overall have high competence in it. They could train others to do it.	

**Graphic B** shows the average assessment score (1, 2, 3 or 4) of all responses where the skills category is considered relevant. The higher the average therefore, the higher the level of existing competence.

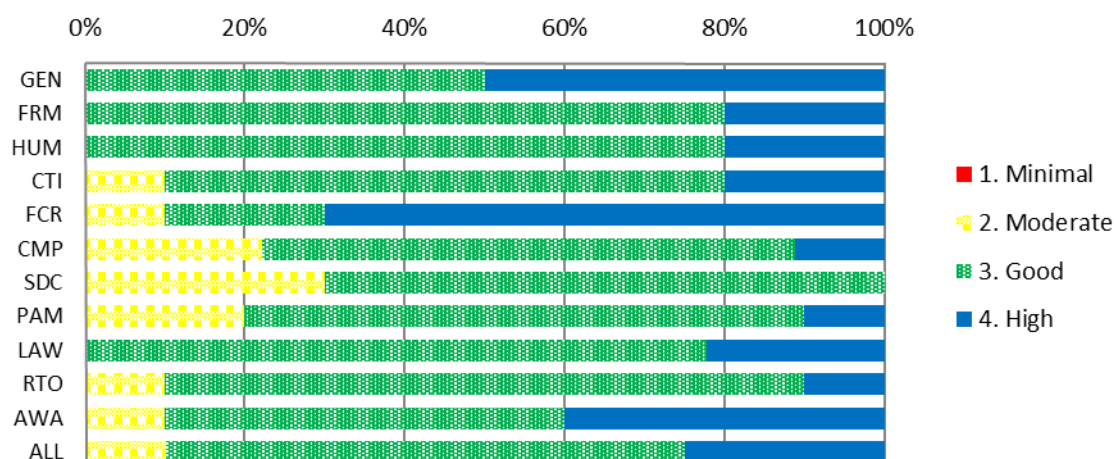
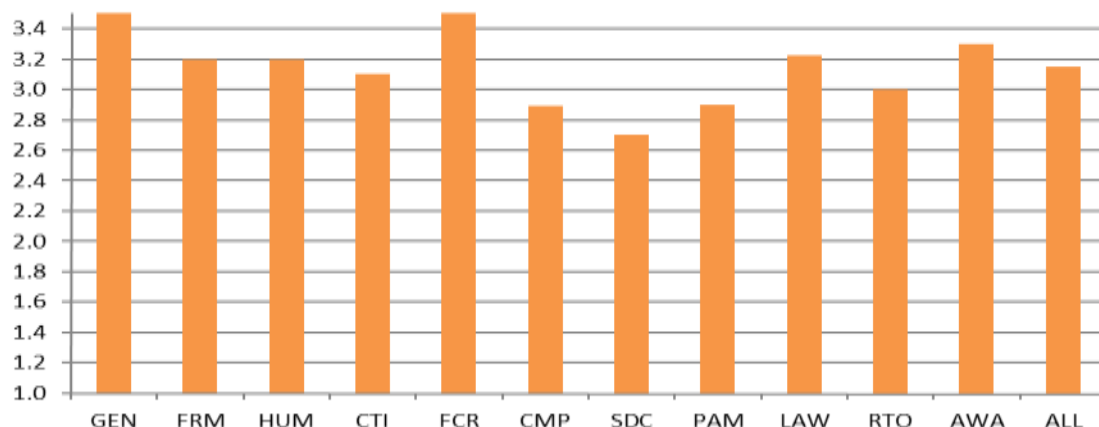
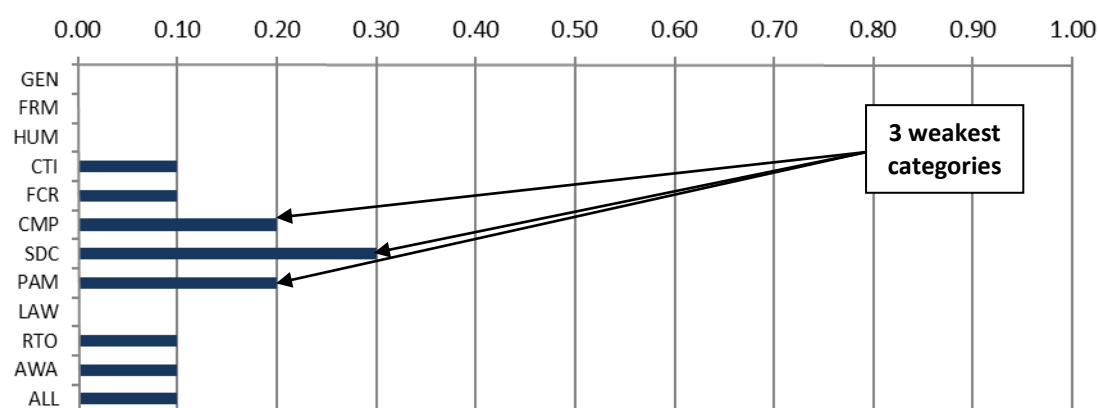
**Graphic C** shows Capacity Needs Index (CNI), which is intended to provide a standardised indication of the need for capacity development in the different categories. The formula for the CNI is shown in the box below.

**Capacity Needs index (CNI) =**

***Proportion of responses that assess the skills category as relevant) \* Proportion of responses that assess competence in the skills category as either 1 (Little or no competence) or 2 (some competence).***

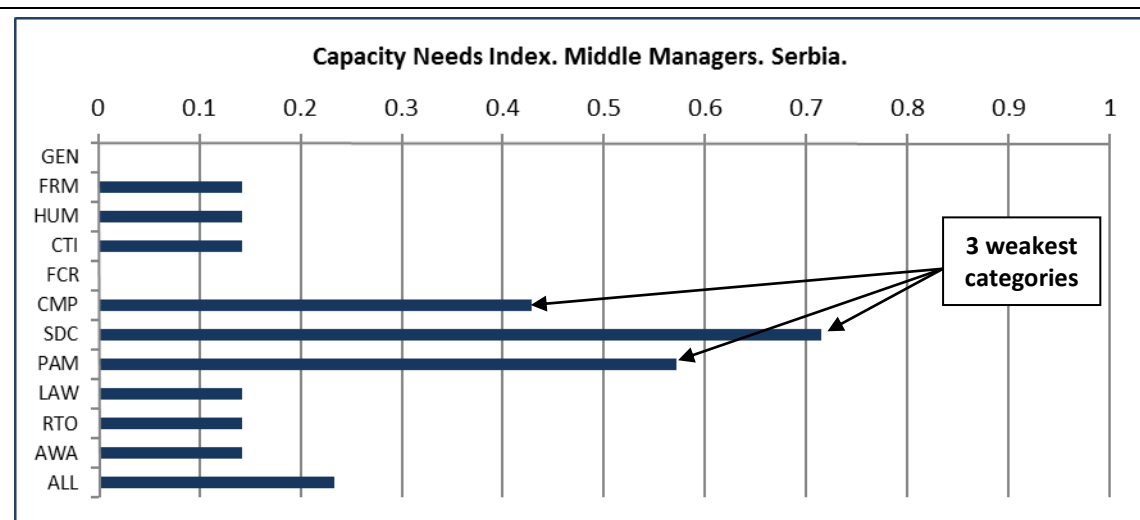
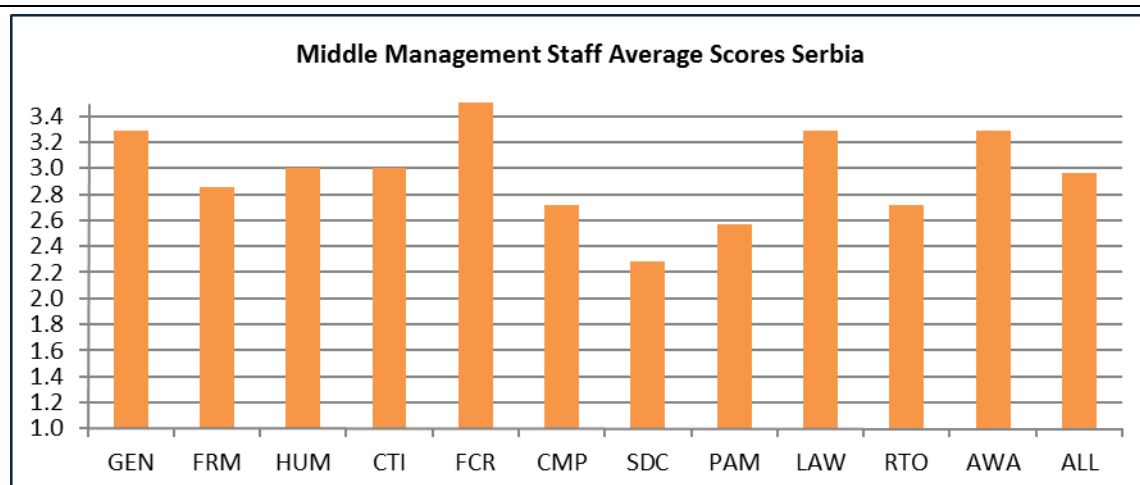
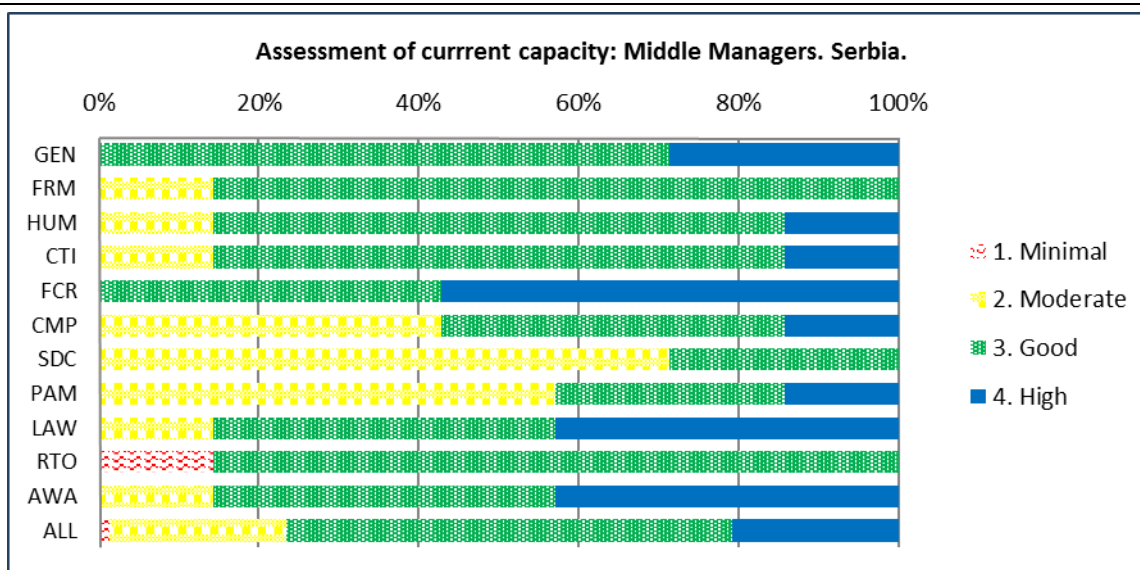
The higher the CNI, the greater the need for capacity development in that category. This formula is intended to take into account how relevant the category is, as well as how weak the overall competence is.

The results are shown for Senior Managers, Middle Managers and Technical Staff, and Field Staff (Rangers) only. The results for administrative and support staff are available separately, but inclusion of the results tends to distort the needs of the 'front line' PA staff. Each set of results is accompanied by brief observations. See Section 5 for more detailed assessment and discussion and Section 6 for recommendations.

**Assessment of current capacity: Senior Managers. Serbia.****Senior Management Staff Average Scores Serbia****Capacity Needs Index. Senior Managers. Serbia.****OBSERVATIONS**

Overall, confidence in the competence of senior managers is very high, among the highest in the region. Three technical categories are weaker: conservation management (CMP) and protected area management and planning (PAM) and working with communities (SDC). The reasons for this very high assessment should be subject to further research.

