



THE IMPACT OF COVID-19 PANDEMIC ON AFRICA'S PROTECTED AREAS OPERATIONS AND PROGRAMMES

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Cover Photo: Mzima Springs, Tsavo West NP, Kenya: Restoration of degraded habitats is restoration of human health and well-being (Photo by J Waithaka, 2011)

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1. INTRODUCTION

The Coronavirus Disease (COVID-19) was first brought to the global attention in December 2019 and declared a pandemic by the World Health Organization (WHO) on 11 March 2020. The outbreak, suspected to have been caused by human-animal contacts, immediately brought the whole world to an abrupt stop, gravely affecting the lives of the entire global community and posing enormous health, economic, environmental and social challenges to the entire human population.

Travel restrictions, social distancing, cancellation, or postponement of events, partial or complete lockdowns, and other measures were immediately instituted across the continents. As a result, most protected area operations were scaled down or suspended, visitor facilities closed to the public, workplaces shut, “non-essential PA staff” withdrawn from their duty stations, and important supply chains disrupted, all significantly affecting critical day-to-day operations in protected areas.

A questionnaire survey targeting the Executive Directors of protected area agencies in Africa was undertaken to understand how the measures taken to control the spread of COVID-19 pandemic had impacted protected area operations and programmes across the continent. It also sought to understand the interventions and investments that would be needed to prevent loss of biodiversity and livelihoods of communities neighboring protected areas.

Key words: COVID-19, pandemic, protected areas, impact, operations, Africa.

SUMMARY OF FINDINGS

The impact of COVID-19 pandemic on 23 operations and programmes considered important for achieving Africa’s PA mandates was assessed through an online survey questionnaire. These included operations such as protecting endangered species, conducting regular field patrols, managing human wildlife conflicts, monitoring illegal wildlife trade, conducting anti-poaching operations and generating revenue from various sources (see Table 1 for the full list).

The results show that the measures taken to contain the spread of COVID-19 pandemic had significant impacts on all 23 operations and programmes, some to a lesser and others to a greater degree in different countries. Most countries reported high impacts in activities related to monitoring illegal wildlife trade, gathering security intelligence and carrying out security investigations.

The impact of the pandemic on revenue generation was so serious that nearly half of PA agencies across Africa reported that they could only maintain basic operations for up to three months if the restrictions imposed by COVID-19 continued to be in force. This loss of income to already underfunded PAs has huge implications on their ability to perform basic functions and fulfill mandatory obligations, including payment of salaries and protecting biodiversity and other resources.

The collaboration between PAs and their key partners, including local communities, governmental and non-governmental organizations, researchers and private landowners were also impacted by the pandemic, further diminishing the resources they contribute to support PAs and neighboring communities.

The survey results strongly suggest that local people will need to be better supported and economically empowered for the roles they play in conserving nature for the benefit of humanity. The sudden closure of tourism related community enterprises caused loss of jobs, undermined many development projects that were supported by income from tourism and weakened collaboration with investors. Loss of livelihood may force some communities to turn to wildlife consumption if other survival options dry up.

On a more positive note, the survey results indicate that supporting conservation outside protected areas is among the highest priorities for protected area agencies, a view expressed by 84% of the countries. This awareness provides strong grounds for enhancing collaboration between PA managers and local communities in implementing the ecosystem-based approach to nature conservation, an important step in promoting respectful coexistence between people and wildlife and preventing future pandemics.

Although not quantified yet, COVID-19 pandemic has caused the deterioration of general security both inside and outside PAs, increased vulnerability to PA resources and values and loss of livelihoods for neighboring communities. It has impaired collaborations with key partners and heightened threats from human wildlife conflicts. The absence of emergency response guidelines and lack of preparedness to deal with a pandemic of this magnitude was recognized as a key weakness in PA management. This, coupled with scarcity of financial resources, abrupt travel restrictions, meagre resources, inadequate skills and capacity, inadequate information about the disease, reduced support from crucial partners and lack of appropriate technology to support some operations during the lockdown undermined the ability of most PAs to cope with the pandemic. In addition, the failure of national governments to include critical PA operations in the category of “essential services” further weakened the capacity of PAs to develop and implement appropriate intervention measures to reduce the impacts of COVID-19.

There were some differences in the impacts of COVID-19 between Eastern and Southern African countries on the one hand, and Western and Central African countries on the other. More countries in Eastern and Southern Africa accorded high importance to most of the 23 operations than did countries from Western and Central Africa. For example, 90% of the countries in Eastern and Southern Africa accorded high importance to managing human wildlife conflict while only 44% of the countries in Western and Central Africa accorded human wildlife conflict a high importance rating. Similarly, high impact of COVID-19 on human wildlife conflict operations was reported in 80% of the countries in Eastern and Southern Africa and

by only 22% of the countries in Western and Central Africa. This observation provides a justification for creating a platform for PA Agencies to share experiences, solutions and lessons for managing protected areas in order to learn from each other and to maximize benefits of protected areas to nature and people.

It will take some time to understand the full damage and range of impacts caused by this pandemic. However, the survey result identifies the areas that need urgent support to strengthen the ability of PAs to respond to COVID-19 and future pandemics. They include funding, enhanced technical support, skill development, hiring of more staff, provision of relevant equipment, measures to stop the spread of the disease and strengthening and broadening partnerships. Nevertheless, urgent support should be provided to PA agencies and other actors to help reduce poaching, eliminate illegal wildlife trade, minimize human wildlife conflicts and support the livelihoods of local communities.

This study opens an opportunity for national and regional dialogues on how to reduce the impacts of COVID-19 pandemic and prevent future outbreaks. Such dialogues should recognize the centrality of protected areas in maintaining human health and well-being. The socio-economic impacts of the COVID-19 lockdown are a clear lesson that we cannot continue to ignore the role healthy nature plays in making life more livable. The links between protected areas and human health and the need to create stronger partnerships and alliances between the conservation and health sectors must become a key theme when planning how to prevent or cope with future pandemics. Other sectors of the economy must also become partners in the support of protected areas for the role they play in securing a range of ecosystem services beneficial to human health and well-being. Through COVID-19, a strong case for conserving and protecting nature and investing in the restoration of degraded ecosystems has been made. A continent-wide system of healthy, effectively managed, ecologically representative and well-connected protected areas will play a central role in enhancing both environmental and human health, and in preventing future pandemics of this nature.

3. SURVEY DESIGN AND DATA ANALYSIS

The study was carried out through an online Survey [questionnaire](https://ee.kobotoolbox.org/x/#HjkuqO3j) (<https://ee.kobotoolbox.org/x/#HjkuqO3j>) that had 23 fixed choice questions and five open-ended questions. The questionnaire was sent to all heads of PA agencies in Africa.

FIXED CHOICE QUESTIONS

The fixed choice questions focused on the impact of COVID-19 on 23 core operations and programmes that generally determine the management effectiveness of protected area agencies. They target operations related to biodiversity conservation and protection, law enforcement, collaborations with stakeholders, generation of revenue and enabling functions such as capacity building.

ASSESSING IMPORTANCE OF PA OPERATIONS AND IMPACT OF COVID-19 ON THEM

The questionnaire sought to shed light on two issues: (i) the importance accorded to each operation or programme in achieving the mandates of the organizations and, (ii) the impact of COVID-19 on these operations / programmes.

Importance was assessed on a five-point rating scale: (a) Not Important, (b) Somewhat Important, (c) Important, (d) Very Important and (e) Extremely Important.

Similarly, the impact of COVID-19 on each of these operations / programmes was assessed using a 5 point rating scale: “Not Important” for impacts of 0-19%, Slightly High for impacts of 20%-39%), Moderately High for impacts of 40%-59%, Very High for impacts of 60%-79% and Extremely High for impacts of 80%-100 %.

LINKING IMPORTANCE AND IMPACT

Understanding the importance attached to each of these PA operations / programmes is key to appreciating the impact of COVID-19 on each one of them, and all of them considered together, both at the continental and regional levels.

Linking “level of impact” to “importance rating” can be useful in determining where priority interventions should be directed when allocating limited resources. That should be the case for any operation accorded high importance and has been hit hard by the pandemic.

REPORTING OF IMPORTANCE RATING AND LEVEL OF IMPACT

In the analysis and reporting, the importance of each operation is presented as “**Not Important**”, **Low** (for those rated as “Somewhat Important”), “**Medium**” (for those rated as “Important”) and “**High**” (for those rated as “Very High” to “Extremely High”). Likewise, the impacts of COVID-19 are presented as “**Not Important**” (for those rated 0-19%), **Low** (for

those rated 20-39%), **“Medium”** (for those rated 40-59%) and **“High”** (for those rated 60-100%). In both cases, the “very high” and ‘extremely high” ratings are combined.

Analysis was done both at the continental and regional levels to understand how the impacts of COVID-19 were being felt across Africa, and to detect similarities and differences between regions. For this purpose, Africa was divided into two blocks, Southern and Eastern Africa and Central Africa and Western Africa. Algeria, the only country from Northern Africa that responded was grouped together with Western and Central Africa.

REPORTING ON OPEN-ENDED QUESTIONS

The open-ended questions sought clarifications on some key issues, including (Qi) factors that had reduced the ability of PAs to cope with the impacts of COVID-19, (Qii) how long PAs would effectively carry out their mandates under the constraints imposed by COVID-19, (Qiii) the kind of support that would be needed for PAs to better cope with COVID-19, (Qiv) ways of enhancing financial stability of PAs beyond tourism, and (Qv) the support that would be needed to safeguard the livelihoods of communities neighboring PAs.

Each country was asked to give three responses for each question.

In the analysis, all the related responses in each question were grouped together and then tallied. For example, in (Qi) above, all responses that mentioned “finances”, “revenue”, “funding”, “cash”, “income”, “budget” and “money”, were grouped under “Finance”. The number of countries providing similar responses to the same question were counted and presented as a percentage of the total number of countries that responded to the question. Due to the wide range of responses in open ended questions, only the top two or three responses for each question were accorded a percentage value. However, the rest are also mentioned in the report.

4. RESULTS

The countries that responded to the questionnaire were Algeria, Benin, Cameroon, Chad, Ethiopia, Ghana, Guinea-Bissau, Madagascar, Malawi, Mozambique, Niger, Nigeria, Rwanda, Sao Tome and Principe, Seychelles, Somalia, Sudan, Swaziland and Uganda. Ten of these were from the Eastern and Southern African region while the other nine were from the Western and Central African region.

4.1 ASSESSMENT OF THE IMPACT OF COVID-19 ON PAS: FIXED QUESTIONS

This section shows the results of the impacts of COVID-19 on various core PA operations and programmes, referred to as “basic conservation operations” or “operational elements” in the questionnaire. There were 23 operations and programmes ranging from “protecting endangered species” to “conducting regular field patrols” (See table 1 for the full list).

4.2 IMPACTS OF COVID-19: THE BIG PICTURE

The results presented in this section are in response to the two questions below:

Q1: How IMPORTANT is the element of the basic conservation operation below?

Q2: What PROPORTION of the operational element is impacted by COVID-19?

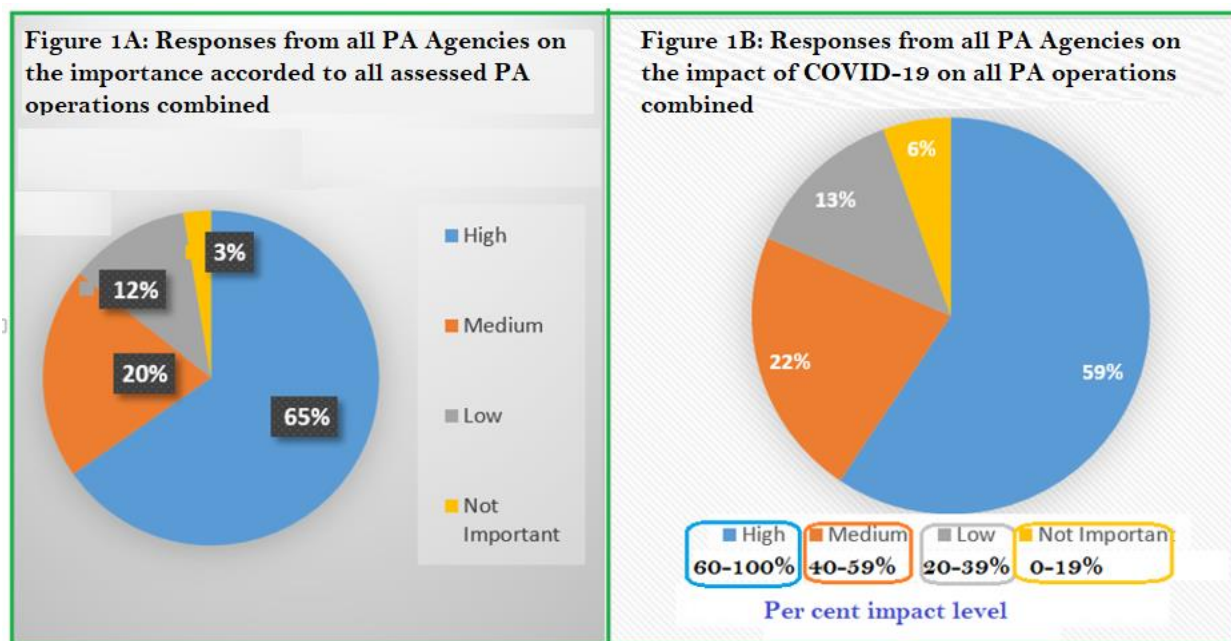
For brevity, each of these 23 functional elements will be referred to as “PA operation”.