## GENERAL ASSESSMENTS BY PA DIRECTORS OF COMPETENCE: MIDDLE MANAGERS

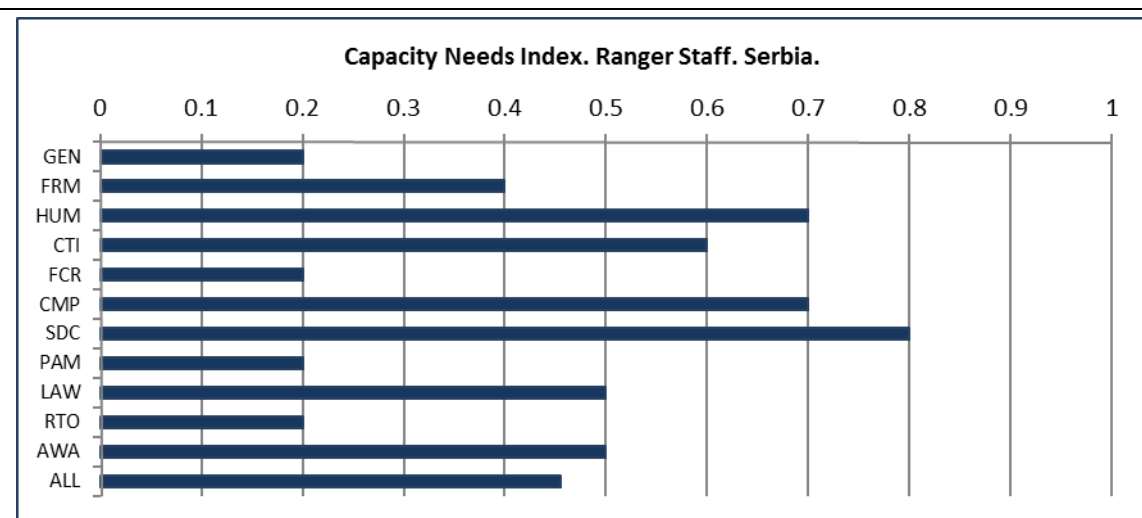
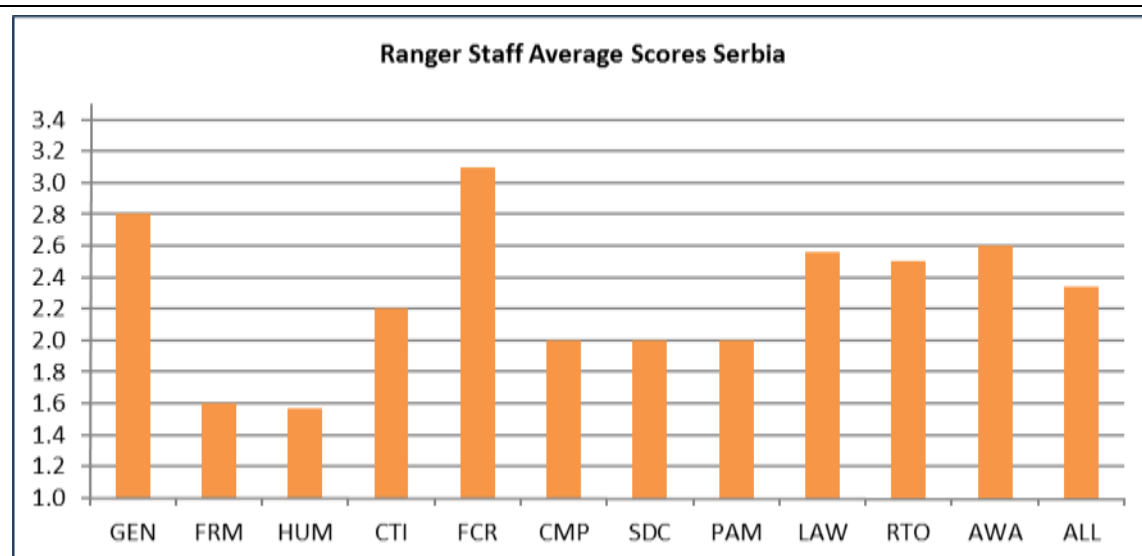
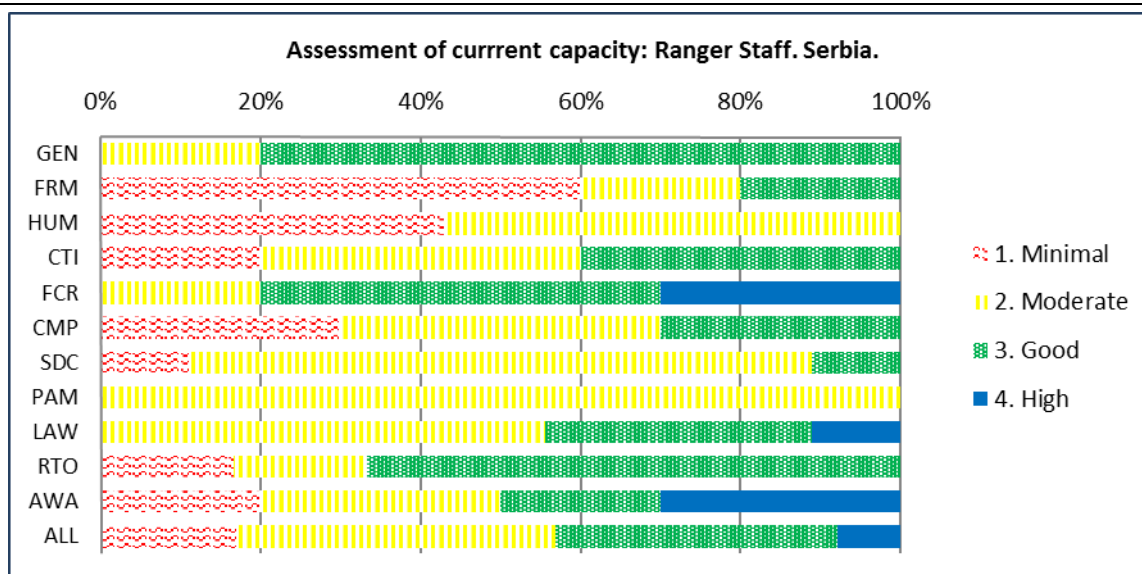


## OBSERVATIONS

The overall assessment shows a high level of confidence in the competence of middle managers. The three weakest categories are the same as for senior managers: PAM, SDC and CMP.



## GENERAL ASSESSMENTS BY PA DIRECTORS OF COMPETENCE: RANGERS AND FIELD STAFF



## OBSERVATIONS

In contrast the assessments for senior and middle managers, 45% of the assessments for rangers were in the weakest two bands, indicating a general need for training. The weakest categories are SDC, CMP and HUM.



#### 4.5.2 SELF ASSESSMENTS OF COMPETENCE BY INDIVIDUALS

Where the General Questionnaire focused on the judgement and opinion of a representative person from each protected area institution, the Self-Assessment Questionnaire records the opinions of individuals about their own competence.

Each set of assessments is summarised in three graphics.

**Graphic A** shows the proportions of self-assessments for each skills category, according to the numerical scale described in the previous section. Colour coding is used to aid understanding of the results. These graphics exclude assessments of '0' (not relevant), and therefore only represent proportion of responses which considered the skills category to be relevant. The author has found that a rapid assessment of competence can be made by considering the boundary between the two weakest categories (indicated in red and yellow) and the two strongest categories (green and blue). The yellow-green boundary therefore, provides a quick indication of comparative competence of the different categories.

Table 9 Colour coding used for competences

Rating	Definition	Colour code
0	I do not need this skill in my work	
1	I need this skill in my work, but I have little or no competence in it. I require extensive training and development.	
2	I need this skill in my work, and I have some competence in it. I require advanced training and development.	
3	I need this skill in my work, and I have good competence in it. I only require periodic updating.	
4	I have high competence in this skill and could train others to do it.	

**Graphic B** shows the average assessment score (1,2,3 or 4) of all responses where the skills category is considered relevant. The higher the average, therefore, the higher the level of existing competence.

**Graphic C** shows Capacity Needs Index (CNI), which is intended to provide a standardised indication of the need for capacity development in the different categories. The CNI is calculated as follows:

$$\text{Capacity Needs index (CNI)} = (\text{Proportion of responses that assess the skills category as relevant}) * \text{Proportion of responses that assess competence in the skills category as either 1 (Little or no competence) or 2 (some competence)}.$$

This formula is intended therefore to take into account how relevant the category is as well as how weak the overall competence is. The higher CNI therefore, the greater the need for capacity development in that category.

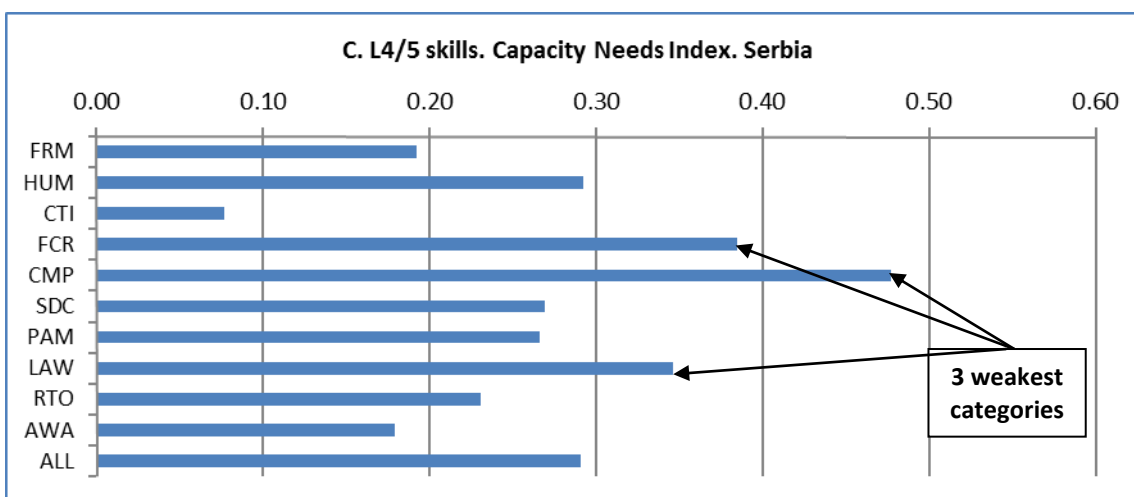
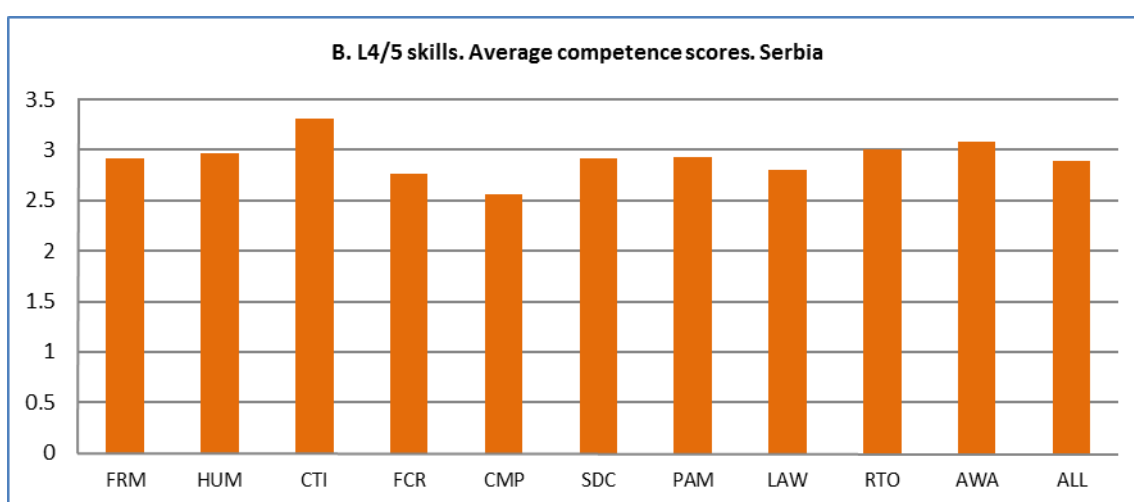
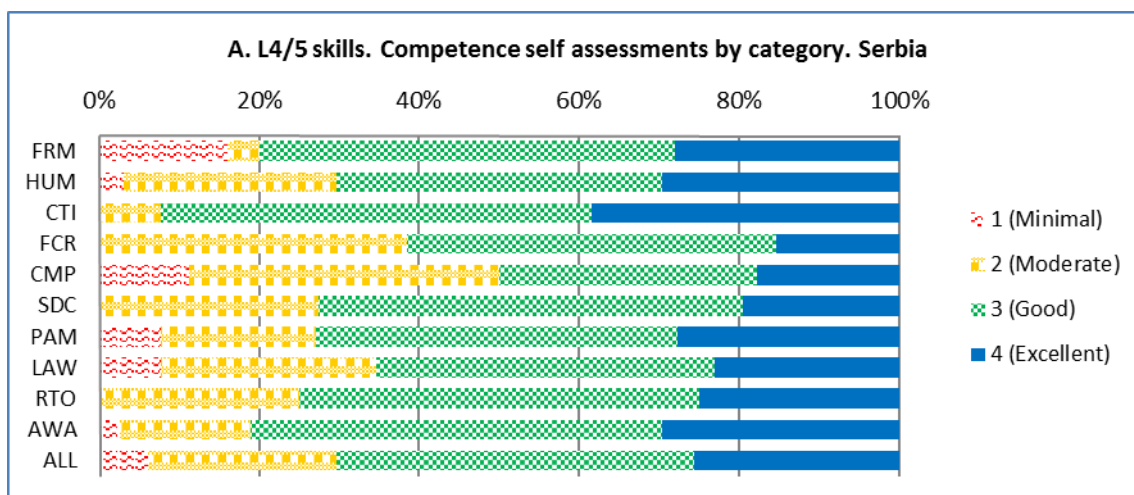
The results are shown grouped according to the levels associated with the competence. Individuals provided responses about skills at their level and the level below; in the case of Serbia Level 5 staff also self-assessed for Level 3 skills; the numbers of individuals answering questions at each level are shown in Table 10. Results for level 4 and 5 personnel are grouped because their responsibilities overlap, because there are only very few Level 5 skills and because the overall numbers of Level 4 and 5 staff alone are too small to allow reliable analysis.

Table 10 Numbers and levels covered by the Self-Assessment Questionnaire

Level of Skills	2	3	4/5
Numbers of respondents	55 Level 2 staff	29 Level 3 staff	13 Level 4/5 staff
	29 Level 3 staff	13 Level 4/5 Staff	
	84 responses	42 responses	13 responses

Each set of results is accompanied by brief observations. See Section 5 for more detailed assessment and discussion and Section 6 for recommendations.

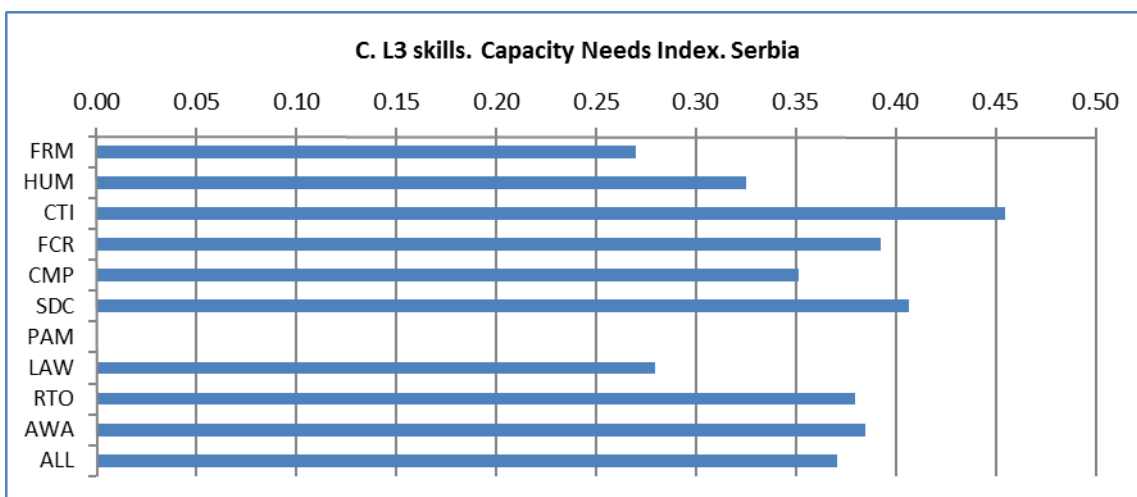
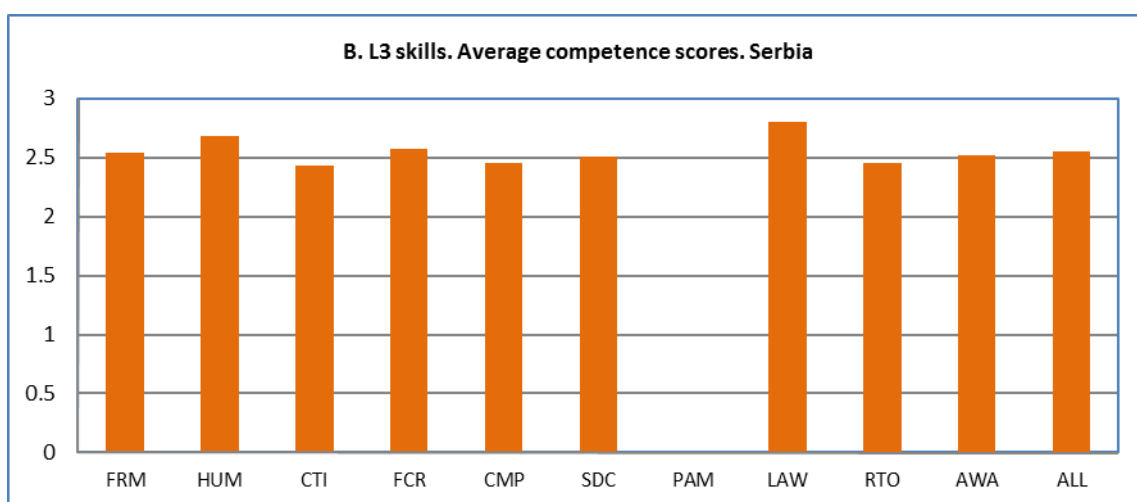
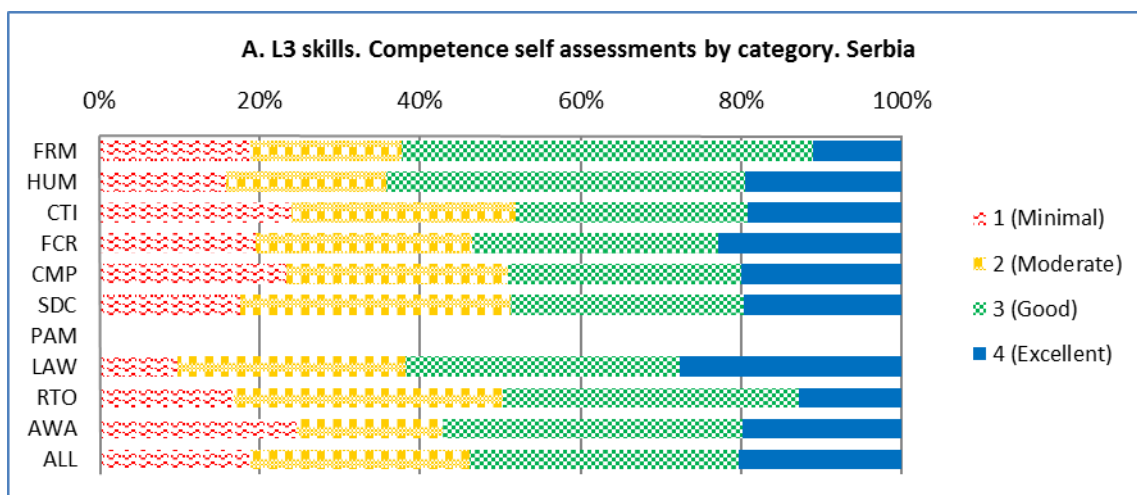
## SELF ASSESSMENTS OF COMPETENCE: SKILLS AT LEVELS 4 AND 5



## OBSERVATIONS

Just under 30% of the self-assessments are in the two weakest score bands (1 and 2), indicating an overall moderate need for capacity development. The biggest capacity need appears to be CMP, while FCR, LAW and HUM are also weak.

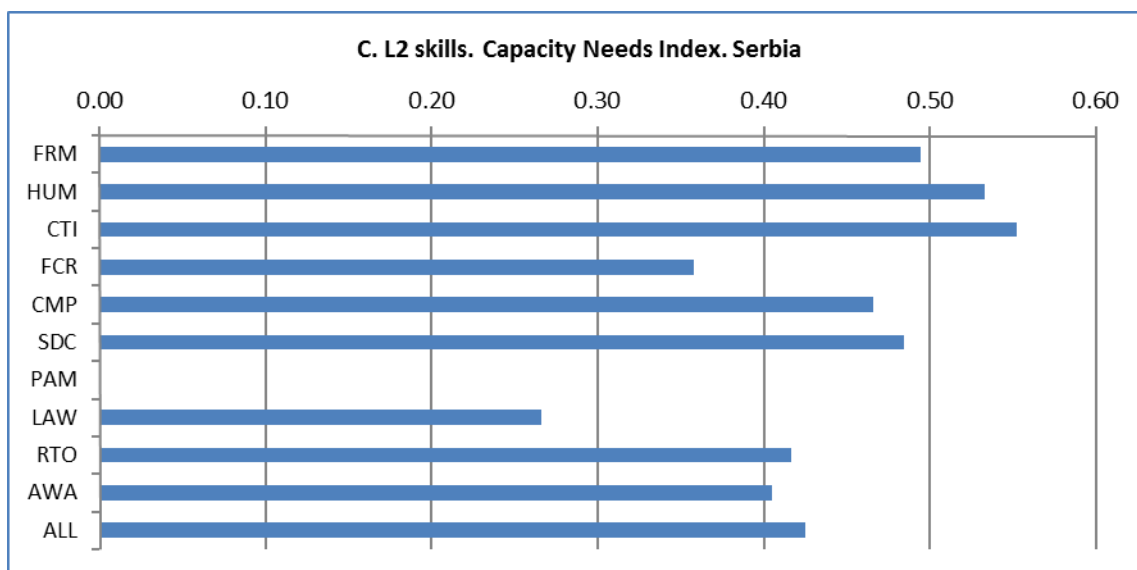
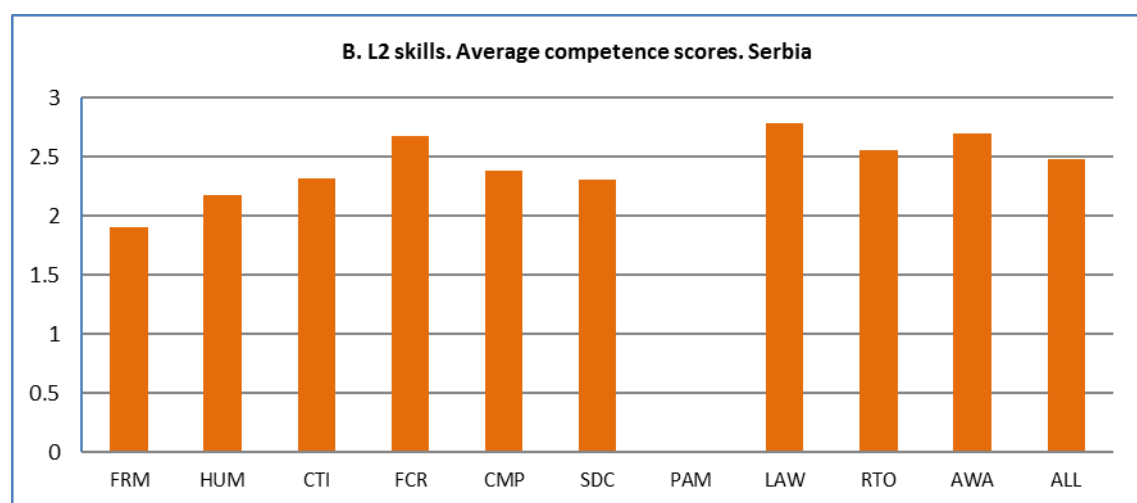
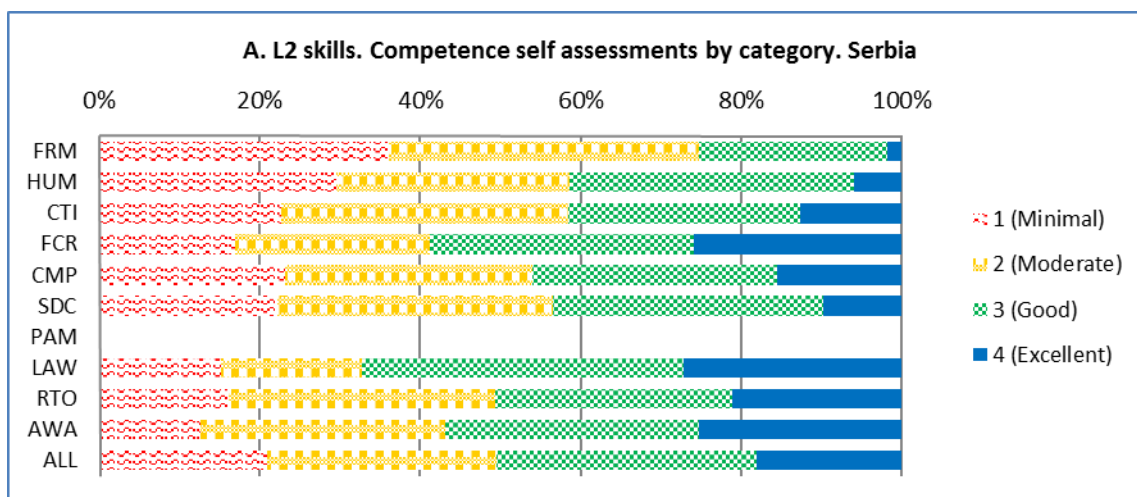
## SELF ASSESSMENTS OF COMPETENCE: LEVEL 3 SKILLS



## OBSERVATIONS

Overall, more than 35% of self-assessments at this level are in the two weakest bands. CTI and SDC are the weakest categories; most of the other technical categories have a similar score, indicating that there is a general need for training in all topics.

## SELF ASSESSMENTS OF COMPETENCE: LEVEL 2 SKILLS



## OBSERVATIONS

Self-assessments at this level much weaker than at the other two levels, with more than 40% of assessments in the two weakest bands. Almost all categories are weak; FCR and LAW, the most commonly needed ranger skills are a little stronger, but still require attention.