Maasai Mara National Reserve: No tourists in sight

Figure 1A shows Africa-wide responses on the level of Importance accorded to all the 23 PA operations while Figure 1B shows the impact of Covid-19 on the same.

Figure 1: Combined importance accorded to all PA operations and the impact of COVID-19 pandemic.



97% of the responses show that the 23 operations selected for assessment were important in achieving the mandates of Africa’s protected area agencies. Of these, 65% were rated as of “high importance”, 20% as of “medium importance” and 12% as of “low importance” and 3% as “not important”.

94% of the responses show that the 23 operations selected for assessment were impacted by COVID-19 to some degree. Out of these 59% rated the level of impact as “high”, 22% “medium” 13% “low and 6% “not important”.

Figures 1A and 1B show that COVID-19 has significantly affected the work of PA agencies across the continent. That 59% of the impacts were considered to be high testifies to the significance of the devastation caused by the pandemic.

The widespread impact of COVID-19 may necessitate the development of Africa-wide strategies for responding to this and future pandemics.

A few countries reported that the impact of COVID-19 on some operations such as management of human wildlife conflict or protecting endangered species was “low” or “not important”. Further studies will be necessary to understand the circumstances on the ground or the management measures that could be attributed to such desirable outcomes.

4.3 COVID-19 IMPACTS ON SPECIFIC OPERATIONS

Table 1 below compares the proportion of African counties that rated individual PA operations as of high importance with those that reported high impact from Covid-19 on each of the operations.

Table 1: Number of African countries reporting high impact of COVID-19 on important operations.

| PA operations Assessed | % Countries reporting that an operation is of High importance | % Countries reporting that COVID-19 impact on the operations is High |
|--|---|--|
| Supporting conservation outside Pas | 84.2 | 63.0 |
| Monitoring illegal wildlife trade | 78.9 | 78.5 |
| Collaboration with researchers | 78.9 | 52.0 |
| Protecting endangered species | 78.9 | 57.0 |
| Intelligence gathering | 73.7 | 74.0 |
| Carrying out investigations | 73.7 | 68.5 |
| Collaboration with other arms of government | 73.7 | 68.0 |
| Ensuring security of tourists and related facilities | 73.7 | 63.0 |
| Conducting anti-poaching operations | 73.7 | 53.0 |
| Conducting research and monitoring activities | 68.4 | 63.0 |
| Conducting regular field patrols | 68.4 | 57.0 |
| Generating revenue from tourism | 68.4 | 78.5 |
| Carrying out training programs | 63.2 | 68.5 |
| Collaboration with local communities | 63.2 | 63.0 |
| Managing human wildlife conflicts | 63.2 | 51.0 |
| Carrying out conservation education and outreach | 63.2 | 57.0 |
| Conducting search and rescue operations | 52.6 | 45.5 |
| Handling emergency wildlife incidents | 47.4 | 47.0 |
| Maintaining internal communications | 47.4 | 21.5 |
| Maintenance of critical infrastructure | 47.4 | 31.0 |
| Collaboration with NGOs | 42.1 | 51.0 |
| Collaboration with private landowners | 42.1 | 51.0 |
| Generating revenue from non-tourism sources | 42.1 | 78.5 |

Note: Importance rating can be either a strength or weakness depending on country-specific circumstances. For example, a country with high poaching incidents will likely rate anti-poaching as an important management priority while a country with no or low poaching incidents may give anti-poaching a low importance rating.

4.3(A) RESULTS ON PROPORTION OF AFRICAN COUNTRIES REPORTING VARIOUS OPERATIONS AS OF HIGH IMPORTANCE

- There is a broad recognition that supporting conservation outside protected areas, i.e., using the landscape approach to conservation is a very important strategy for PAs.
- Monitoring illegal wildlife trade and protecting endangered species are important operations in nearly 80% of African countries. Both are mainly as a result of poaching and may explain why other operations such as intelligence gathering, carrying out investigations, conducting regular field patrols, entering into collaboration with other arms of government have high importance ratings. Collaboration with researchers is also considered important in many countries probably because, besides generating information, they also provide extra eyes and resources on the ground.
- Less than 50% of African countries accord high importance to collaborations with NGOs and private landowners, a surprising observation considering how these partners can contribute to more effective management and governance of PA agencies...
- More countries accord high importance to revenue generated from tourism than that generated from all other sources put together. The narrow revenue base for countries that rely on tourism render them vulnerable to crises affecting the tourism industry.

4.3(B) RESULTS ON PROPORTION OF AFRICAN COUNTRIES REPORTING HIGH IMPACT OF COVID-19 ON OPERATIONS THEY HAVE RATED AS OF HIGH IMPORTANCE

- The PA operations most widely impacted by the pandemic are those related to revenue generation, whether from tourism or from other sources.
- Also widely affected are operations that require mobility of PA officers or their interactions with other people. These include monitoring illegal wildlife trade, intelligence gathering, training activities and investigations and collaboration with local communities. PA operations that may not require much interactions with outsiders are accorded high importance in less than 50% of the countries. These are “maintaining internal communication, maintenance of critical infrastructure and search and rescue operations.”
- About half of the countries reported high impact on important biodiversity conservation activities such as protection of endangered species, conducting regular security patrols and conducting anti-poaching activities.

4.3(C) COVID-19 IMPACTS ON RELATED PA OPERATIONS

The 23 PA operations were grouped into five categories as shown in table 2 below and the impacts of COVID 19 analyzed for each category at continental and regional levels. A self-explanatory chart on “importance rating” for the operations in each category is presented together with the results of the impact of COVID-19 for comparison.

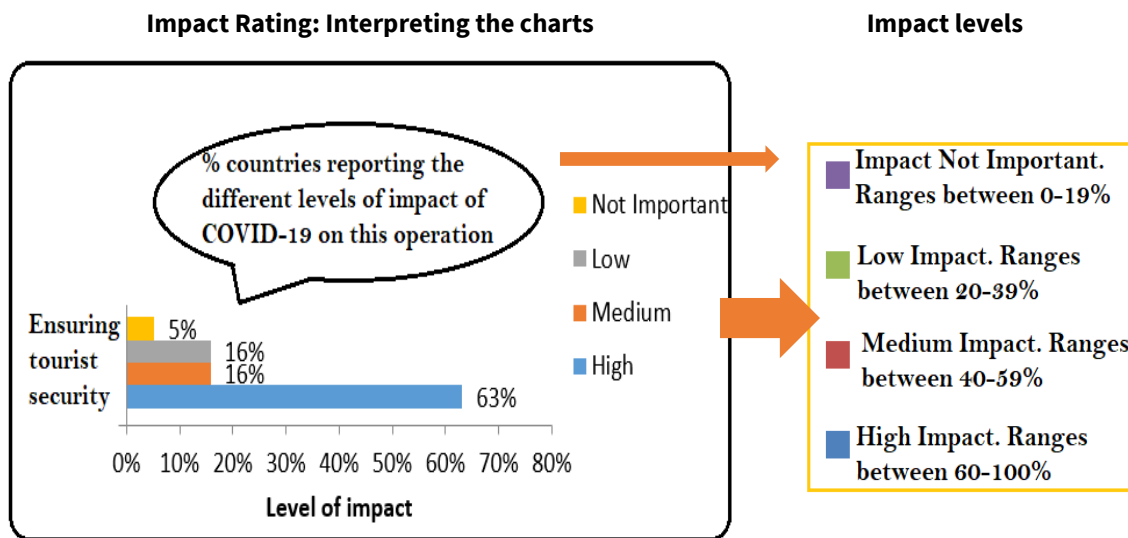
Due to the diverse geographical, climatic, ecological, social, economic, political, cultural and other factors that exist across the continent, some PA operations are more important in some countries than in others. Similarly, the impacts of COVID-19 on these operations are also likely to differ. The section below shows how these differences manifest themselves within Africa and between the two African regions.

Table 2: Categories of core PA Operations

| Biodiversity related operations | Security related operations | Collaborations | Revenue generation operations |
|---|--|---|--|
| Supporting conservation outside protected areas | Ensuring security of tourists and related facilities | Collaboration with other arms of government | Generating revenue from non-tourism sources |
| Monitoring illegal wildlife trade | Intelligence gathering | Collaboration with researchers | Generating revenue from tourism |
| Conducting regular field patrols | Carrying out investigations | Collaboration with local communities | Enabling operations |
| Protecting endangered species | Managing human wildlife conflicts | Collaboration with non-governmental organizations | Carrying out conservation education and outreach |
| Conducting anti-poaching operations | Conducting search and rescue operations | Collaboration with private landowners | Maintaining internal communications |
| Conducting research and monitoring activities | | | Maintenance of critical infrastructure |
| Handling emergency wildlife incidents | | | Carrying out training programmes |

The detailed results of the impacts of COVID-19 are presented in graphic form in the section below. Figure 2 provides highlights on how to read the graphics.

Figure 2: Key to understanding the results presented in figures 3-17



NOTE: This report does not attempt to explain why some PA operations are rated higher than others or why the impact of COVID-19 pandemic is high, low or not important for some operations, or in different regions. A follow up within the Africa Protected Areas Leader’s Forum will help clarify the results obtained in this survey.