#### 4.5.3 RANKING OF INDIVIDUAL COMPETENCES AND PERSONAL PREFERENCES FROM THE SELF ASSESSMENT

The previous section aggregated the results according to the ten general skills categories. However, it was also possible to analyse self-assessed competence in the specific skills within each category, providing a more detailed picture of specific capacity development requirements. This information can be used to help identify the specific components of training courses and to contrast the results of self-assessments with personal preferences. The results are presented below.

##### RANKING OF INDIVIDUAL COMPETENCES AND PERSONAL PREFERENCES: LEVEL 4/5 SKILLS

Figure 8 Comparison of ranked capacity development priorities of senior managers according to the self-assessment (left) and ranked personal preferences for capacity development (right)

PRIORITIES BASED ON SELF-ASSESSMENTS OF COMPETENCE. GREATEST CAPACITY DEVELOPMENT NEED FIRST.			PRIORITIES BASED ON PERSONAL SELECTION OF SKILLS. MOST PREFERRED FIRST.		
CODE	SKILL	CNI SCORE	CODE	SKILL	Preferences
PAM 4.8	Monitor management effectiveness of the protected area using standard tools and methods (e.g. IUCN Management Effectiveness Tracking Tool (METT))	0.69	SDC 4.1	Develop agreements with communities for resource access and use.	5
SDC 4.4	Design and implement long socio economic and cultural research and monitoring programmes.	0.62	PAM 4.2	Lead the development of protected area conservation zoning systems and management plans using an appropriate national or international format and process	5
CMP 4.3	Plan, manage and evaluate ex-situ animal conservation and breeding projects (rescue centres, captive breeding etc.)	0.54	CTI 4.2	Institute mechanisms for public consultations, communication and participation over decisions, policies & plans.	4
CMP 4.5	Determine the value of ecological/environmental services.	0.54	CMP 4.5	Determine the value of ecological/environmental services.	4
CMP 4.1	Plan, manage and evaluate, scientifically based programmes for ecosystem and habitat research, conservation and monitoring ecosystems)	0.46	SDC 4.2	Resolve conflicts concerning protected areas, communities and other stakeholders (Disputes, complaints over settlements, resource use, land claims, decisions. Disputes between different stakeholder groups)	4
CMP 4.4	Plan, manage and evaluate ex-situ plant conservation and breeding projects (botanic gardens, plant breeding for reintroduction and restoration etc.)	0.46	PAM 4.1	Understand and interpret relevant legislation for the planning and management of protected areas	4
LAW 4.1	Identify legal requirements and instruments for improving or extending protection and contribute to the development of protected area regulations.	0.46	RTO 4.1	Lead development of detailed recreation and tourism strategies and plans for the protected area and local communities	4
HUM 4.2	Manage staff recruitment and contracting.	0.38	RTO 4.2	Develop business and financial plans and forecasts for tourism and recreation in the protected area	4
HUM 4.5	Plan, design, supervise and evaluate staff training and capacity development programmes	0.38	FRM 4.2	Develop detailed business plans, fund raising and revenue generating schemes.	3
FCR 4.1	Contribute to specification and design of major infrastructure projects.	0.38	HUM 4.1	Identify staffing needs and structures, assign roles and responsibilities and set performance standards	3
CMP 4.2	Plan, manage and evaluate, scientifically based programmes for species research, conservation and monitoring (survey, monitoring, control, reintroduction, special protection measures etc.))	0.38	HUM 4.4	Lead training and development needs analysis.	3
PAM 4.7	Direct, review and evaluate implementation of special projects (with national or international funding)	0.38	CTI 4.1	Negotiate agreements and resolve disputes and conflicts.	3
PAM 5.2	Direct the design of protected areas, networks, systems and strategies.	0.38	CMP 4.4	Plan, manage and evaluate ex-situ plant conservation and breeding projects (botanic gardens, plant breeding for reintroduction and restoration etc.)	3
HUM 4.3	Plan for and ensure the welfare, health and safety of staff, visitors and other users	0.31	HUM 4.3	Plan for and ensure the welfare, health and safety of staff, visitors and other users	2

PAM 4.4	Plan and negotiate trans boundary protected area and conservation initiatives.	0.31	HUM 4.5	Plan, design, supervise and evaluate staff training and capacity development programmes	2
RTO 4.3	Establish safety standards and codes of conduct for protected area users.	0.31	FCR 4.1	Contribute to specification and design of major infrastructure projects.	2
PAM 5.1	Direct and evaluate policy and strategy development for biodiversity conservation and protected area management.	0.31	CMP 4.1	Plan, manage and evaluate, scientifically based programmes for ecosystem and habitat research, conservation and monitoring ecosystems)	2
PAM 5.3	Plan and negotiate trans boundary protected area and conservation initiatives.	0.31	CMP 4.2	Plan, manage and evaluate, scientifically based programmes for species research, conservation and monitoring (survey, monitoring, control, reintroduction, special protection measures etc.)	2
FRM 4.1	Develop and monitor annual financial plans and prepare financial reports	0.23	PAM 4.5	Develop protected area project plans, proposals and budgets using nationally or internationally recognised formats and processes.	2
HUM 4.4	Lead training and development needs analysis.	0.23	PAM 4.6	Develop and negotiate collaborative partnerships, plans and programmes	2
SDC 4.3	Identify and mobilise external sources of assistance, support and finance for local communities.	0.23	PAM 4.7	Direct, review and evaluate implementation of special projects (with national or international funding)	2
PAM 4.3	Lead development of contingency plans for potential disasters.	0.23	AWA 4.2	Research and plan interpretive/tourist/visitor centres and other major infrastructure	2
PAM 4.6	Develop and negotiate collaborative partnerships, plans and programmes	0.23	AWA 4.3	Plan and manage marketing, media and public relations activities.	2
LAW 4.2	Coordinate protected area law enforcement activities with law enforcement and regulating agencies	0.23	PAM 5.1	Direct and evaluate policy and strategy development for biodiversity conservation and protected area management.	2
RTO 4.1	Lead development of detailed recreation and tourism strategies and plans for the protected area and local communities	0.23	FRM 4.1	Develop and monitor annual financial plans and prepare financial reports	1
RTO 4.2	Develop business and financial plans and forecasts for tourism and recreation in the protected area	0.23	CMP 4.3	Plan, manage and evaluate ex-situ animal conservation and breeding projects (rescue centres, captive breeding etc.)	1
AWA 4.1	Lead the development of interpretation, awareness and education strategies and action plans and evaluate their impacts	0.23	SDC 4.3	Identify and mobilise external sources of assistance, support and finance for local communities.	1
PAM 5.5	Contribute to updating of policies and legislation related to protected areas and biodiversity conservation	0.23	SDC 4.4	Design and implement long socio economic and cultural research and monitoring programmes.	1
FRM 4.2	Develop detailed business plans, fund raising and revenue generating schemes.	0.15	PAM 4.4	Plan and negotiate trans boundary protected area and conservation initiatives.	1
HUM 4.1	Identify staffing needs and structures, assign roles and responsibilities and set performance standards	0.15	PAM 4.8	Monitor management effectiveness of the protected area using standard tools and methods (e.g. IUCN Management Effectiveness Tracking Tool (METT))	1
CTI 4.1	Negotiate agreements and resolve disputes and conflicts.	0.15	LAW 4.1	Identify legal requirements and instruments for improving or extending protection and contribute to the development of protected area regulations.	1
SDC 4.2	Resolve conflicts concerning protected areas, communities and other stakeholders (Disputes, complaints over settlements, resource use, land claims, decisions. Disputes between different stakeholder groups)	0.15	RTO 4.3	Establish safety standards and codes of conduct for protected area users.	1
PAM 4.2	Lead the development of protected area conservation zoning systems and management plans using an appropriate national or international format and process	0.15	HUM 4.2	Manage staff recruitment and contracting.	0
AWA 4.2	Research and plan interpretive/tourist/visitor centres and other major infrastructure	0.15	PAM 4.3	Lead development of contingency plans for potential disasters.	0
AWA 4.3	Plan and manage marketing, media and public relations activities.	0.15	LAW 4.2	Coordinate protected area law enforcement activities with law enforcement and regulating agencies	0
PAM	Direct the process of protected area boundary	0.15	AWA	Lead the development of interpretation,	0



5.4	formalisation, rationalisation, gazettelement.		4.1	awareness and education strategies and action plans and evaluate their impacts	
SDC 4.1	Develop agreements with communities for resource access and use.	0.08	PAM 5.2	Direct the design of protected areas, networks, systems and strategies.	0
PAM 4.5	Develop protected area project plans, proposals and budgets using nationally or internationally recognised formats and processes.	0.08	PAM 5.3	Plan and negotiate trans boundary protected area and conservation initiatives.	0
CTI 4.2	Institute mechanisms for public consultations, communication and participation over decisions, policies & plans.	0.00	PAM 5.4	Direct the process of protected area boundary formalisation, rationalisation, gazettelement.	0
PAM 4.1	Understand and interpret relevant legislation for the planning and management of protected areas	0.00	PAM 5.5	Contribute to updating of policies and legislation related to protected areas and biodiversity conservation	0

#### RANKING OF INDIVIDUAL COMPETENCES AND PERSONAL PREFERENCES: LEVEL 3 SKILLS

Figure 9 Comparison of ranked capacity development priorities of middle managers according to the self-assessment (left) and ranked personal preferences for capacity development (right)

PRIORITIES BASED ON SELF-ASSESSMENTS OF COMPETENCE. GREATEST CAPACITY DEVELOPMENT NEED FIRST.			PRIORITIES BASED ON PERSONAL SELECTION OF SKILLS. MOST PREFERRED FIRST.		
CODE	SKILL	CNI SCORE	CODE	SKILL	Preferences
CTI 3.4	Operate GIS systems	0.64	FCR 3.1	Plan and organise logistics for field trips, surveys and patrols.	10
FCR 3.3	Operate and use base station radio and communication equipment.	0.51	FCR 3.2	Organise and lead search and rescue operations in the field.	9
AWA 3.3	Research, plan and design special education programmes for schools.	0.49	FCR 3.6	Locate, mark and inspect boundaries in the field.	9
FCR 3.5	Inspect and specify maintenance and repair requirements and schedules.	0.48	CTI 3.4	Operate GIS systems	7
SDC 3.4	Plan, coordinate and facilitate community capacity development activities.	0.48	AWA 3.1	Plan and design awareness and education activities and events for visitors, educational groups and local people (talks, presentations, guided walks etc.)	7
SDC 3.5	Promote development of local networks and organizations.	0.46	HUM 3.3	Determine causes of poor performance and workplace conflicts and take appropriate action	5
CTI 3.5	Manage library, archives and other information resources.	0.46	FCR 3.7	Identify and assess fire risks and hazards and plan fire prevention and control.	5
CMP 3.5	Plan and supervise animal capture, transport, care and management.	0.46	HUM 3.4	Plan, prepare and deliver formal vocational and skills training for staff	4
RTO 3.3	Identify potential recreation impacts and design impact monitoring and mitigation systems.	0.45	CMP 3.1	Specify management requirements for conservation of habitats and ecosystems	4
SDC 3.1	Plan and conduct scientifically based social and economic surveys (populations, communities, social conditions, livelihoods, resource use, culture etc.)	0.45	CMP 3.3	Specify site based special measures for assisting protection, survival or recovery of key species.	4
SDC 3.2	Plan and conduct scientifically based historical and archaeological assessments (site history, historical and archaeological sites, historic and cultural landscapes etc.)	0.45	SDC 3.6	Provide advice on sustainable community based natural resource use and management.	4
FCR 3.4	Draw up plans and specifications for small works and basic site infrastructure and supervise construction work	0.44	RTO 3.3	Identify potential recreation impacts and design impact monitoring and mitigation systems.	4
CTI 3.2	Give technical presentations and write technical reports/papers.	0.43	CTI 3.3	Operate and maintain computers for advanced functions	3
RTO 3.1	Identify recreation opportunities and design appropriate recreation activities for a protected area.	0.43	CMP 3.7	Analyse, and present interpret survey and monitoring data.	3
HUM 3.5	Plan, prepare and deliver formal lectures and presentations	0.40	SDC 3.1	Plan and conduct scientifically based social and economic surveys (populations, communities, social conditions, livelihoods, resource use, culture etc.)	3
CTI 3.1	Organize and chair formal meetings.	0.40	SDC 3.5	Promote development of local networks and organizations.	3
FCR 3.2	Organise and lead search and rescue operations in the field.	0.40	AWA 3.4	Deliver formal and informal interpretive/ awareness/ educational presentations for visitors, local people and educational	3