Figure 3: Impacts of COVID-19 on important biodiversity related operation

Fig 3A: Importance accorded to biodiversity related operations in PAs in Africa

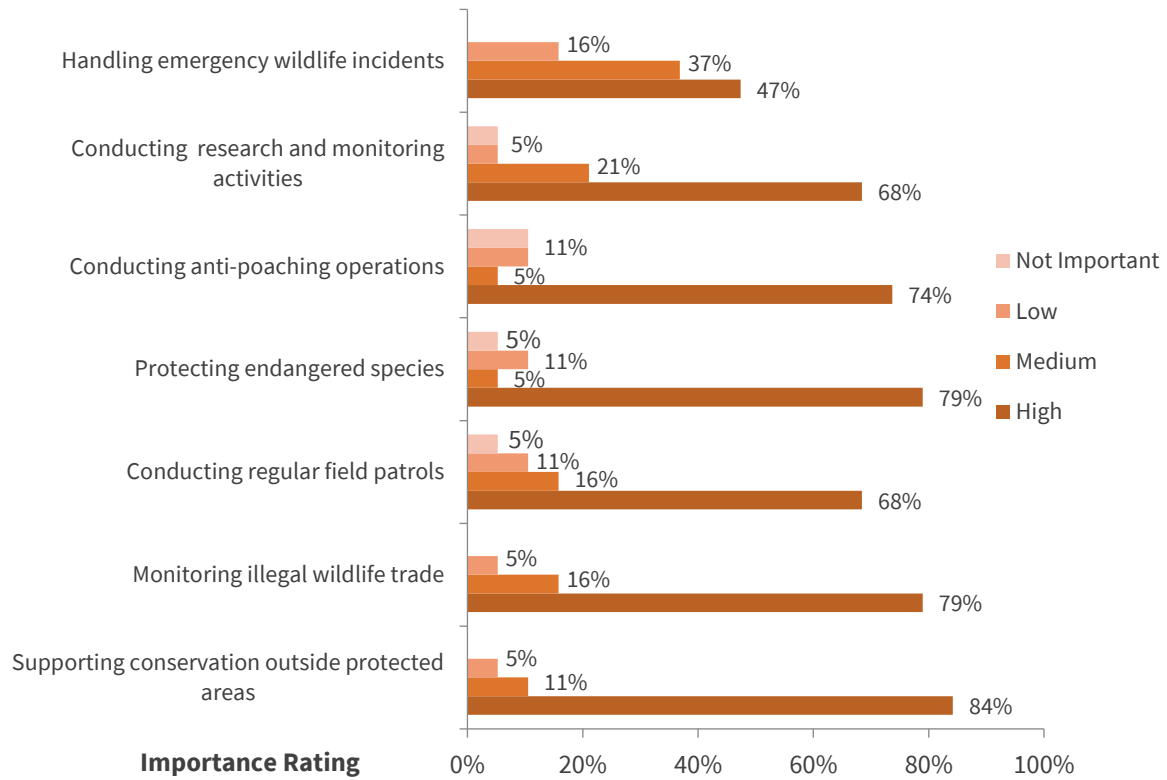


Fig 3B: Impacts of COVID-19 on biodiversity related operations in PAs in Africa

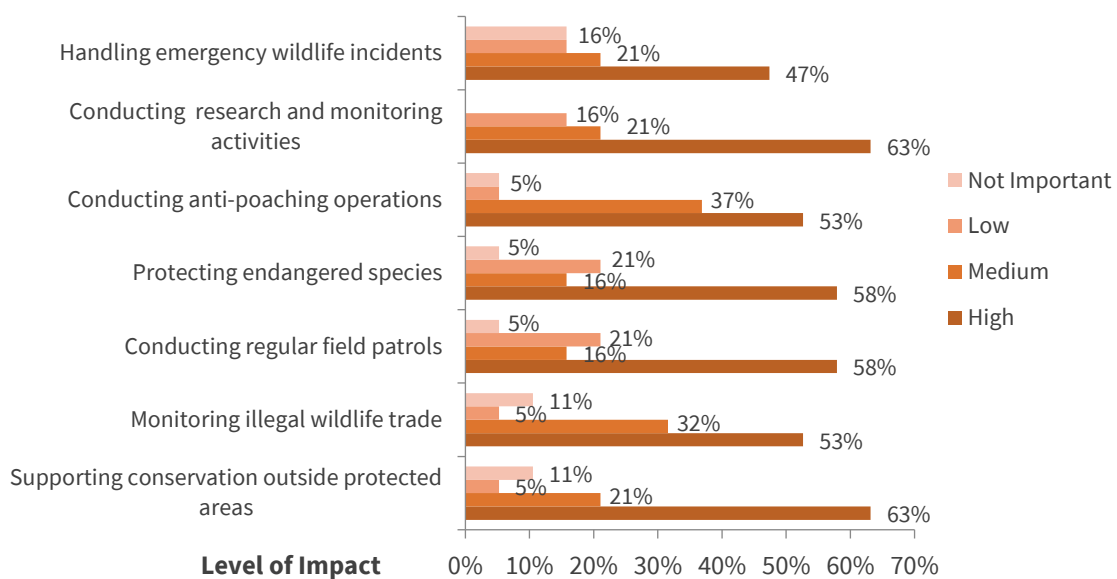


Figure 4: Impacts of COVID-19 on important security related operations

Figure 4A: Importance accorded to security related operations in Africa

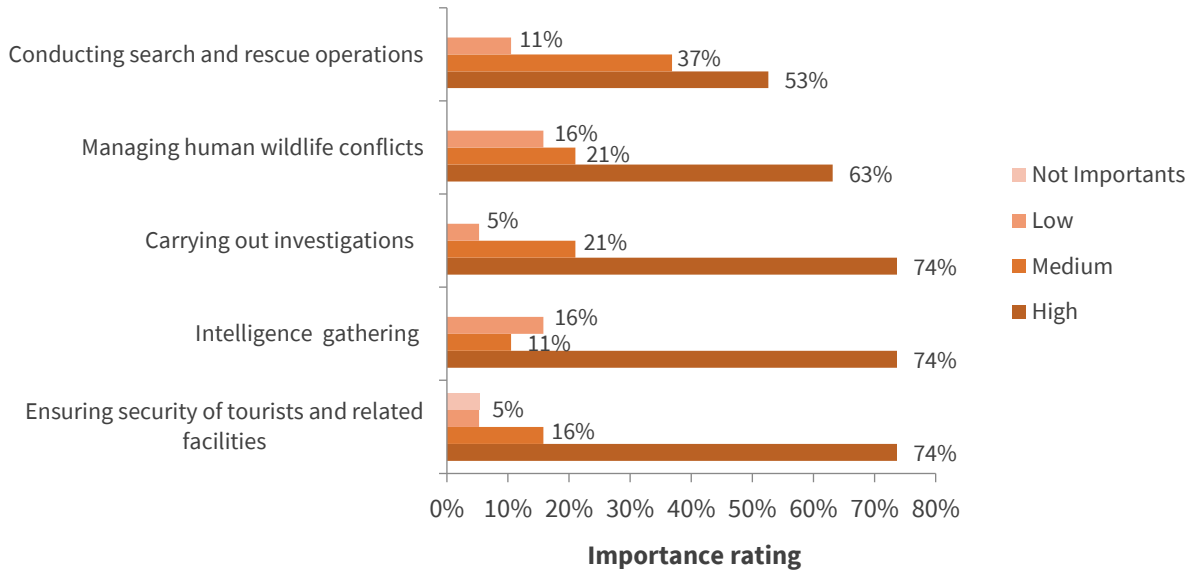


Figure 4B: Impacts of COVID-19 on security related operations in Africa

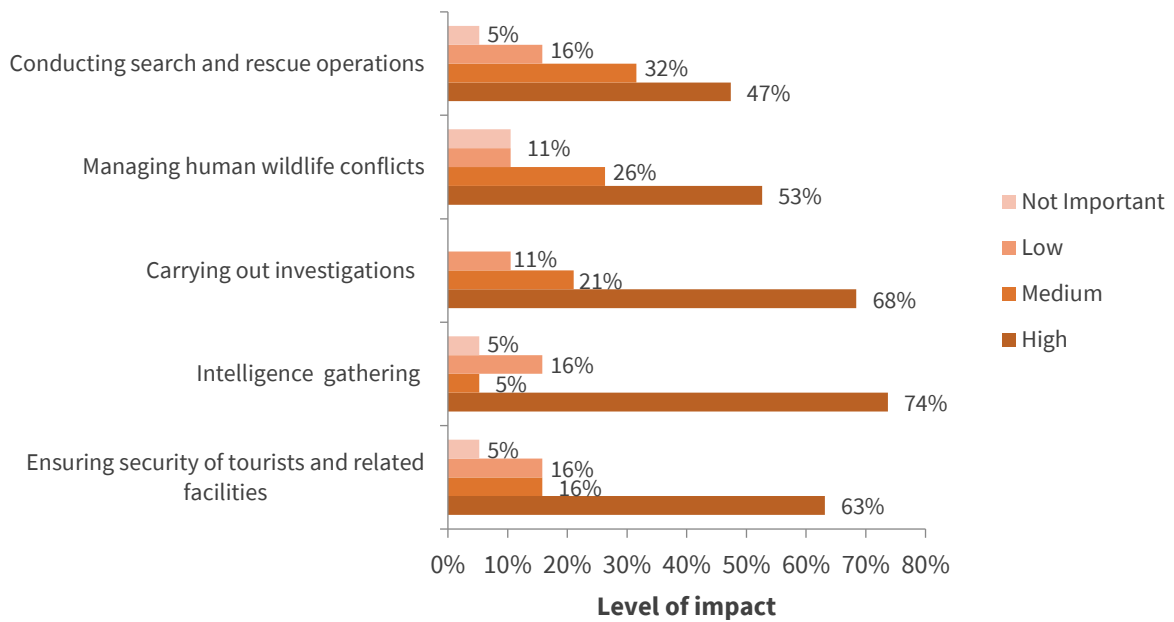


Figure 5: Impacts of COVID-19 on important revenue sources

Figure 5A: Importance accorded to tourism and other revenue sources in Africa

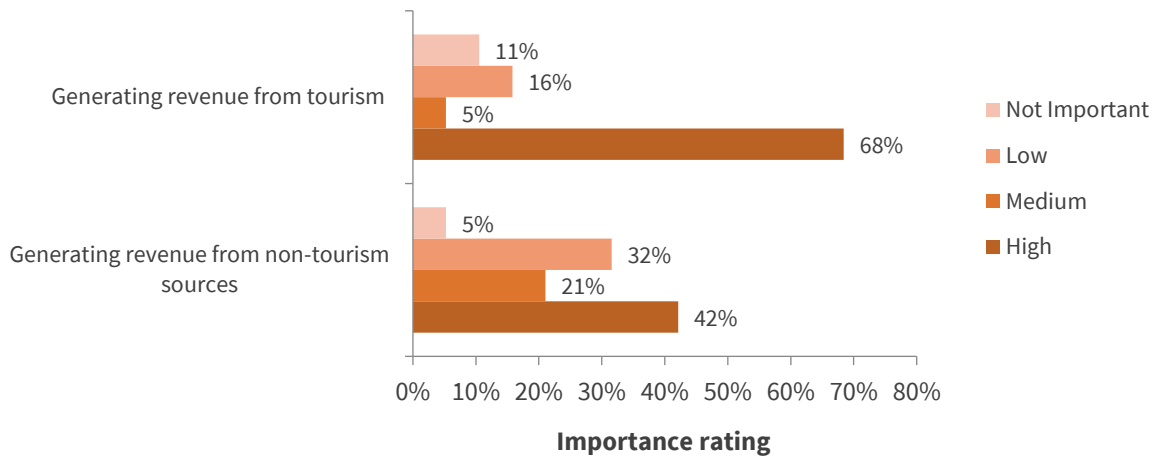


Figure 5B: Impacts of COVID-19 on tourism revenue and other revenue sources in Africa