				groups	
HUM 3.4	Plan, prepare and deliver formal vocational and skills training for staff	0.38	FRM 3.1	Prepare budgets and keep books and accounts	2
AWA 3.1	Plan and design awareness and education activities and events for visitors, educational groups and local people (talks, presentations, guided walks etc.)	0.38	FRM 3.3	Manage official documentation and reporting on finances, assets, equipment, infrastructure etc.	2
AWA 3.2	Research, plan, and design awareness and educational publications, exhibits and signs	0.38	HUM 3.1	Brief, supervise, motivate and evaluate performance of individuals and teams.	2
CMP 3.6	Lead specialised, scientifically based, taxonomic, habitat and ecosystem surveys and monitoring	0.38	HUM 3.5	Plan, prepare and deliver formal lectures and presentations	2
CMP 3.7	Analyse, and present interpret survey and monitoring data.	0.38	CTI 3.1	Organize and chair formal meetings.	2
FCR 3.1	Plan and organise logistics for field trips, surveys and patrols.	0.37	CTI 3.2	Give technical presentations and write technical reports/papers.	2
CMP 3.4	Plan evaluate and supervise management of invasive and problem animals and human wildlife conflict.	0.35	FCR 3.5	Inspect and specify maintenance and repair requirements and schedules.	2
CMP 3.8	Curate collections and manage museums	0.35	CMP 3.6	Lead specialised, scientifically based, taxonomic, habitat and ecosystem surveys and monitoring	2
CMP 3.2	Specify, and evaluate sustainable quotas for natural resource use using scientific methods	0.34	SDC 3.3	Develop and negotiate participatory community conservation and management agreements.	2
AWA 3.5	Provide information for the media	0.34	AWA 3.2	Research, plan, and design awareness and educational publications, exhibits and signs	2
FRM 3.1	Prepare budgets and keep books and accounts	0.33	FRM 3.2	Manage purchasing and inventory.	1
CTI 3.3	Operate and maintain computers for advanced functions	0.33	CMP 3.4	Plan evaluate and supervise management of invasive and problem animals and human wildlife conflict.	1
RTO 3.2	Plan and implement recreation surveys to gather information about visitors and the use of the site	0.33	SDC 3.4	Plan, coordinate and facilitate community capacity development activities.	1
AWA 3.4	Deliver formal and informal interpretive/ awareness/ educational presentations for visitors, local people and educational groups	0.33	RTO 3.2	Plan and implement recreation surveys to gather information about visitors and the use of the site	1
FCR 3.7	Identify and assess fire risks and hazards and plan fire prevention and control.	0.32	RTO 3.4	Supervise safety and security of visitors and other users.	1
HUM 3.1	Brief, supervise, motivate and evaluate performance of individuals and teams.	0.32	AWA 3.5	Provide information for the media	1
CMP 3.3	Specify site based special measures for assisting protection, survival or recovery of key species.	0.32	HUM 3.2	Prepare detailed work plans for staff and direct, monitor and report on work plan implementation	0
SDC 3.3	Develop and negotiate participatory community conservation and management agreements.	0.31	CTI 3.5	Manage library, archives and other information resources.	0
LAW 3.1	Plan law enforcement activities and programmes.	0.31	FCR 3.3	Operate and use base station radio and communication equipment.	0
LAW 3.4	Follow correct procedure for dealing with violations, suspects, crime scenes and seized or confiscated evidence.	0.31	FCR 3.4	Draw up plans and specifications for small works and basic site infrastructure and supervise construction work	0
RTO 3.4	Supervise safety and security of visitors and other users.	0.30	CMP 3.2	Specify, and evaluate sustainable quotas for natural resource use using scientific methods	0
FRM 3.2	Manage purchasing and inventory.	0.29	CMP 3.5	Plan and supervise animal capture, transport, care and management.	0
SDC 3.6	Provide advice on sustainable community based natural resource use and management.	0.29	CMP 3.8	Curate collections and manage museums	0
HUM 3.2	Prepare detailed work plans for staff and direct, monitor and report on work plan implementation	0.26	SDC 3.2	Plan and conduct scientifically based historical and archaeological assessments (site history, historical and archaeological sites, historic and cultural landscapes etc.)	0
HUM 3.3	Determine causes of poor performance and workplace conflicts and take appropriate action	0.26	LAW 3.1	Plan law enforcement activities and programmes.	0
LAW 3.2	Lead patrol and law enforcement activities in the field.	0.26	LAW 3.2	Lead patrol and law enforcement activities in the field.	0



LAW 3.3	Liaise with local communities to resist and prevent illegal activities.	0.24	LAW 3.3	Liaise with local communities to resist and prevent illegal activities.	0
CMP 3.1	Specify management requirements for conservation of habitats and ecosystems	0.24	LAW 3.4	Follow correct procedure for dealing with violations, suspects, crime scenes and seized or confiscated evidence.	0
FCR 3.6	Locate, mark and inspect boundaries in the field.	0.22	RTO 3.1	Identify recreation opportunities and design appropriate recreation activities for a protected area.	0
FRM 3.3	Manage official documentation and reporting on finances, assets, equipment, infrastructure etc.	0.19	AWA 3.3	Research, plan and design special education programmes for schools.	0

## RANKING OF INDIVIDUAL COMPETENCES AND PERSONAL PREFERENCES: LEVEL 2 SKILLS

Figure 10 Comparison of ranked capacity development priorities of middle managers according to the self-assessment (left) and ranked personal preferences for capacity development (right)

PRIORITIES BASED ON SELF-ASSESSMENTS OF COMPETENCE. GREATEST CAPACITY DEVELOPMENT NEED FIRST.			PRIORITIES BASED ON PERSONAL SELECTION OF SKILLS. MOST PREFERRED FIRST.		
COD E	SKILL	CNI SCORE	CODE	SKILL	Prefer-ences
CTI 2.3	Communicate in other languages and/or dialects.	0.65	CTI 2.3	Communicate in other languages and/or dialects.	23
HUM 2.1	Supervise and motivate work teams under direct supervision	0.58	CMP 2.1	Recognise common and typical vegetation and habitat types, plant and animal species and their signs	22
FCR 2.6	Use GPS for Georeferencing locations and for navigation and orientation.	0.57	CTI 2.4	Operate and maintain computer for basic functions (word processing, internet, email)	19
CTI 2.4	Operate and maintain computer for basic functions (word processing, internet, email)	0.56	FCR 2.6	Use GPS for Georeferencing locations and for navigation and orientation.	17
CMP 2.5	Use and care for basic scientific instruments used in surveying	0.55	CMP 2.2	Accurately record and report wildlife observations using standard forms (where available)	15
FRM 2.1	Collect and present evidence of expenditure and other financial transactions	0.54	RTO 2.1	Guide, assist and regulate visitors on site.	15
CTI 2.5	Operate office and audio visual equipment	0.54	AWA 2.1	Provide basic information about the protected area to visitors, community members and the public.	15
FCR 2.4	Identify, prevent and/or provide primary treatment in the field for illness, diseases and bites (First Aid in the workplace)	0.54	CTI 2.1	Make basic oral presentations to colleagues, local people and visitors	13
CTI 2.1	Make basic oral presentations to colleagues, local people and visitors	0.52	FCR 2.2	Follow good safety and environmental practice in the field.	11
SDC 2.3	Monitor compliance by local communities with agreements and laws affecting them and the protected area.	0.52	CMP 2.3	Conduct supervised surveys of wildlife, habitats, natural resources and physical landscape features (under guidance of specialists)	10
CMP 2.4	Use identification aids to identify plants and animals.	0.51	CMP 2.6	Conduct practical habitat creation, restoration, management and manipulation work	9
CMP 2.6	Conduct practical habitat creation, restoration, management and manipulation work	0.51	LAW 2.2	Conduct enforcement activities legally and safely	9
CMP 2.7	Assist in the capture / immobilisation, handling and transportation of animals.	0.51	SDC 2.1	Under supervision, gather and record information about communities and livelihoods and provide basic reports to supervisors	8
CMP 2.2	Accurately record and report wildlife observations using standard forms (where available)	0.50	RTO 2.2	Respond to emergencies and accidents to visitors.	7
CMP 2.9	Care for captive animals	0.49	CTI 2.2	Prepare written reports of work activities using standard formats	6
SDC 2.2	Provide basic information, guidance and assistance for community-based conservation and sustainable use.	0.49	FCR 2.3	Fight fires.	6
CTI 2.2	Prepare written reports of work activities using standard formats	0.49	FCR 2.4	Identify, prevent and/or provide primary treatment in the field for illness, diseases and bites (First Aid in the workplace)	6
HUM 2.2	Provide training and instruction in the workplace for supervised staff	0.48	SDC 2.2	Provide basic information, guidance and assistance for community-based conservation and sustainable use.	6
FCR 2.10	Use and maintain radio handset for field communication.	0.46	LAW 2.3	Treat suspects and members of the public correctly and legally during patrol and enforcement activities.	6
FRM 2.2	Manage stores of equipment and supplies.	0.45	HUM 2.2	Provide training and instruction in the workplace for supervised staff	5
FCR 2.5	Use compass and chart or map for navigation and orientation.	0.45	FCR 2.9	Safely operate and maintain small boats and their engines	5
SDC	Under supervision, gather and record information	0.44	CMP	Use identification aids to identify plants and	5

2.1	about communities and livelihoods and provide basic reports to supervisors		2.4	animals.	
CMP 2.1	Recognise common and typical vegetation and habitat types, plant and animal species and their signs	0.43	LAW 2.1	Recognise and identify signs and evidence of illegal or restricted activities in the field.	5
RTO 2.2	Respond to emergencies and accidents to visitors.	0.43	LAW 2.4	Report correctly on law enforcement activities	5
AWA 2.1	Provide basic information about the protected area to visitors, community members and the public.	0.40	LAW 2.5	Deal effectively with hostile situations and defend oneself against physical attack.	5
RTO 2.1	Guide, assist and regulate visitors on site.	0.40	HUM 2.1	Supervise and motivate work teams under direct supervision	4
CMP 2.3	Conduct supervised surveys of wildlife, habitats, natural resources and physical landscape features (under guidance of specialists)	0.37	CTI 2.5	Operate office and audio visual equipment	4
LAW 2.2	Conduct enforcement activities legally and safely	0.34	CMP 2.7	Assist in the capture / immobilisation, handling and transportation of animals.	4
CMP 2.8	Check and replenish feeding stations for wild animals.	0.32	FRM 2.2	Manage stores of equipment and supplies.	3
FCR 2.8	Drive and provide basic maintenance for motor vehicles and small engines	0.31	FCR 2.7	Construct and repair outdoor structures, paths and trails.	2
FCR 2.7	Construct and repair outdoor structures, paths and trails.	0.30	CMP 2.5	Use and care for basic scientific instruments used in surveying	2
FCR 2.2	Follow good safety and environmental practice in the field.	0.27	FRM 2.1	Collect and present evidence of expenditure and other financial transactions	1
LAW 2.1	Recognise and identify signs and evidence of illegal or restricted activities in the field.	0.27	FCR 2.1	Care for, check and maintain basic field equipment.	1
LAW 2.6	Care for and use firearms correctly and safely (if relevant)	0.27	FCR 2.5	Use compass and chart or map for navigation and orientation.	1
LAW 2.5	Deal effectively with hostile situations and defend oneself against physical attack.	0.27	FCR 2.8	Drive and provide basic maintenance for motor vehicles and small engines	1
LAW 2.4	Report correctly on law enforcement activities	0.26	CMP 2.9	Care for captive animals	1
FCR 2.3	Fight fires.	0.25	SDC 2.3	Monitor compliance by local communities with agreements and laws affecting them and the protected area.	1
FCR 2.1	Care for, check and maintain basic field equipment.	0.24	LAW 2.6	Care for and use firearms correctly and safely (if relevant)	1
FCR 2.9	Safely operate and maintain small boats and their engines	0.20	FCR 2.10	Use and maintain radio handset for field communication.	0
LAW 2.3	Treat suspects and members of the public correctly and legally during patrol and enforcement activities.	0.19	CMP 2.8	Check and replenish feeding stations for wild animals.	0

#### 4.5.4 OVERALL RANKED NEEDS FROM THE SELF ASSESSMENTS

Figure 11 shows the overall ranked priorities for capacity development in the ten competence categories for Serbia.

Figure 11 Ranked country capacity development needs from self-assessments. Serbia

Country capacity development needs ranked by category and level 1 = Highest need 10 = Lowest need. Top 4 preferences highlighted				
		LEVEL 4/5	LEVEL 3	LEVEL 2
FRM	FINANCIAL & RESOURCES MANAGEMENT	8	8	3
HUM	HUMAN RESOURCES MANAGEMENT & DEVELOPMENT	4	6	1
CTI	COMMUNICATION TECHNOLOGY AND INFORMATION	10	1	2
FCR	FIELD CRAFT AND PRACTICAL SKILLS	2	3	8
CMP	CONSERVATION ASSESSMENT PLANNING & MANAGEMENT	1	5	5
SDC	SUSTAINABLE DEVELOPMENT & COMMUNITIES	5	2	4
PAM	PROTECTED AREA POLICY, PLANNING AND PROJECTS	6		
LAW	LAW ENFORCEMENT	3	7	9
RTO	RECREATION AND TOURISM	7	9	6
AWA	AWARENESS, EDUCATION AND PUBLIC RELATIONS	9	4	7

## 5 CONCLUSIONS

The following sections discuss the conclusions from the results of the two questionnaires for Serbia. See the General Report for discussion of the entire regional survey, for comparisons between countries and for an assessment of the limitations and possible inaccuracies in the survey.

### 5.1 OVERALL CONCLUSIONS

There is an overall need for improved capacity among protected area staff at all levels in Serbia. Current training provision is minimal, and although some programmes of training have taken place on a range of topics, these have been limited, have benefited relatively few staff and are mainly dependent on international support. Staff development in Serbia does not appear to be fully institutionalised and training programmes are largely dependent on external funding.

### 5.2 STAFFING

- Around 40% of personnel in PAs in Serbia are field staff (rangers), with a further 38% administrative and support staff. Serbia (78% male/22% female) has a highly unbalanced gender balance among PA staff, compared to the rest of the region (average: 66% male/34% female). This balance is affected by the large number of rangers in the system, almost all of whom are male.
- The personnel surveyed are fairly well educated, 48 % have a university education, while the majority of the rest (mainly rangers) are high school graduates.
- The age distribution of staff is skewed; only 8% are under 30 years old, indicating a lack of recent recruitment. While not an apparent problem in the short term, in the longer term this can cause a capacity problem as fewer experienced staff will be available to take over from older staff as they retire or leave.

### 5.3 TRAINING

- The overall current average of training delivered of around 0.5 training days per person per year is among the lowest in the region and completely inadequate, falling far short of the ideal amounts of annual training identified by managers in the General Questionnaire, which were in the region of five to ten days.
- Recent training topics in Serbia have covered a broad range of topics, but community work and awareness have been neglected among the technical topics.
- No systematic training programme is in place; provision has been highly dependent on project funding and international support.
- Managers preferred learning methods are study visits and short courses.

### 5.4 THE COMPETENCE ASSESSMENTS

The following sections discuss each of the competence categories, taking into account the results of both the General Questionnaire and the Self-Assessment Questionnaire.

#### 5.4.1 MANAGEMENT OF FINANCE AND PHYSICAL RESOURCES (FRM)

This topic appears to be a low priority, except at Level 2, where there may be a need for basic training in record keeping.

#### 5.4.2 MANAGEMENT OF HUMAN RESOURCES (HUM)

At Level 4/5 there is a need for training in general human resource management procedures, including staff capacity development. For Level 2 staff, basic supervisory skills are the second biggest need among all competences.

#### 5.4.3 COMMUNICATION, TECHNOLOGY AND INFORMATION (CTI)

Results from this category require careful scrutiny, because the skills within it mix personal communication skills with skills associated with using information technology.

With respect to IT skills needs, these rate very highly at Level 3 (advanced computing and GIS) and at Level 2 (basic computer use). With respect to the communication skills, at Level 2 communicating in other languages rated highly as a need in the self-assessments and in the personal preferences.

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#### 5.4.4 FIELD CRAFT (FCR)

These are quite traditional protected area skills in which competence often rates quite highly. However, in Serbia this category is surprisingly a significant weakness at Level 3 and Level 4, suggesting that management staff are not acquiring many of the basic skills required for planning and supervision of safe and effective field work.

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#### 5.4.5 CONSERVATION PLANNING, ASSESSMENT AND MANAGEMENT (CMP)

Although conservation is the main foundation of protected area management, this category is the greatest weakness at Level 4/5, and a moderate weakness at the other levels. This is quite a common finding across the region. The lead author has found a similar lack of capacity in this category in most other surveys of this type, suggesting that among all the other demands on protected area managers and staff, the primary skills connected with conserving and managing diversity are being neglected or taken for granted.

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#### 5.4.6 SUSTAINABLE DEVELOPMENT & COMMUNITIES (SDC)

This category is a major weakness at Level 3 and a moderate weakness at other levels. Middle management and technical staff evidently recognise the need to build their skills in working with local stakeholders, managing resource use and resolving conflicts. These results for Serbia are very similar to those for most other countries in the region.

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#### 5.4.7 PROTECTED AREA POLICY, PLANNING AND PROJECTS (PAM)

This category is assessed at Level 4/5 only and appears to be a moderate need overall. However, some specific skills rated as quite high needs, including management effectiveness monitoring and project planning and implementation.

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#### 5.4.8 LAW ENFORCEMENT (LAW)

This is a traditional aspect of protected area management, and capacity in Serbia appears to be quite good at Levels 2 and 3. The main need is at Level 4/5 and relates to planning and national coordination of law enforcement efforts.

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#### 5.4.9 RECREATION AND TOURISM (RTO)

This category does not appear to be major priority for capacity development in Serbia at any of the levels. The main needs relate to visitor safety and the impact of visitation, rather than planning and provision of tourism opportunities.

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#### 5.4.10 AWARENESS, EDUCATION AND PUBLIC RELATIONS (AWA)

The greatest need is at Level 3, where planning and delivery of awareness for schools and visitors rate quite highly.

## 6.1 OVERALL RECOMMENDATIONS

These overall recommendations are mainly with concerned with developing an internal, sustainable and affordable programme of capacity development for PA personnel, without reliance on external funding and providing learning opportunities for staff that less expensive, but just as effective as formal courses.

### 1. ESTABLISH A BASIC FORMAL STAFF DEVELOPMENT POLICY AND PROGRAMME FOR PROTECTED AREA STAFF IN SERBIA

This would contribute greatly to improving staff capacity, to professionalizing protected area management in Serbia and to increasing ownership of capacity development. The following measures are recommended.

1.1 Protected area agencies in Serbia should develop a general overall policy, strategy and plan for capacity developments of their personnel.

This strategy should be based in part on the results and recommendations arising from this survey and from other recent TNAs and should be used to guide and direct the capacity development elements of donor assisted projects.

1.2 Protected area agencies in Serbia should establish basic norms for how much capacity development should be made available to staff.

For example, *'all permanent staff should have access to at least five days' relevant, structured training (or equivalent capacity development) per year'*.

1.3 Protected area agencies in Serbia and its offices should allocate budgets for capacity development to provide the required amount of training.

It should be stressed here that budgeting for capacity development does not have to be based on provision of (expensive) formal training courses and study tours: there are many other much cheaper options for providing good quality training and capacity development (See recommendation 2).

1.4 Records should be kept of all capacity development events, of training attended by all personnel and of the quality and impact of the training.

### 2. BUILD INTERNAL CAPACITY FOR CAPACITY DEVELOPMENT

Efforts should be made to organise capacity development programmes that focus on transfer of skills among existing staff, rather than relying on external (and much more expensive) training providers and on formal short courses (and all the associated expenses). Furthermore, there are many low-cost, easy to organise activities which can help build staff capacity within institutions, without reliance on external investment. The following specific actions should be considered.

2.1 Appoint a capacity development/training officer (or small team) in protected area agencies.

This person should be responsible for identifying and mobilising a wide range of ways in which staff can improve their skills and knowledge. The role should include

- Organising and coordinating formal training events.
- Coordinating and directing the capacity development programmes of donor assisted projects to ensure that are correctly aligned with the national strategy and with national needs.
- Providing and sharing information about training opportunities.
- Ensuring that basic learning resources are available in protected areas. Ideally, it should be possible to provide computers and Internet access, but even access to basic library of wildlife identification materials and copies of manuals and textbooks can make a difference.
- Establishing mentoring systems within protected areas, where more experienced staff are required to mentor and guide newer, less experienced staff.

- Identifying expertise within the protected area (and the protected area network) and making use of those with high levels of skills to train newer, less experienced staff.
- Organising regular informal training and learning sessions where staff can discuss and share their skills, provide updates on new policies, laws, regulations, technical advances etc.
- Ensuring that all visiting experts and researchers to the protected area are required to deliver a training session or seminar as part of the conditions of their permission to work there.
- Ensuring that good records are kept of training and capacity development.

2.2 Establish and train a national capacity development team comprising relevant expert practitioners from within protected area institutions.

This team should be trained to provide standard training courses on priority topics across the PA system.

2.3 Provide supervisors in protected areas with training in basic instructional techniques for working with teams and workgroups.

### 3. ENGAGE WITH REGIONAL INITIATIVES TO IMPROVE THE PROFESSIONALIZATION AND PROFILE OF PA MANAGEMENT.

There is a general movement to improve the profile of PA management across Europe, as recognised in the resolutions of the workshop held on in Germany in June 2013 and of the 'Little Sydney' conference on protected areas in Europe held in 2015.

#### 6.2 SPECIFIC PRIORITY CAPACITY DEVELOPMENT RECOMMENDATIONS

#### 4. DEVELOP A COMMON FOUNDATION PROGRAMME FOR ALL PROTECTED AREAS STAFF

Rather than develop many small courses, it may be more effective and efficient to establish a basic standard foundation course covering essential skills, knowledge for all personnel involved in PAs in Serbia. This course can then be delivered internally by training officers and by the national capacity development team.

Suggested basic principles of the programme are that:

- 4.1 All new or recently appointed protected area staff should complete a two-day induction course.
- 4.2 National curricula and programmes for the course should be developed, and a set of training materials provided.
- 4.3 The course should be delivered by a national internal training team.
- 4.4 Completion of the course should ideally be certificated and documented in the personnel records of staff.

Table 11 shows a possible curriculum for the course.

Table 11 Possible curriculum for a general staff induction course

Course Title	Protected Area Staff Induction
<b>Duration</b>	2 days
<b>Target group</b>	All new ranger, scientific and technical staff with responsibilities in protected areas. All staff who have been employed in the past 3 years.
<b>Purpose</b>	To ensure that all staff working in protected area have a good understanding of the area, its functions and of basic standards of good and safe practice.
<b>Assessment</b>	Required attendance for the entire course Written and practical tests.
Topic	Mode of Delivery
INTRODUCTION Values, purpose and functions of protected areas. Threats to protected areas. Administrative and legal basis and procedures for protected area management. Main conservation and management strategies of protected areas.	Lectures, presentations.

Functions and duties of protected area staff and key stakeholders. Essentials of good personal conduct and environmental practice in the work place.	
<b>OBSERVATION AND COMMUNICATION SKILLS</b> Record keeping and note taking. Basic leadership, team building and motivation. Communicating with stakeholders and visitors.	Presentations with examples. Site based instruction. Practical exercises. Follow up by supervisors.
<b>BASIC FIELD WORK SKILLS</b> First aid. Good environmental practice in the workplace and the field. Emergency response procedures. Fire prevention and firefighting. Safe use, care and maintenance of tools and equipment. Maps, navigation and GPS. Basic boat handling and safety (if necessary). Basic vehicle use and safety (if necessary).	Presentations with examples. Site Based instruction. Follow up by supervisors.

## 5. DEVELOP AND PROVIDE TRAINING FOR IMPLEMENTATION OF A COMMON SYSTEM FOR PROTECTED AREA PLANNING, MONITORING AND REPORTING

New approaches to systematic protected area planning, monitoring and reporting for protected areas need to be embedded at the institutional level, as well as being taught and promoted at the site level. Therefore, although it is important that training in management planning, monitoring etc. continues, there should be a parallel and complementary focus on providing an institutional platform for improved planning, management, monitoring and reporting. This will help ensure consistent management across the system and provide a clear framework for delivery of internationally assisted capacity development. It is specifically recommended therefore that

- 5.1 Protected area agencies in Serbia should prioritise development of clear frameworks and system for modern PA management planning, monitoring, reporting and adaptive management.
- 5.2 Training and guidance should be provided for all PA administrations for the use and implementation for framework and system.
- 5.3 All donor assisted and project related capacity development programmes should be required to be integrated with, and support the national system.

## 6. BUILD CAPACITY FOR WORKING WITH COMMUNITIES

The results of the assessments clearly show that there is a need for improved capacity for staff at all levels in working with communities. The training that is offered should not just deal with the underlying principles and theory, it should include training in practical, personal skills associated with working with communities, for example interpersonal communication, conflict resolution or development of local awareness strategies.

- 6.1 Develop a training programme for staff working in protected areas where collaborative management is an important component.

An outline of a possible basic curriculum is shown in Table 12.

Table 12 Possible curriculum for a community outreach course

Course	Planning and management of community outreach programmes and activities in protected areas
<b>Duration</b>	5 days or 2 x 3 day modules
<b>Target group</b>	Staff of the Sustainable Use and Community Outreach Department. Director, Deputy Director and other Department Heads.
<b>Purpose</b>	To enable staff to work in a participatory way with protected area and surrounding communities to combine sustainable development with achieving the conservation objectives of the protected



	area.
<b>Assessment</b>	Completion of full attendance at all components. Completion of a practical assignment. Possible written examination.
<b>Topic</b>	<b>Mode of Delivery</b>
<b>Background</b>	Formal lectures
<ul style="list-style-type: none"> <li>Communities living in protected areas, corridors and buffer zones.</li> <li>Key concepts and principles relating to communities and sustainable rural development.</li> </ul>	
<b>Survey and Assessment</b>	Seminars and discussions
<ul style="list-style-type: none"> <li>Techniques for gathering and recording information about communities and livelihoods.</li> <li>Planning and conducting basic social and economic surveys.</li> </ul>	
<b>Working with communities</b>	Village visits with expert facilitation
<ul style="list-style-type: none"> <li>Basic communication skills for working with local communities; the participatory approach.</li> <li>Promoting development of local networks and organizations.</li> <li>Providing advice on sustainable community based natural resource use and management.</li> <li>Developing agreements with communities for resource access and use.</li> <li>Specifying, and evaluating sustainable quotas for natural resource use using scientific methods</li> </ul>	Group work and exercises
<ul style="list-style-type: none"> <li>Resolving conflicts concerning protected areas, communities and other stakeholders (Disputes, complaints over settlements, resource use, land claims, decisions)</li> <li>Identifying and mobilising sources of assistance, support and finance for local communities.</li> </ul>	Study visit to protected areas

## 7. BUILD CAPACITY FOR APPLIED CONSERVATION BIOLOGY AND CONSERVATION MANAGEMENT

As discussed in the general conclusions, this category is a major weakness. Since conservation is the primary function of protected areas (as determined by IUCN), there is a need to address this.