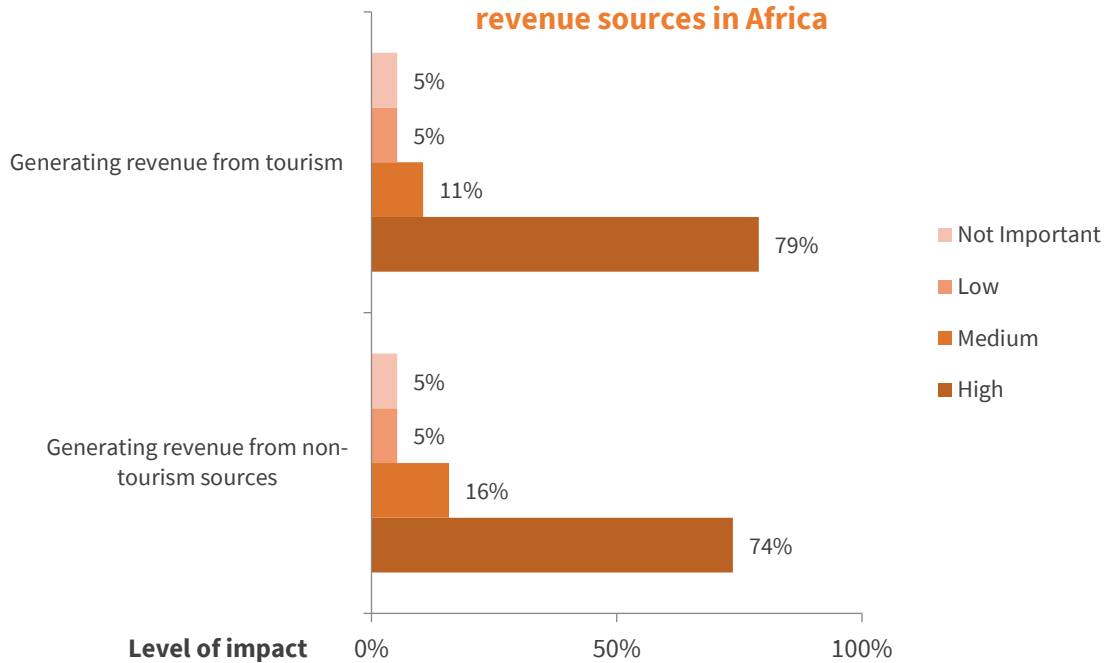


Figure 6: Impacts of COVID-19 on important collaborations with key partners

Figure 6A: Importance accorded to collaborations with selected partners

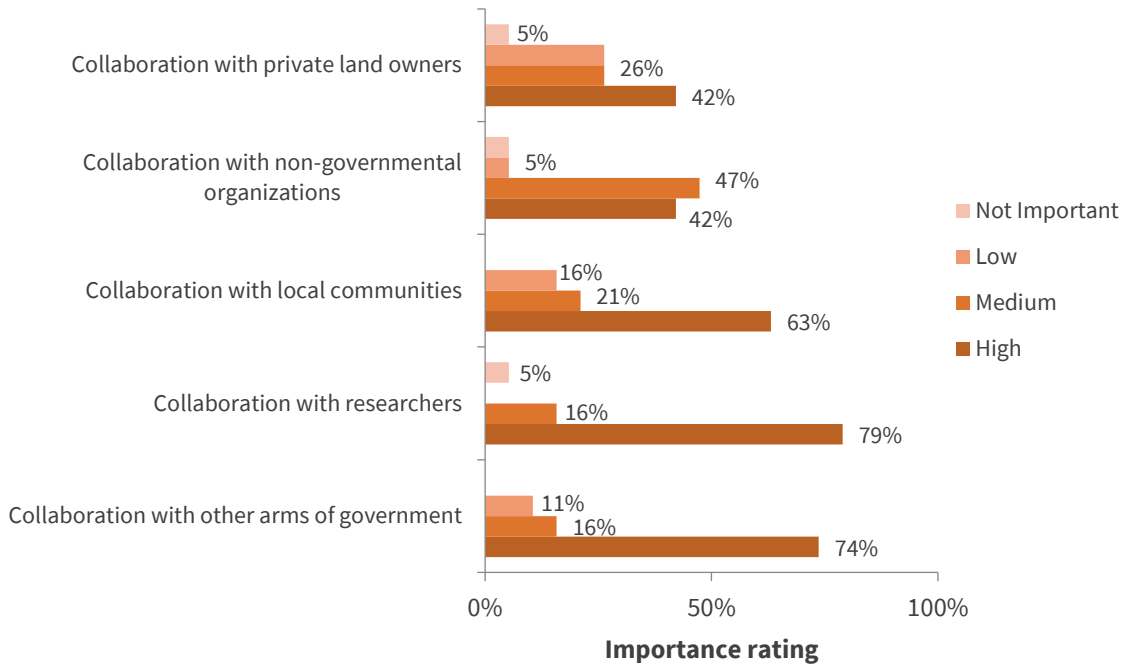


Figure 6B: Impacts of COVID-19 on collaborations with selected partners

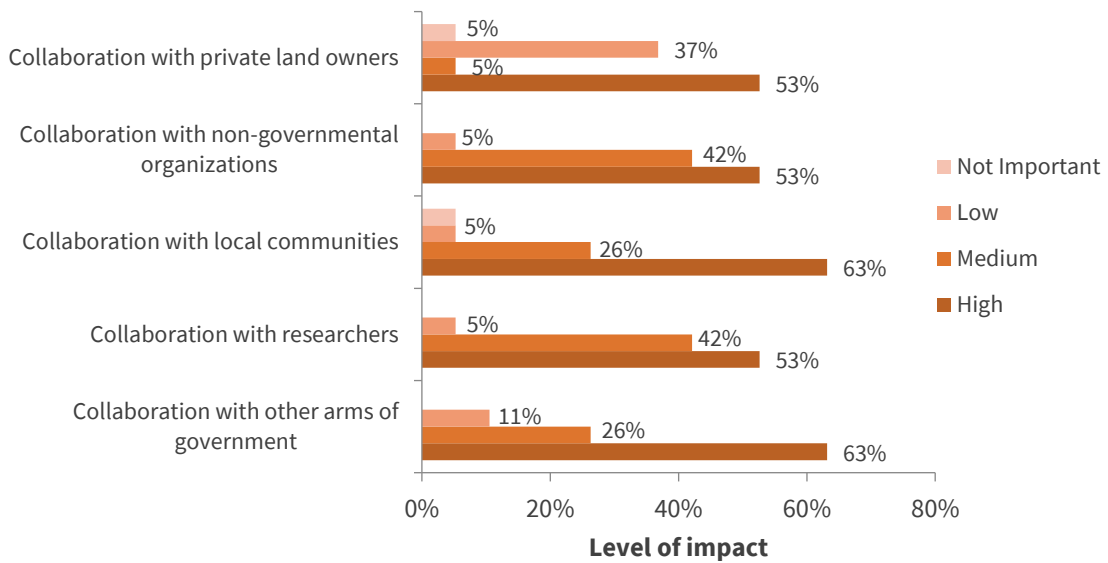


Figure 7: Impacts of COVID-19 on important enabling functions

Figure 7A: Importance accorded to various enabling functions

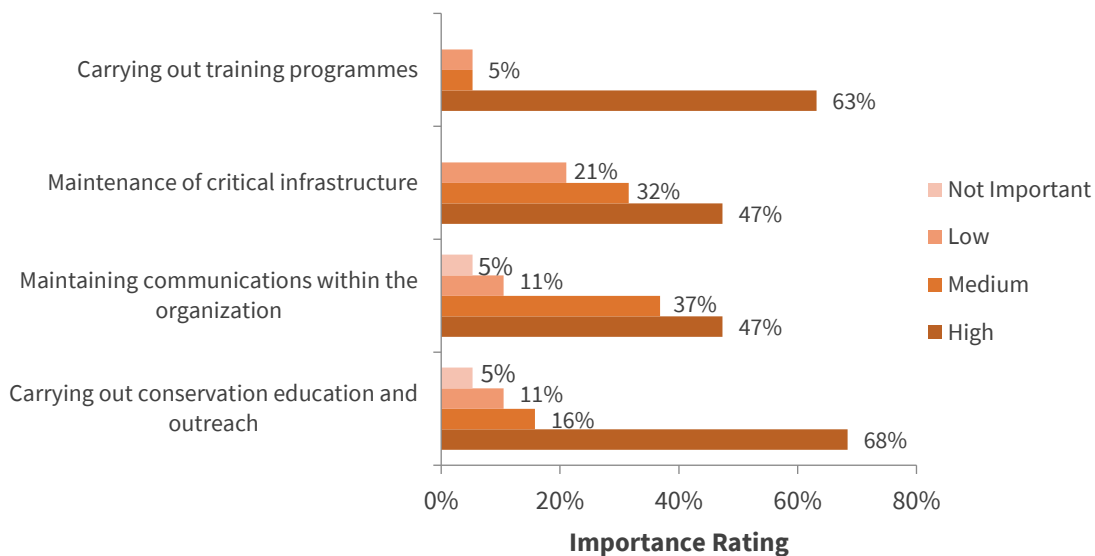
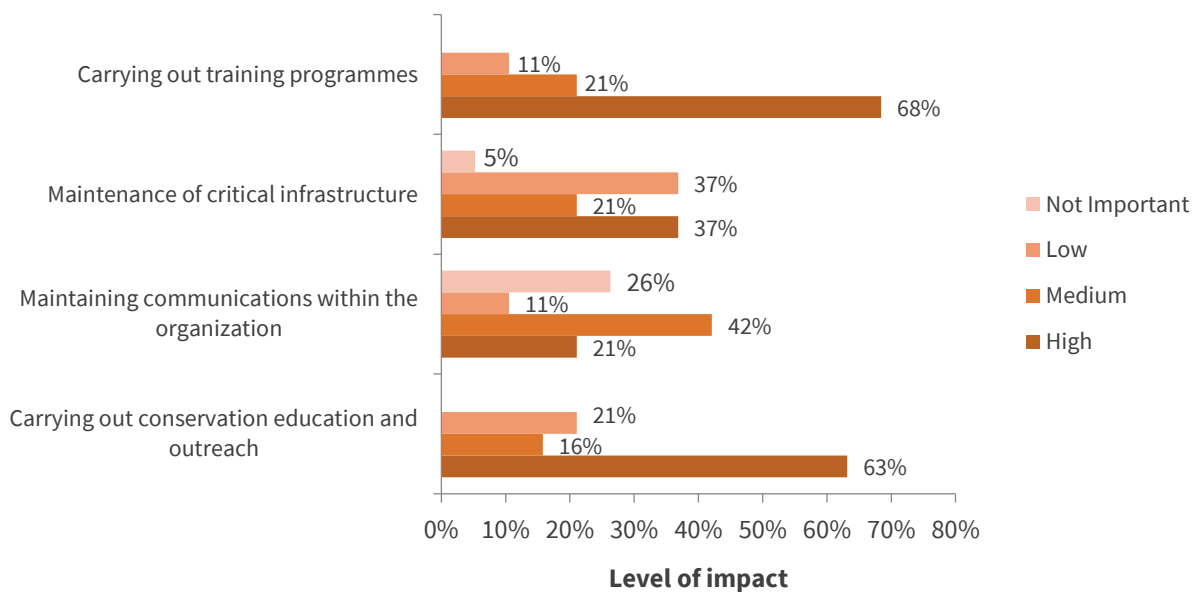


Figure 7B: Impacts of COVID-19 on selected enabling functions



4.4: A REGIONAL PERSPECTIVE: IMPORTANCE ACCORDED TO VARIOUS PA OPERATIONS IN EASTERN AND SOUTHERN AFRICA (E&S AFRICA) AND WESTERN AND CENTRAL AFRICA (W&C AFRICA).

Figure 8A: Biodiversity related Operations: A comparison between E&S Africa and W&C Africa

Figure 8A: Importance accorded to biodiversity related operations in E&S Africa

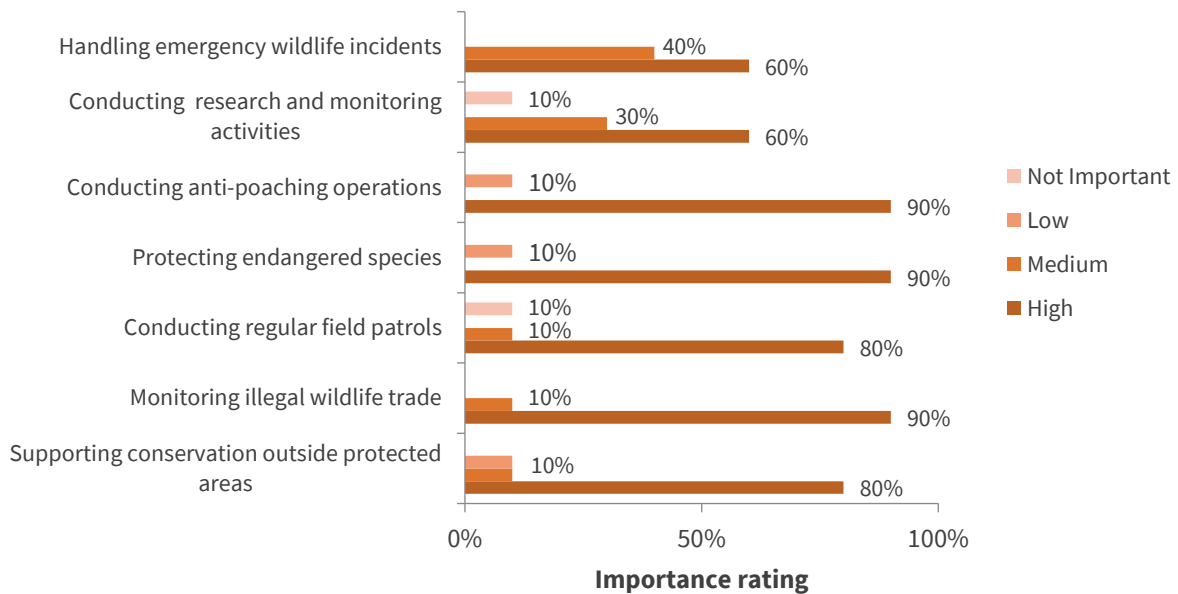


Figure 8B: Importance accorded to biodiversity related operations in W&C Africa

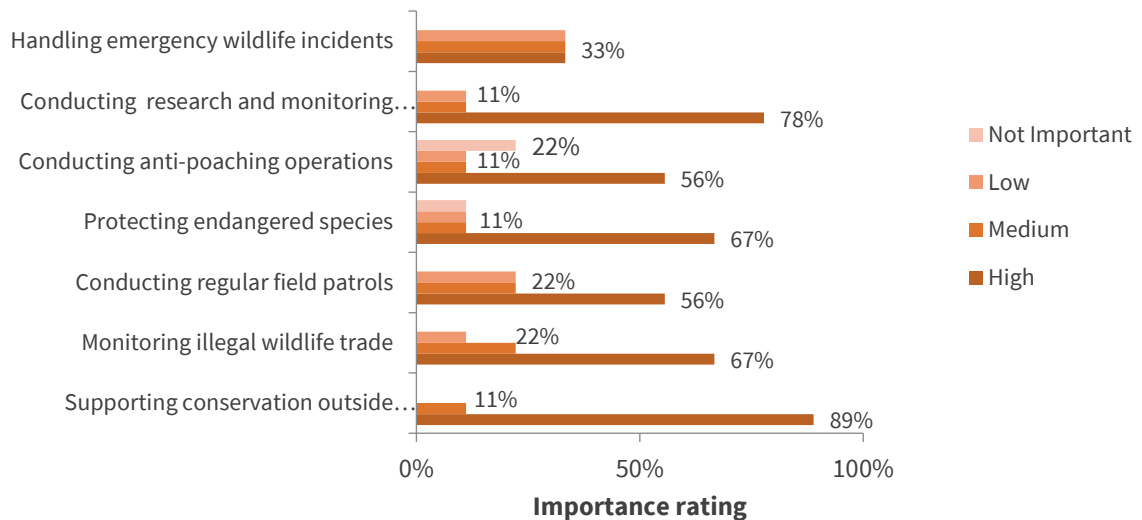


Figure 9: Security related operations: A comparison between E&S Africa and W&C Africa

Figure 9A: Importance accorded to security related operations in E&S Africa

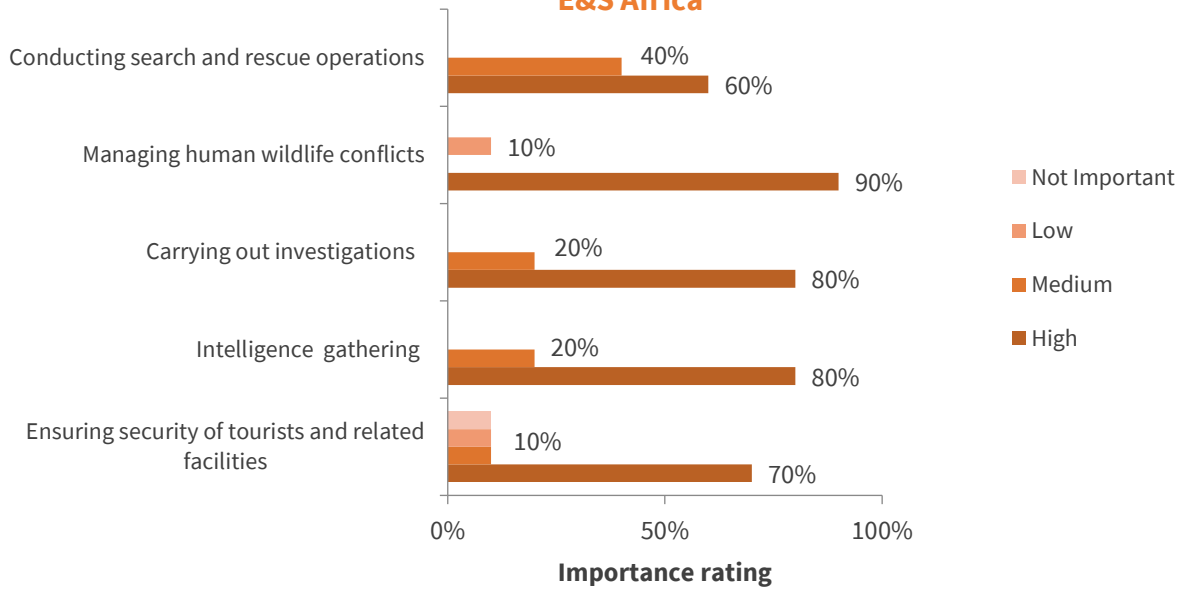


Figure 9B: Importance accorded to security related operations in W&C Africa

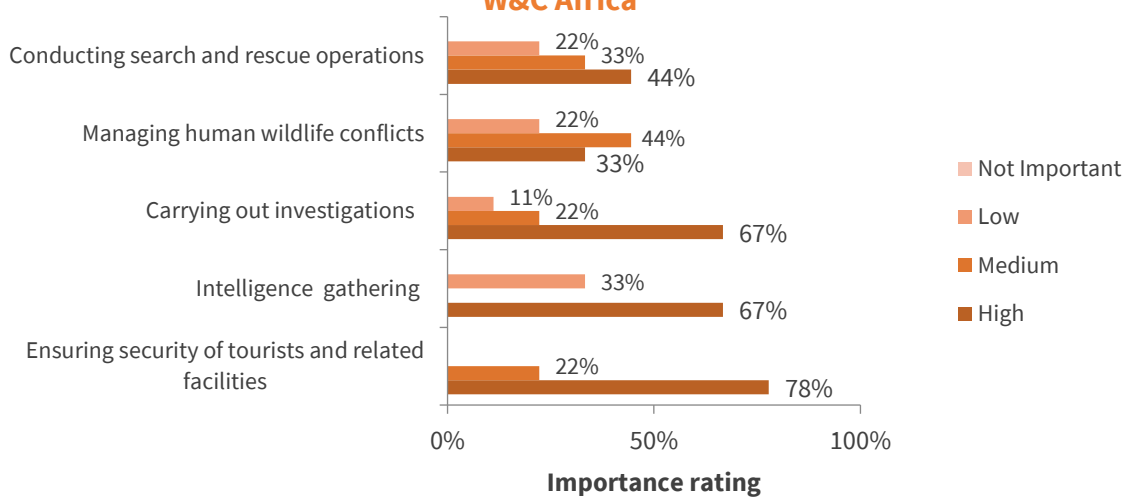


Figure 10: Revenue Generation Sources: A comparison between E&S Africa and W&C Africa

Figure 10A: Importance accorded to tourism and other revenue sources in E&S Africa

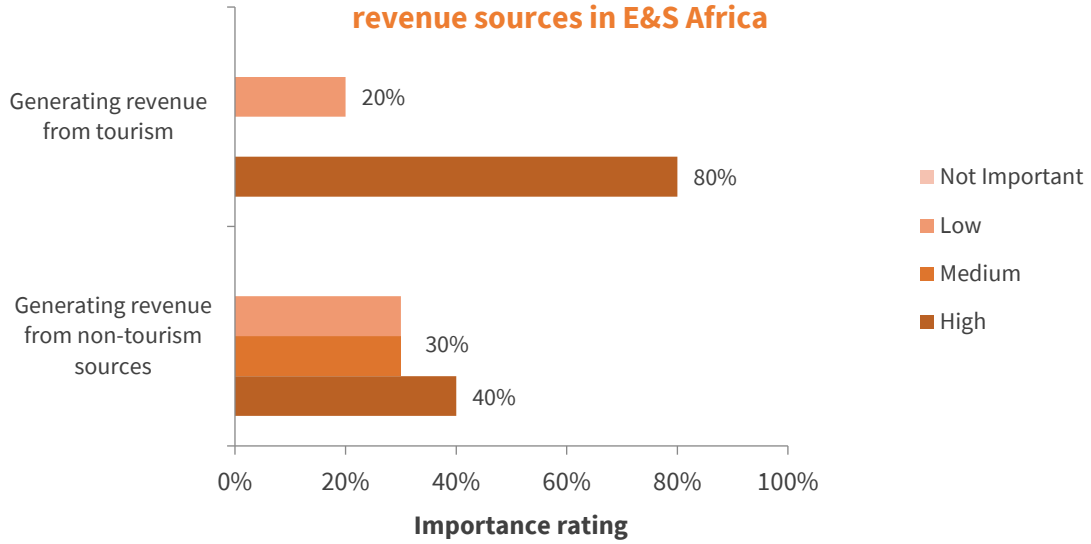


Figure 10B: Importance accorded to tourism and other revenue sources in W&C Africa

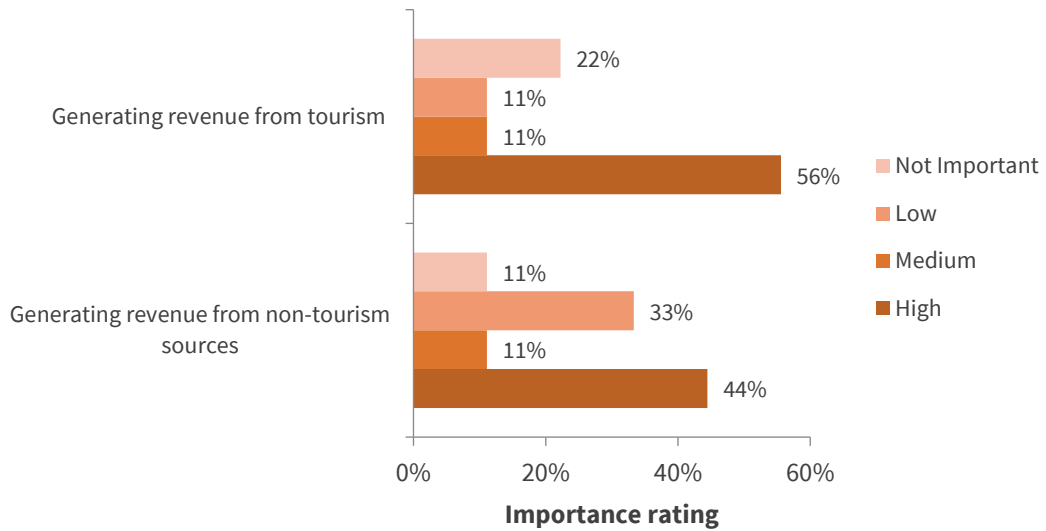


Figure 11: Collaborations with key partners: A comparison between E&S Africa and W&C Africa

Figure 11A: Importance accorded to collaborations with selected partners in E&S Africa

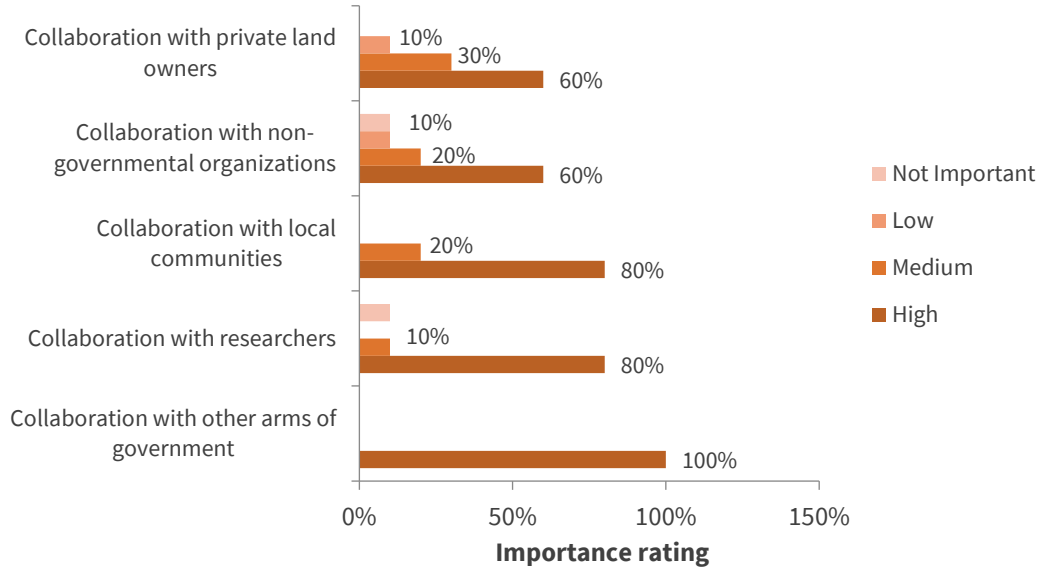


Figure 11B: Importance accorded to collaborations with selected partners in W&C Africa