7.1 Design and deliver an updated course on applied, management-oriented conservation management for relevant PA staff.

This could be developed in association with universities, but it must have a strong focus on management oriented rather than research based approaches. A possible curriculum is shown in Table 13.

Table 13 Possible curriculum for a conservation biology course

<b>Course</b>	<b>Conservation biology (biodiversity survey, assessment, monitoring and management of species of conservation concern)</b>
<b>Duration</b>	5 days or 2 x 3 day modules
<b>Target group</b>	Scientific Staff. Deputy Directors and other Department Heads.
<b>Purpose</b>	To enable staff to develop and implement scientifically based programmes for active survey, assessment, conservation and monitoring of key species, habitats and ecosystems
<b>Assessment</b>	Completion of full attendance at all components Completion of a practical assignment Possible written examination
<b>Topic</b>	<b>Mode of Delivery</b>
<b>Background</b>	Formal lectures
<ul style="list-style-type: none"> <li>Understand key concepts and principles of conservation biology: species, populations, communities, ecosystems.</li> <li>Understand key measures required for the conservation of rare and fragile species and ecosystems.</li> <li>Understand the legal and policy basis for biodiversity conservation nationally and internationally.</li> </ul>	Seminars and discussions
<b>Survey and assessment</b>	Field survey



<ul style="list-style-type: none"> <li>• Recognise common and typical vegetation and habitat types, plant and animal species and their signs.</li> <li>• Use identification aids and equipment to identify plants and animals.</li> <li>• Accurately record and report wildlife observations using standard forms (where available).</li> <li>• Conduct and lead scientifically based, taxonomic, habitat and ecosystem surveys and monitoring activities.</li> <li>• Analyse, and present interpret survey and monitoring data.</li> </ul>	<p>exercises</p> <p>Group work and exercises</p> <p>Study visit to protected areas</p>
<b>Conservation management and planning</b>	
<ul style="list-style-type: none"> <li>• Specify management requirements for conservation of habitats and ecosystems</li> <li>• Specify special measures for assisting protection, survival or recovery of key species.</li> <li>• Plan, evaluate and supervise management of invasive and problem animals and human wildlife conflict.</li> <li>• Specify, and evaluate sustainable quotas for natural resource use using scientific methods</li> <li>• Plan, manage and evaluate, long term programmes for scientifically based programmes for species, ecosystem and habitat research, conservation and monitoring.</li> <li>• Understand the principles of determining the value of ecological/environmental services.</li> <li>• Understand the principles, roles and functions of ex-situ conservation measures</li> </ul>	

7.2 Encourage universities to develop and deliver programmes in applied conservation biology and management. It would be beneficial to shift the emphasis of some university programmes from field biology and research to active measures for conserving and monitoring biodiversity.

## 8. ORGANISE A SERIES OF FACILITATED SEMINARS/LEARNING EVENTS FOR SENIOR STAFF OF PA AGENCIES AND ADMINISTRATIONS

At Level 4/5, capacity appears to be quite patchy in some categories, even where they are not assessed as an overall priority. It would probably be impractical to recommend full training courses in all these categories; this would be very expensive and senior staff would probably not have the time to attend them. The proposed solution therefore is to hold a series of quarterly (or six monthly) facilitated seminars on priority topics, each with a specialist facilitator. The following specific recommendations are based on the results of this needs assessments.

- 8.1 Hold a seminar/learning event for senior staff on law enforcement and prevention of environmental crime. This topic was a very high priority at Level 4/5.
- 8.2 Hold seminars/learning events for senior staff on human resource management and staff development.
- 8.3 Hold seminars/learning events for senior staff on planning, establishment and impact mitigation of infrastructure development in protected areas.
- 8.4 Hold seminars/learning events for senior staff on sustainable financing for protected areas.

## 1. GENERAL QUESTIONNAIRE

<b>Protected Area Questionnaire</b>					
<b>TRAINING AND DEVELOPMENT NEEDS ASSESSMENT</b>					
To be completed for.					
<ul style="list-style-type: none"> <li>Protected Area Administrations.</li> <li>Departments at regional or national level responsible for protected areas</li> </ul>					
<b>A. GENERAL INFORMATION</b>					
<b>A1 Country</b>					
<b>A2. Full Name of Protected Area or Institution</b>					
<b>A3. IUCN Category of the Protected Area (if known)</b>					
<b>A4 Area of the Protected Area (hectares)</b>					
<b>A5 Name and Position of Person completing the questionnaire</b>					
<b>A6. Date of completion of questionnaire</b>					
<b>A7. STAFF NUMBERS.</b> Please indicate the numbers of staff in the institution at the levels indicated					
<b>Total Number of Staff of the Protected Area or Institution or Department</b>					
<b>STAFF LEVELS</b>	<b>Support staff (Labourers, cleaners, drivers etc.)</b>	<b>Administrative Staff</b>	<b>Rangers/ Field Staff</b>	<b>Mid-level Managers/ Professional Staff/Head Rangers</b>	<b>Directors/ Deputy Directors</b>
PLEASE RECORD NUMBERS OF STAFF IN THE PA OR INSTITUTION					
<b>A. CURRENT SITUATION FOR TRAINING AND CAPACITY DEVELOPMENT</b>					
<b>B1. PREVIOUS TRAINING.</b> Please indicate how much time and resources have been allocated to formal training and capacity development for staff or local stakeholders in the past 3 years					
<b>Year</b>	<b>Title and topic of training</b>	<b>Training provider</b>	<b>Number of days</b>	<b>Number of participants</b>	<b>Notes</b>
<b>B2. RESOURCES AND BUDGET FOR TRAINING.</b> If the institution has its own special budget for training, please state how much it has been for the past 3 years					
<b><i>The institution has a training budget</i></b>			<b>YES</b>	<b>NO</b>	
<b>Year</b>	<b>Amount of budget</b>	<b>Main uses of budget</b>			
2011					
2012					
2013					

B3. SKILLS AND EXPERIENCE. COMPETENCE ASSESSMENTS FOR EACH LEVEL OF STAFF					
Please complete the following table, which is an assessment of the current skills and experience of personnel conducting protected areas work at different levels.					
For each skills category and staff level please enter a rating of 0-4 as follows					
<b>0</b> = Staff at this level do not need these skills. <b>1</b> = Staff at this level need these skills, but have little or no competence in them: extensive training and development are needed. <b>2</b> = Staff at this level need these skills and have some competence in them: Further training and development are needed		<b>3</b> = Staff at this level need these skills and have good competence in them: Periodic updating only is needed. <b>4</b> = Staff at this level need these skills and are highly competent in them. They could train and instruct others in these skills.			
STAFF CATEGORY.	Support staff (Labourers, cleaners, drivers etc.)	Administrative Staff	Rangers/. Field Staff	Mid-level Managers/. Professional Staff/Head Rangers	Directors/. Deputy Directors
SKILLS CATEGORY	Assessment 0,1,2,3 or 4				
<b>GENERAL SKILLS (GEN).</b> General skills require for any job. Commitment, motivation, positive attitude, honesty, teamwork etc.					
<b>FINANCIAL &amp; RESOURCES MANAGEMENT (FRM).</b> Management and organisation of finances, assets and equipment for the protected area.					
<b>HUMAN RESOURCES MANAGEMENT &amp; DEVELOPMENT. (HUM).</b> Directing, managing, organising and capacity building for staff and others working in the PA					
<b>COMMUNICATION TECHNOLOGY AND INFORMATION (CTI).</b> Communication skills. Presentations, reports, negotiations, conflict resolutions. Use of computers and technology.					
<b>FIELD CRAFT AND PRACTICAL SKILLS (FCR).</b> Skills for field work: navigation, health and safety, basic construction and maintenance and good environmental practice in the field.					
<b>CONSERVATION ASSESSMENT PLANNING &amp; MANAGEMENT (CMP).</b> Identifying, surveying and monitoring species and ecosystems. Identifying the need for and carrying out specific actions for the protection and conservation of species, habitats and ecosystems.,					
<b>SUSTAINABLE DEVELOPMENT &amp; COMMUNITIES (SDC).</b> Conducting social and economic assessments in local communities. Working with communities in the Protected Area and Buffer Zone to promote sustainable					

resource use and development					
<b>PROTECTED AREA POLICY, PLANNING AND PROJECTS (PAM).</b> Preparing strategies, master plans and management plans for managing protected areas. Designing and applying for special projects to support the work of Protected Areas					
<b>LAW ENFORCEMENT (LAW).</b> Law enforcement: understanding the law and conducting activities to enforce the law in protected areas.					
<b>RECREATION AND TOURISM (RTO).</b> Planning and managing environmentally sensitive recreation and tourism for visitors to protected areas					
<b>AWARENESS, EDUCATION AND PUBLIC RELATIONS (AWA).</b> Planning and carrying out awareness, education and public relations work with visitors and local people. Presentations, signboards, educational materials, guiding visitors, working with schools groups. Promoting and publicising the Protected Area through the media.					

**B4. FUTURE NEEDS AND PRIORITIES.** Please indicate what you consider to be the three most important capacity development need(s) of each category of staff

Support staff (Labourers, cleaners, drivers etc.)	Administrative Staff	Rangers/. Field Staff	Mid-level Managers/. Professional Staff/Head Rangers	Directors/Deputy Directors
1	1	1	1	1
2	2	2	2	2
3	3	3	3	3

**B. MODES OF TRAINING AND LEARNING**

**C1. MODES OF LEARNING.** Staff capacity can be developed in many ways. Please answer the following questions about different methods of staff development

Please assess how effective and suitable each type of learning would be for each level of staff at the protected area or institution.

**0: Not all effective or suitable; 1: -Marginally effective and suitable; Effective and suitable.**

**3: Highly effective and suitable**

MODE OF LEARNING	Support staff (Labourers, cleaners, drivers etc.)	Administrative Staff	Rangers/. Field Staff	Mid-level Managers/. Professional Staff/Head Rangers	Directors/. Deputy Directors
Informal learning in the work place with more experienced colleagues					
Short training sessions provided by supervisors and managers in the work place					
Short Formal Training Courses (<1 week)					
Longer training courses (1-4					

weeks)					
Long Term Study for Formal Qualifications (e.g. University Courses)					
Informal individual learning using training manuals and study materials					
Formal individual study through distance learning. Following courses using internet and correspondence					
Exchanges and study visits with other Protected Areas					
Others (please list)					
<b>C2. ALLOCATION OF TIME FOR TRAINING AND DEVELOPMENT</b> Please indicate what you consider to be the ideal amount of time to be devoted each year to formal training of staff at different levels Indicate <u>one choice</u> for each staff category					
	<b>Support staff (Labourers, cleaners, drivers etc.)</b>	<b>Administrative Staff</b>	<b>Rangers/. Field Staff</b>	<b>Mid-level Managers/. Professional Staff/Head Rangers</b>	<b>Directors/. Deputy Directors</b>
0 days					
1-5 days					
6-10 days					
11-15 days					
16-20 days					
>20 days					
<b>C. OTHER COMMENTS</b>					
<b>Please add any further comments or suggestions</b>					
<div style="text-align: center;">.</div>					

## 2. COVER SHEET FOR THE SELF-ASSESSMENT QUESTIONNAIRE

COVER PAGE	
COUNTRY	
NAME (Optional)	
GENDER	M F
AGE (Circle one answer)	1: <30    2: 31-45    3: 46-60 4: >60
Official JOB TITLE AND GRADE	
PLACE OF WORK (NAME AND LOCATION OF PROTECTED AREA OR PA MANAGING INSTITUTION)	
NUMBER OF YEARS' EXPERIENCE IN PROTECTED AREA WORK (Circle one answer)	1: 0-5 years ; 2: 5-10 years: 3: 10-15 years. 4: 15+ years
HIGHEST QUALIFICATION LEVEL (Underline ONE answer)	1. Elementary School 2. High School 3. Bachelors Degree/Higher vocational qualification 4. Masters Degree 5. PhD
Training received in the past 3 years	
Training Event and provider 1 2 3 4 5	Dates and duration
TO BE COMPLETED BY CAPACITY ASSESSMENT SUPERVISOR	
COMPETENCE LEVELS ASSESSED	
GENERAL WORK SKILLS	✓
Circle which levels are assessed in this questionnaire	1    2    3    4    5
NAME OF CAPACITY ASSESSOR	
DATE OF ASSESSMENT	
LOCATION OF ASSESSMENT	
UNIQUE ASSESSMENT NUMBER PROTECTED AREA CODE AND NUMBER (e.g. CCR 07)	