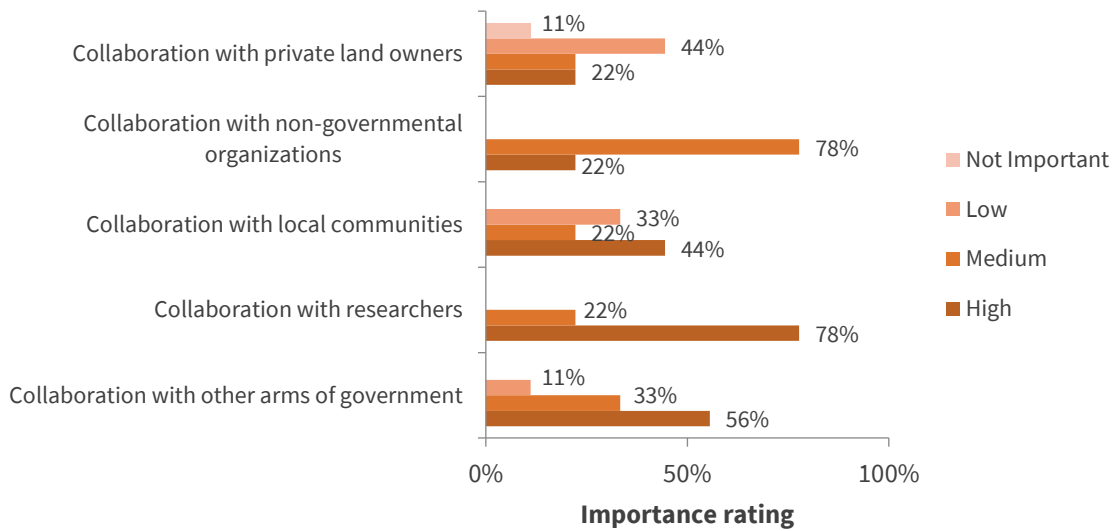


Figure 12: Selected enabling functions: A comparison between E&S Africa and W&C Africa

Figure 12A: Importance accorded to various enabling functions in E&S Africa

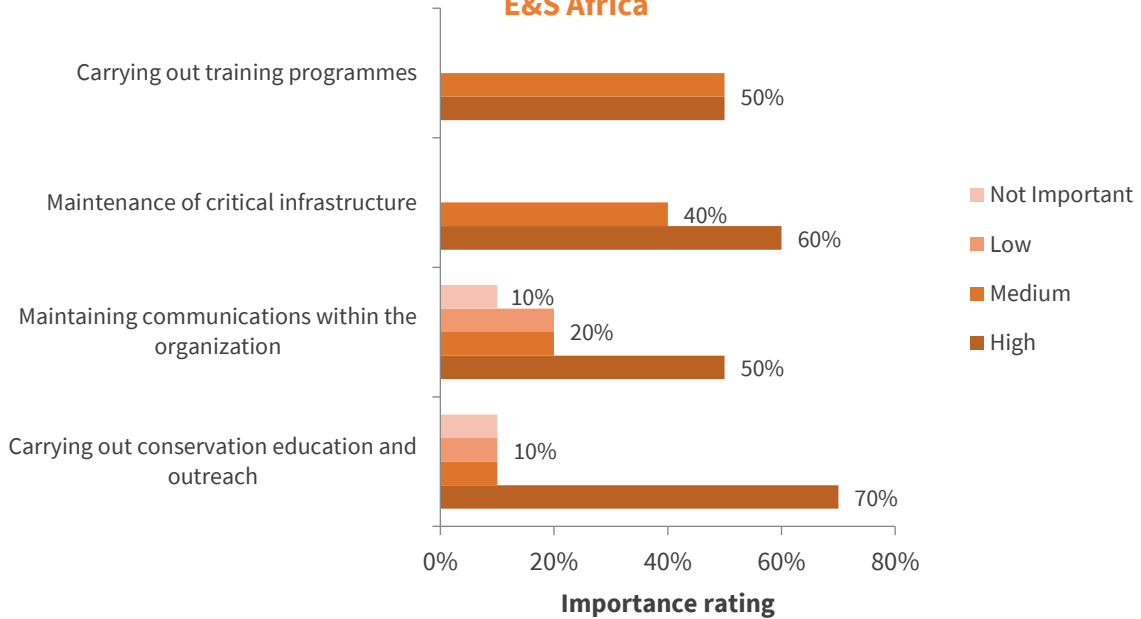
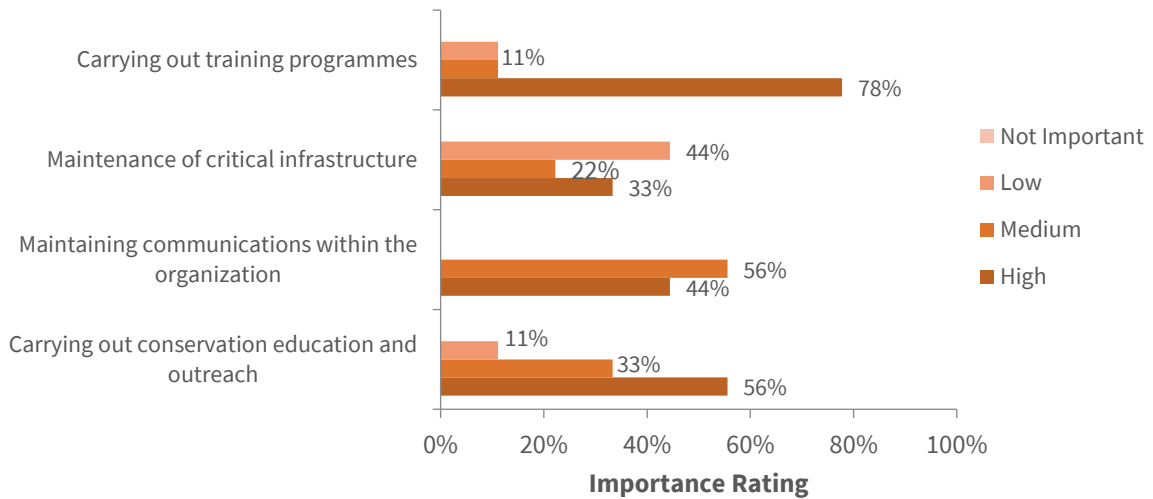


Figure 12B: Importance accorded to various enabling functions in WCA



4.5: A REGIONAL PERSPECTIVE: IMPACTS OF COVID-19 PANDEMIC ON IMPORTANT PA OPERATIONS

Figure 13: Biodiversity related operations: A comparison between E&S Africa and W&C Africa

Figure 13A: Impacts of COVID-19 on biodiversity related operations in E&S Africa

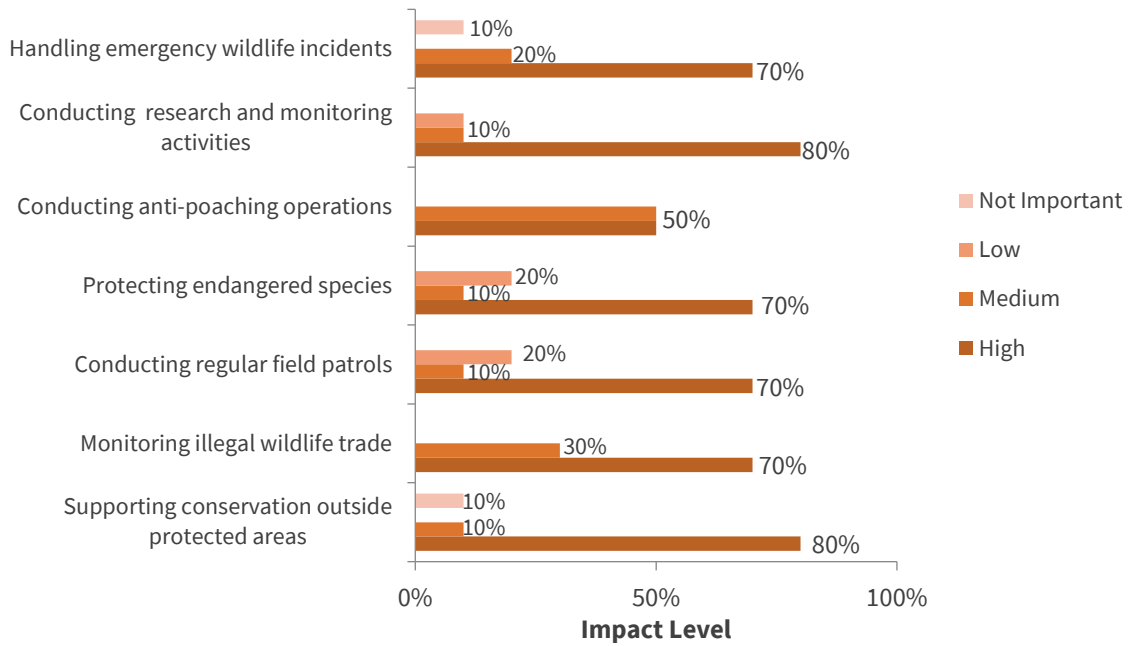


Figure 13B: Impacts of COVID-19 on biodiversity related operations in W&C Africa

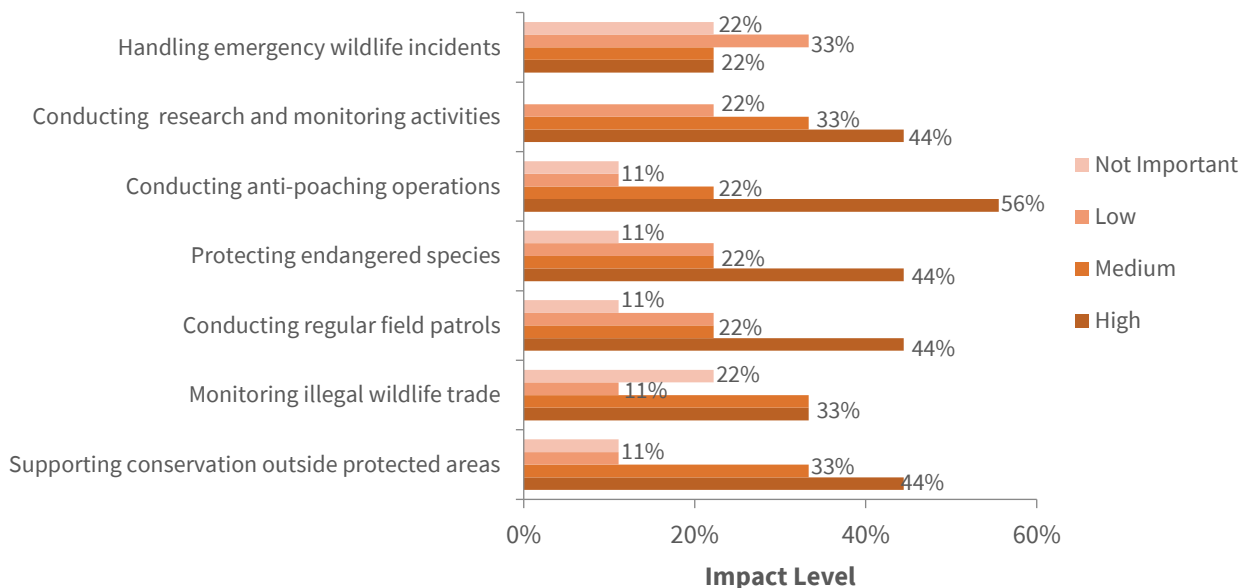


Figure 14: Security related operations: A comparison between E&S Africa and W&C Africa

Figure 14A: Impacts of COVID-19 on security related operations in E&S Africa

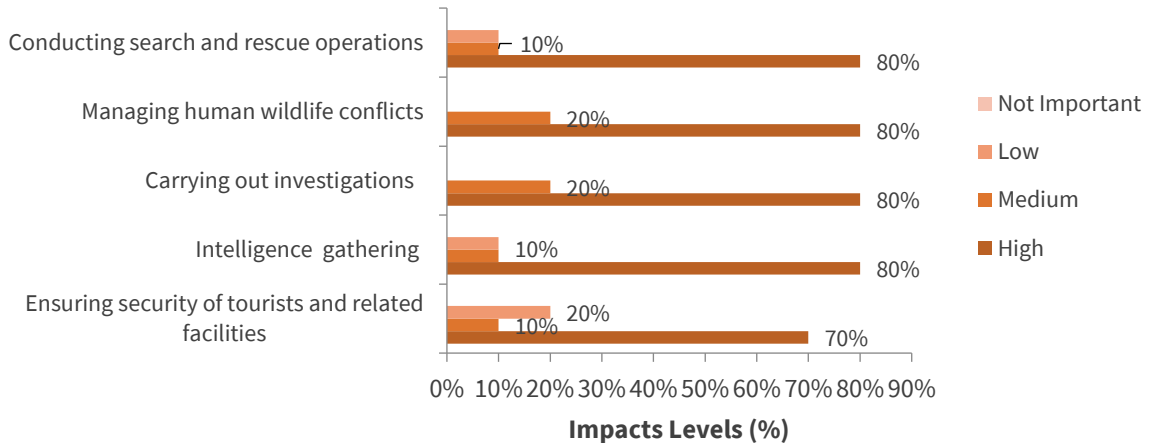


Figure 14B: Impacts of COVID-19 on security related operations in W&C Africa

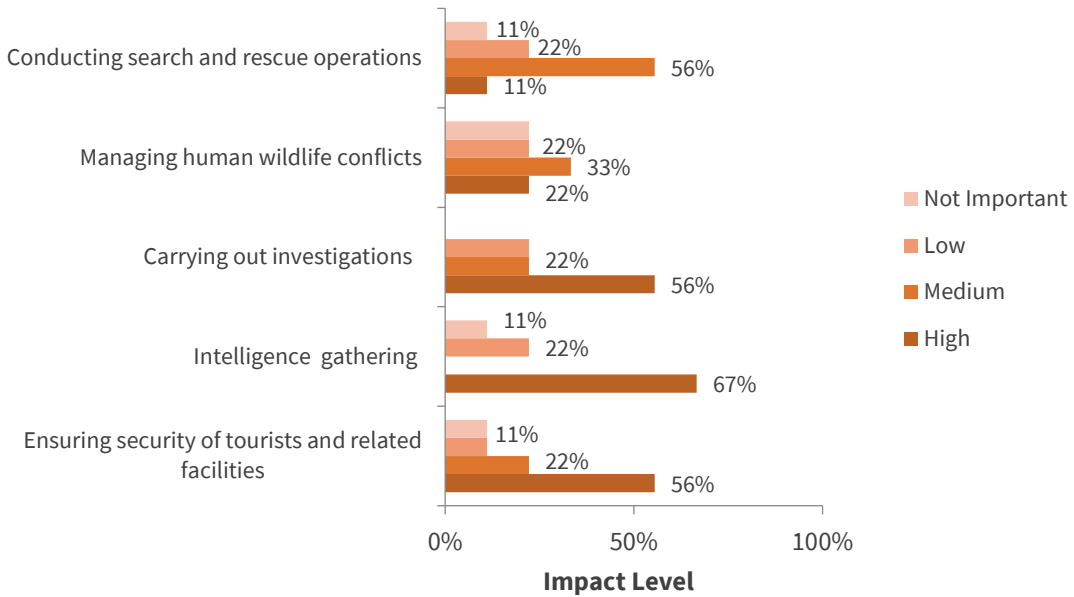


Figure 15: Revenue generation sources: A comparison between E&S Africa and W&C Africa

Figure 15A: Impacts of COVID-19 on tourism and other revenue sources in E&S Africa

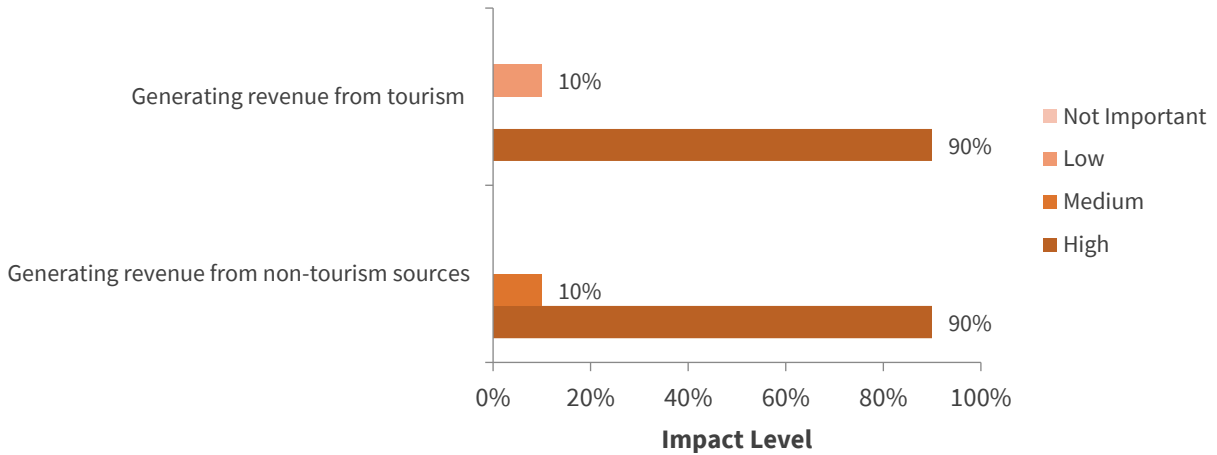


Figure 15 B: Impacts of COVID-19 on tourism and other revenue sources in W&C Africa

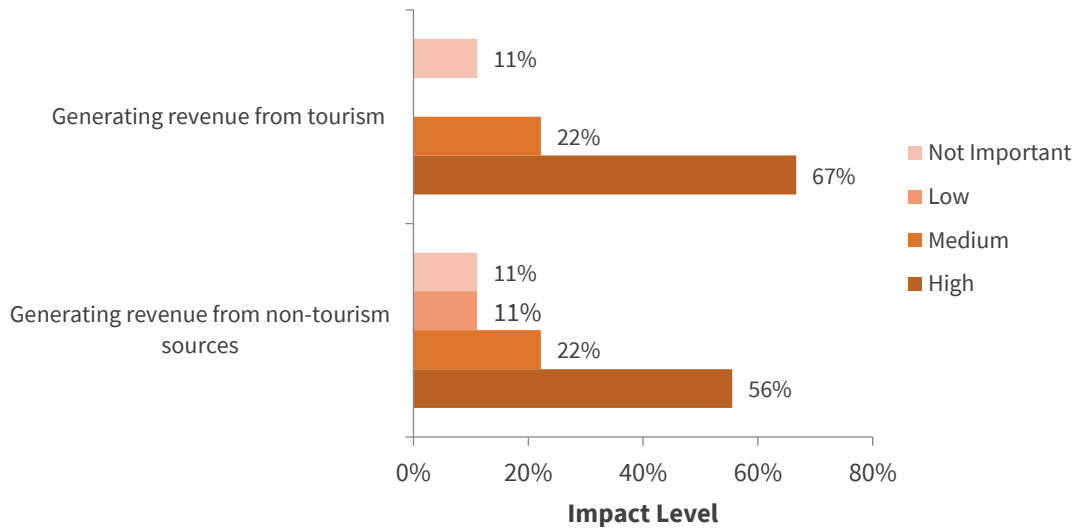


Figure 16: Collaboration with key stakeholders: A comparison between E&S Africa and W&C Africa

Figure 16A: Impacts of COVID-19 on Collaborations in E&S Africa

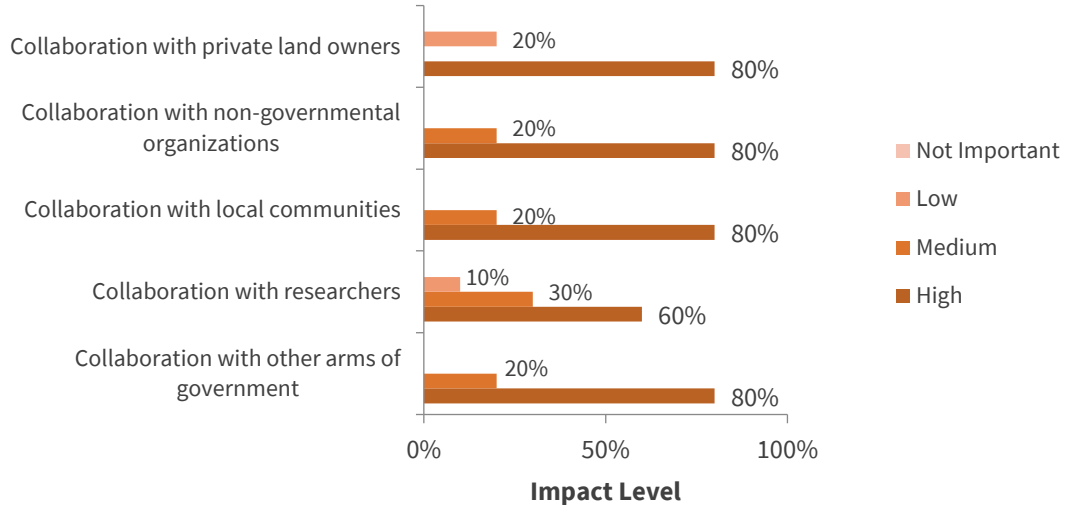


Figure 16B: Impacts of COVID-19 on collaborations in W&C Africa

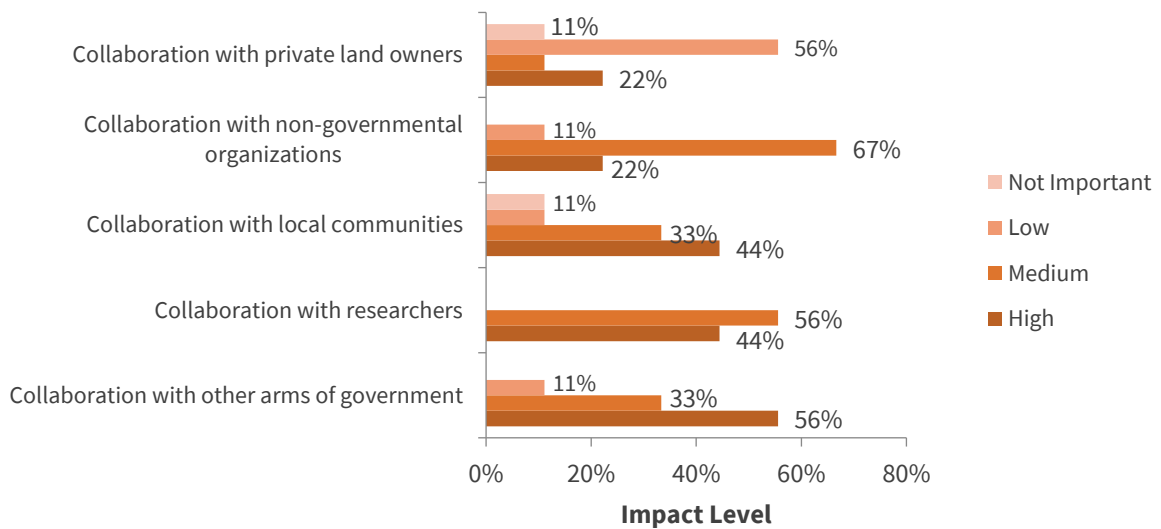


Figure 17: Selected enabling functions: A comparison between E&S Africa and W&C Africa