### 3. FULL LIST OF COMPETENCES USED IN THE SELF ASSESSMENT QUESTIONNAIRE

<b>FRM</b>	<b>FINANCIAL AND RESOURCES MANAGEMENT</b>
<b>FRM</b>	<b>LEVEL 2</b>
FRM 2.1	Collect and present evidence of expenditure and other financial transactions
FRM 2.2	Manage stores of equipment and supplies.
<b>FRM</b>	<b>LEVEL 3</b>
FRM 3.1	Prepare budgets and keep books and accounts
FRM 3.2	Manage purchasing and inventory.
FRM 3.3	Manage official documentation and reporting on finances, assets, equipment, infrastructure etc.
<b>FRM</b>	<b>LEVEL 4</b>
FRM 4.1	Develop and monitor annual financial plans and prepare financial reports
FRM 4.2	Develop detailed business plans, fund raising and revenue generating schemes.
<b>HUM</b>	<b>HUMAN RESOURCES MANAGEMENT AND DEVELOPMENT</b>
<b>HUM</b>	<b>LEVEL 2</b>
HUM 2.1	Supervise and motivate work teams under direct supervision
HUM 2.2	Provide training and instruction in the workplace for supervised staff
<b>HUM</b>	<b>LEVEL 3</b>
HUM 3.1	Brief, supervise, motivate and evaluate performance of individuals and teams.
HUM 3.2	Prepare detailed work plans for staff and direct, monitor and report on work plan implementation
HUM 3.3	Determine causes of poor performance and workplace conflicts and take appropriate action
HUM 3.4	Plan, prepare and deliver formal vocational and skills training for staff
HUM 3.5	Plan, prepare and deliver formal lectures and presentations
<b>HUM</b>	<b>LEVEL 4</b>
HUM4.1	Identify staffing needs and structures, assign roles and responsibilities and set performance standards
HUM4.2	Manage staff recruitment and contracting.
HUM4.3	Plan for and ensure the welfare, health and safety of staff, visitors and other users
HUM4.4	Lead training and development needs analysis.
HUM4.5	Plan, design, supervise and evaluate staff training and capacity development programmes
<b>CTI</b>	<b>COMMUNICATION, TECHNOLOGY AND INFORMATION</b>
<b>CTI</b>	<b>LEVEL 2</b>
CTI 2.1	Make basic oral presentations to colleagues, local people and visitors
CTI 2.2	Prepare written reports of work activities using standard formats
CTI 2.3	Communicate in other languages and/or dialects.
CTI 2.4	Operate and maintain computer for basic functions (word processing, internet, email)
CTI 2.5	Operate office and audio visual equipment
<b>CTI</b>	<b>LEVEL 3</b>
CTI 3.1	Organize and chair formal meetings.
CTI 3.2	Give technical presentations and write technical reports/papers.
CTI 3.3	Operate and maintain computers for advanced functions
CTI 3.4	Operate GIS systems
CTI 3.5	Manage library, archives and other information resources.
<b>CTI</b>	<b>LEVEL 4</b>
CTI 4.1	Negotiate agreements and resolve disputes and conflicts.
CTI 4.2	Institute mechanisms for public consultations, communication and participation over decisions, policies & plans.
<b>FCR</b>	<b>FIELD CRAFT AND PRACTICAL SKILLS</b>



<b>FCR</b>	<b>LEVEL 2</b>
FCR 2.1	Care for, check and maintain basic field equipment.
FCR 2.2	Follow good safety and environmental practice in the field.
FCR 2.3	Fight fires.
FCR 2.4	Identify, prevent and/or provide primary treatment in the field for illness, diseases and bites (First Aid)
FCR 2.5	Use compass and chart or map for navigation and orientation.
FCR 2.6	Use GPS for georeferencing locations and for navigation and orientation.
FCR 2.7	Construct and repair outdoor structures, paths and trails.
FCR 2.8	Drive and provide basic maintenance for motor vehicles and small engines
FCR 2.9	Safely operate and maintain small boats and their engines
FCR 2.10	Use and maintain radio handset for field communication.
<b>FCR</b>	<b>LEVEL 3</b>
FCR3.1	Plan and organise logistics for field trips, surveys and patrols.
FCR3.2	Organise and lead search and rescue operations in the field.
FCR3.3	Operate and use base station radio and communication equipment.
FCR3.4	Draw up plans and specifications for small works and basic site infrastructure and supervise construction work
FCR3.5	Inspect and specify maintenance and repair requirements and schedules.
FCR3.6	Locate, mark and inspect boundaries in the field.
FCR3.7	Identify and assess fire risks and hazards and plan fire prevention and control.
<b>FCR</b>	<b>LEVEL 4</b>
FCR 4.1	Contribute to specification and design of major infrastructure projects.
<b>CMP</b>	<b>CONSERVATION ASSESSMENT, PLANNING AND MANAGEMENT</b>
<b>CMP</b>	<b>LEVEL 2</b>
CMP2.1	Recognise common and typical vegetation and habitat types, plant and animal species and their signs
CMP2.2	Accurately record and report wildlife observations using standard forms (where available)
CMP2.3	Conduct supervised surveys of wildlife, habitats, natural resources and physical landscape features
CMP2.4	Use identification aids to identify plants and animals.
CMP2.5	Use and care for basic scientific instruments used in surveying
CMP2.6	Conduct practical habitat creation, restoration, management and manipulation work
CMP2.7	Assist in the capture / immobilisation, handling and transportation of animals.
CMP2.8	Check and replenish feeding stations for wild animals.
CMP2.9	Care for captive animals
<b>CMP</b>	<b>LEVEL 3</b>
CMP 3.1	Specify management requirements for conservation of habitats and ecosystems
CMP 3.2	Specify, and evaluate sustainable quotas for natural resource use using scientific methods
CMP 3.3	Specify site based special measures for assisting protection, survival or recovery of key species.
CMP 3.4	Plan evaluate and supervise management of invasive and problem animals and human wildlife conflict.
CMP 3.5	Plan and supervise animal capture, transport, care and management.
CMP 3.6	Lead specialised, scientifically based, taxonomic, habitat and ecosystem surveys and monitoring
CMP 3.7	Analyse, and present interpret survey and monitoring data.
CMP 3.8	Curate collections and manage museums
<b>CMP</b>	<b>LEVEL 4</b>
CMP 4.1	Plan, manage and evaluate, scientifically based programmes for ecosystem and habitat research, conservation and monitoring ecosystems)
CMP 4.2	Plan, manage and evaluate, scientifically based programmes for species research, conservation and monitoring (survey, monitoring, control, reintroduction, special protection measures etc.))
CMP 4.3	Plan, manage and evaluate ex-situ animal conservation and projects (rescue centres, captive breeding etc.)

CMP 4.4	Plan, manage and evaluate ex-situ plant conservation and breeding projects (botanic gardens, plant breeding for reintroduction and restoration etc.)
CMP 4.5	Determine the value of ecological/environmental services.
<b>SDC</b>	<b>SUSTAINABLE DEVELOPMENT AND COMMUNITIES</b>
<b>SDC</b>	<b>LEVEL 2</b>
SDC 2.1	Under supervision, gather and record information about communities and livelihoods and provide basic reports to supervisors
SDC 2.2	Provide basic information, guidance and assistance for community-based conservation and sustainable use.
SDC 2.3	Monitor compliance by local communities with agreements and laws affecting them and the protected area.
<b>SDC</b>	<b>LEVEL 3</b>
SDC 3.1	Plan and conduct scientifically based social and economic surveys (populations, communities, social conditions, livelihoods, resource use, culture etc.)
SDC 3.2	Plan and conduct scientifically based historical and archaeological assessments (site history, historical and archaeological sites, historic and cultural landscapes etc.)
SDC 3.3	Develop and negotiate participatory community conservation and management agreements.
SDC 3.4	Plan, coordinate and facilitate community capacity development activities.
SDC 3.5	Promote development of local networks and organizations.
SDC 3.6	Provide advice on sustainable community based natural resource use and management.
<b>SDC</b>	<b>LEVEL 4</b>
SDC4.1	Develop agreements with communities for resource access and use.
SDC4.2	Resolve conflicts concerning protected areas, communities and other stakeholders (Disputes, complaints over settlements, resource use, land claims, decisions. Disputes between different stakeholder groups)
SDC4.3	Identify and mobilise external sources of assistance, support and finance for local communities.
SDC4.4	Design and implement long socio economic and cultural research and monitoring programmes.
<b>PAM</b>	<b>PROTECTED AREA POLICY, PLANNING AND PROJECTS</b>
<b>PAM</b>	<b>LEVEL 4</b>
PAM 4.1	Understand and interpret relevant legislation for the planning and management of protected areas
PAM 4.2	Lead the development of protected area conservation zoning systems and management plans using an appropriate national or international format and process
PAM 4.3	Lead development of contingency plans for potential disasters.
PAM 4.4	Plan and negotiate trans boundary protected area and conservation initiatives.
PAM 4.5	Develop protected area project plans, proposals and budgets using nationally or internationally recognised formats and processes.
PAM 4.6	Develop and negotiate collaborative partnerships, plans and programmes
PAM 4.7	Direct, review and evaluate implementation of special projects (with national or international funding)
PAM 4.8	Monitor management effectiveness of the protected area using standard tools and methods (e.g. IUCN Management Effectiveness Tracking Tool (METT))
<b>PAM</b>	<b>LEVEL 5</b>
PAM5.1	Direct and evaluate policy and strategy development for biodiversity conservation and protected area management.
PAM5.2	Direct the design of protected areas, networks, systems and strategies.
PAM5.3	Plan and negotiate trans boundary protected area and conservation initiatives.
PAM5.4	Direct the process of protected area boundary formalisation, rationalisation, gazettelement.
PAM5.5	Contribute to updating of policies and legislation related to protected areas and biodiversity conservation
<b>LAW</b>	<b>LAW ENFORCEMENT</b>
<b>LAW</b>	<b>LEVEL 2</b>
LAW 2.1	Recognise and identify signs and evidence of illegal or restricted activities in the field.
LAW 2.2	Conduct enforcement activities legally and safely
LAW 2.3	Treat suspects and members of the public correctly and legally during patrol and enforcement activities.
LAW 2.4	Report correctly on law enforcement activities

LAW 2.5	Deal effectively with hostile situations and defend oneself against physical attack.
LAW 2.6	Care for and use firearms correctly and safely (if relevant)
<b>LAW</b>	<b>LEVEL 3</b>
LAW 3.1	Plan law enforcement activities and programmes.
LAW 3.2	Lead patrol and law enforcement activities in the field.
LAW 3.3	Liaise with local communities to resist and prevent illegal activities.
LAW 3.4	Follow correct procedure for dealing with violations, suspects, crime scenes and evidence.
<b>LAW</b>	<b>LEVEL 4</b>
LAW4.1	Identify legal requirements and instruments for improving or extending protection and contribute to the development of protected area regulations.
LAW4.2	Coordinate protected area law enforcement activities with law enforcement and regulating agencies
<b>RTO</b>	<b>RECREATION AND TOURISM</b>
<b>RTO</b>	<b>LEVEL 2</b>
RTO 2.1	Guide, assist and regulate visitors on site.
RTO 2.2	Respond to emergencies and accidents to visitors.
<b>RTO</b>	<b>LEVEL 3</b>
RTO 3.1	Identify recreation opportunities and design appropriate recreation activities for a protected area.
RTO 3.2	Plan and implement recreation surveys to gather information about visitors and the use of the site
RTO 3.3	Identify potential recreation impacts and design impact monitoring and mitigation systems.
RTO 3.4	Supervise safety and security of visitors and other users.
<b>RTO</b>	<b>LEVEL 4</b>
RTO4.1	Lead development of detailed recreation and tourism strategies and plans for the protected area and local communities
RTO4.2	Develop business and financial plans and forecasts for tourism and recreation in the protected area
RTO4.3	Establish safety standards and codes of conduct for protected area users.
<b>AWA</b>	<b>AWARENESS, EDUCATION AND PUBLIC RELATIONS</b>
<b>AWA</b>	<b>LEVEL 2</b>
AWA 2.1	Provide basic information about the protected area to visitors, community members and the public.
<b>AWA</b>	<b>LEVEL 3</b>
AWA 3.1	Plan and design awareness and education activities and events for visitors, educational groups and local people (talks, presentations, guided walks etc.)
AWA 3.2	Research, plan, and design awareness and educational publications, exhibits and signs
AWA 3.3	Research, plan and design special education programmes for schools.
AWA 3.4	Deliver formal and informal interpretive/ awareness/ educational presentations for visitors, local people and educational groups
AWA 3.5	Provide information for the media
<b>AWA</b>	<b>LEVEL 4</b>
AWA 4.1	Lead the development of interpretation, awareness and education strategies and action plans and evaluate their impacts
AWA 4.2	Research and plan interpretive/tourist/visitor centres and other major infrastructure
AWA 4.3	Plan and manage marketing, media and public relations activities.