Figure 17A: Impacts of COVID-19 on various enabling functions in E&S Africa

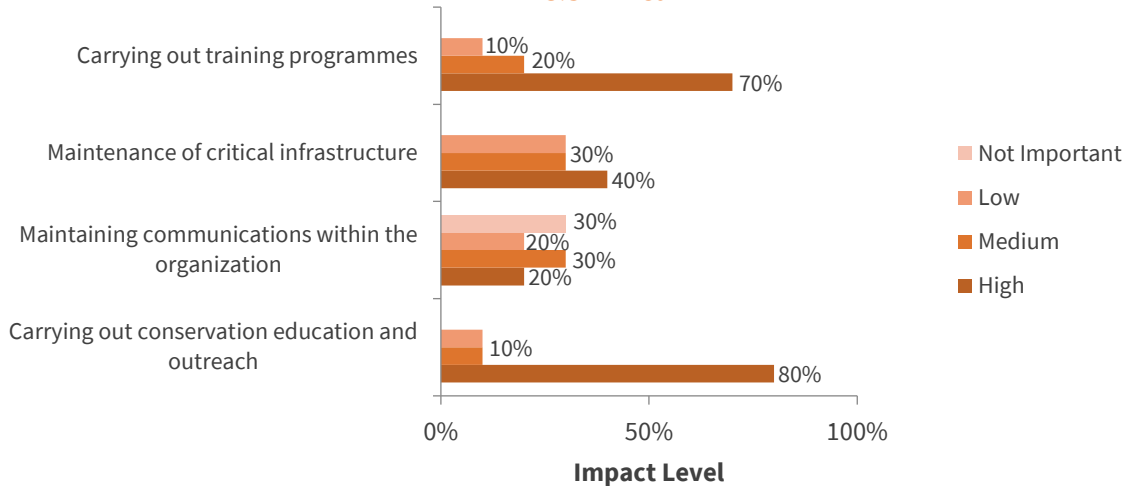
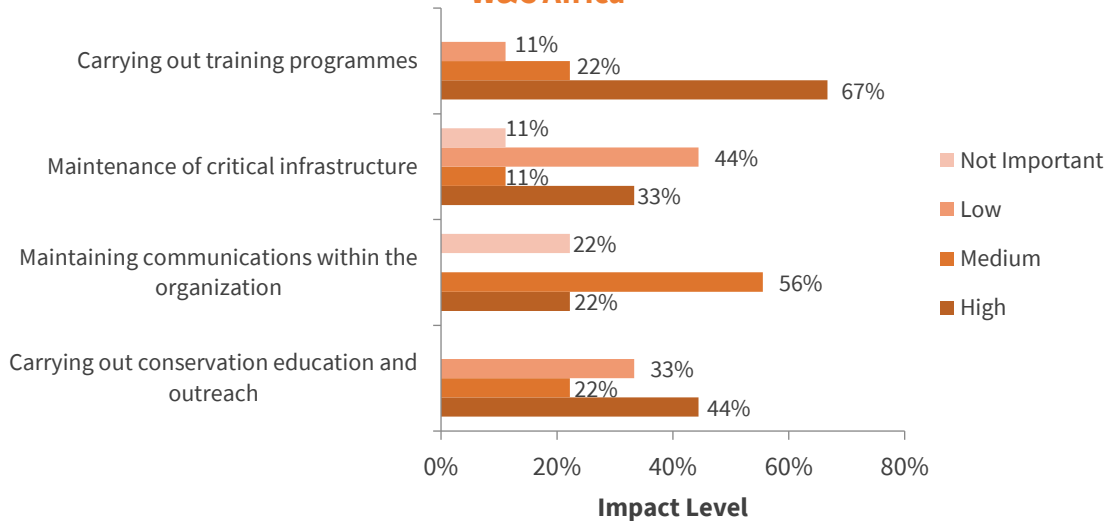


Figure 17B: Impacts of COVID-19 on various enabling functions in W&C Africa



Note: Understanding the importance attached to each of these PA operations is key to appreciating the impact of COVID-19 on each one of them. Linking “level of impact” to “importance rating” can be useful in determining where priority interventions should be directed when allocating limited resources.

4.6: RESPONSES TO OPEN ENDED QUESTIONS

The open-ended questions sought clarifications on some key issues. The questions and the responses provided are presented in the section below. Each of the 19 countries was asked to give three responses for each question.

Q1 In not more than 3 words indicate, what three key factors have most reduced your capacity to cope with the impact of COVID-19

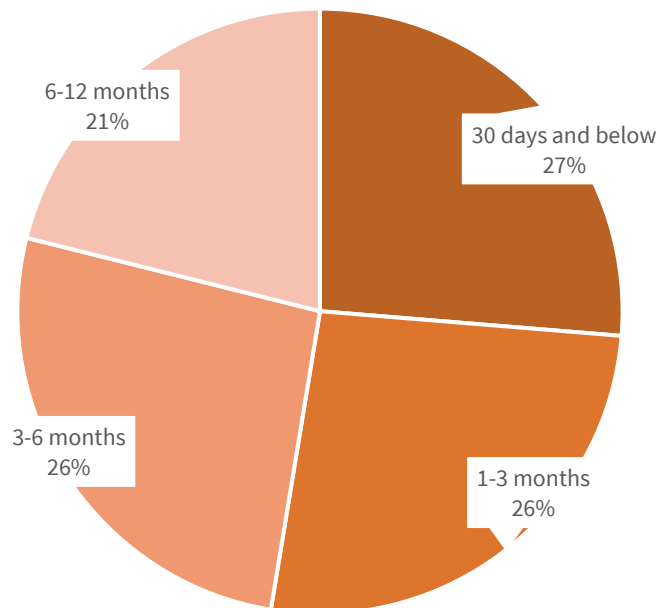
Table 3: Factors that reduced the capacity of PAs in Africa to cope with the impact of COVID-19

| Factors Cited | Additional information provided |
|---|--|
| Finance related factors. Cited by 83.3% of the countries. | Reduced income due to loss of revenue, low government funding, delayed funding, limited support from stakeholders. |
| Covid-19 related restrictions, Cited by 66.7% of the countries. | Ban on travel and meetings, curfews, inability to access offices and to make field visits. |
| Capacity issues. Cited by 50% of the countries | Limited expertise, low staffing levels |
| Insufficient facilities | Lack of personal protective equipment (PPE) to minimize exposure to the disease, Lack of appropriate technology for use both in office and in the field |
| Poor information about the disease | Lack of reliable information on COVID-19 due to low awareness of the disease, misinformation about the disease, insufficient protection from infection, confusion brought by the abruptness of decisions, lack of emergency preparedness |
| Others | Illegal wildlife trade, logistics, general lack of resources |



Q2: How long are you able to maintain PA basic operations under the prevailing circumstances?

Figure 18: Period within which African PAs would function under the conditions imposed by COVID-19 pandemic/.



Q3: In not more than 3 words indicate how you could be supported to better cope with COVID-19

Table 4: Support needed by PA Agencies to better cope with COVID-19 Pandemic

| Support needed | Additional information provided (areas of need) |
|--|---|
| Financial support. Cited by 72.2 percent of the countries | Direct funding from governments, broadening revenue base, tax relief |
| Enhancing capacity. Cited by 55.5% of the countries | Technical support, skill development, hiring of more staff, reinforcement of patrol staff |
| Provision of relevant equipment. Cited by 50% of the countries | Communications equipment, technology to enhance information sharing and creating awareness. |
| Support to local communities | Strengthen engagement with local communities, assist them meet their needs, improve relationships between protected areas and local communities, reduce human wildlife conflict |
| Minimize spread of the disease | Efforts to reduce contacts with animals, conduct broad awareness and sensitization about COVID-19, provide PPE, improve healthcare, prevent infections, provide health insurance, increase emergency preparedness |
| Strengthen partnerships | With researchers, local communities, embrace PPP |
| Others | Support maintenance of infrastructure, support relevant research |

Q4. In not more than 3 words indicate other ways of enhancing financial sustainability for protected areas in your country beyond tourism

Table 5: Ways of enhancing financial sustainability of Protected Areas

| Ways of enhancing financial sustainability | Additional Information |
|---|---|
| Diversifying income sources. Cited by 83.3% of the countries. | The various ways include increasing government support to protected areas, promoting broad-based enterprises, diversify investments in conservation, fundraising from external sources, grants-in-aid, endowment / trust funds, debt conversions, payment for ecosystem services, biodiversity offsets, tapping into the various existing funding mechanisms, reducing taxes. |

| | |
|---|---|
| Broaden partnerships. Cited by 44% of the countries | This to be done by promoting Public-Private-Partnerships (PPP) engagement, collaboration with local communities, creating new partnerships and collaboration with other PA agencies |
| Capacity building | More skilled staff, researchers, exchange of staff between Pas |
| Reduce rural poverty | Improve the livelihoods of local communities and empower them by creating sustainable revenue sources (to reduce reliance on PAs) |
| Use of technology | Use of on-line forums, drones for surveys and monitoring |
| Others | Establish autonomous PA agencies, strengthen management effectiveness, honor relevant global commitments |

Q5: In not more than 3 words indicate what support is needed to safeguard the livelihoods of local people / landowners neighboring protected areas.

All countries indicated that supporting and strengthening diverse income generating sources for local communities will be required to safeguard their livelihoods. The proposed methods of achieving this goal included:

- Support income generating initiatives such as community enterprises, ecotourism, low interest revolving funds, and micro-credit systems.
- Support from governmental and non-governmental organizations
- Public-Private-Community Partnership (PPCP),
- Improve markets for their products, with value addition as an important component.
- Provide support to self-help community groups
- Establish mechanisms for equitable benefit sharing
- Manage human wildlife conflict as part of land use plan.
- Develop capacity of local communities by equipping them with relevant knowledge and skills including agro-silvo-pastoralism, agroforestry, natural resource management, use of smart agriculture and e-marketing,
- Provision of appropriate infrastructure
- Increase community awareness on how to prevent or cope with Covid-19 pandemic and its impacts

Note: Some of the responses from the PA Executive Directors in the above section are not clear. Further efforts will be made to clarify them. For example, it is not clear how the establishment of autonomous PA agencies would help diversity income generation sources although it can be argued that PAs that are managed as semi-autonomous government agencies or parastatals have greater flexibility to venture into new enterprises than those purely run as government departments. Another example that will require further elaboration is the response that honoring relevant global commitments can enhance financial sustainability of protected areas.

5: DISCUSSIONS

Some of the most important PA operations as reported by the executive directors of Africa's protected areas included supporting conservation outside PAs, monitoring illegal wildlife trade, generating revenue from tourism, protecting endangered species, carrying out security operations (intelligence gathering and investigations), conducting anti-poaching operations, conducting regular field patrols and collaboration with researchers, other arms of government and local communities. Most of these were reported to have experienced high COVID-19 impacts.

This report does not explain why some PA operations had higher ratings than others both at continental and at the regional levels. The differences may be linked to the varied geographical, eco-climatic, economic, social, cultural, historical, religious, ethnic, racial, political and demographic environments in which Africa's PAs exist. It would, therefore, be difficult to explain reasons for all the differences observed in this survey. Efforts will be made to do further follow-up analysis under the auspices of the nascent Africa Protected Areas Leader's Forum. However, the following observations can be made.

CONSERVATION OUTSIDE PROTECTED AREAS

Supporting conservation activities outside protected areas emerges as a very important engagement for PA agencies in Africa, voted by 84% of the countries that participated in the survey. As surprising as this may seem, this is given credence by the observation that many of the top ten PA operations involve activities conducted wholly or partially outside protected areas. These include monitoring illegal wildlife trade, managing human wildlife conflicts, protecting endangered species, anti-poaching, field patrols, intelligence gathering and carrying out investigations related to illegal activities. These activities require good collaboration with other arms of governments and with local people. There is, therefore, a high level of common understanding within Africa that PAs are a part of the larger ecosystems and landscapes within which they exist and hence the need to adopt the ecosystem approach to environmental and land use management.

According to the Convention on Biological Diversity COP 5 Decision V/6 (CBD 2000), the application of the ecosystem approach balances conservation, sustainable use, and the fair and equitable sharing of the benefits arising out of the utilization of genetic resources. The lack of this balance, caused by destruction of ecosystems, unsustainable use of natural resources and the subsequent biodiversity loss are among the factors taunted to have contributed to the pandemic that is

plaguing the world today. If broadly implemented, this approach can help reduce occurrences of future pandemics. It can also support the advancement of future efforts of implementing Aichi Biodiversity Target 11 (CBD 2010) that requires PAs, among other things, to be integrated into the wider landscape and seascape as part of the CBD vision of “living in harmony with nature by 2050”.

IMPACT ON BIODIVERSITY RELATED OPERATIONS

The UNEP-WCMC (2016) report on “The State of Biodiversity in Africa: A mid-term review of progress towards the Aichi Biodiversity Targets” paints a grim picture of the state of Africa’s biodiversity. According to the report, biodiversity in Africa continues to decline, with ongoing losses of species and habitats. The same report indicates that seven of the 20 Aichi Targets were on track and that many African countries would achieve the terrestrial coverage element of the target 11 by 2020. COVID-19 threatens the gains made by African countries in their efforts to reverse biodiversity loss by weakening the protection of endangered species and other important initiatives such as monitoring of illegal wildlife trade, conducting anti-poaching operations and carrying out regular patrols. Other impacts include impairing security operations, weakening PA collaborations with key partners and taking away the revenue that supports many biodiversity conservations programs. In addition, the perpetual threats from human wildlife conflicts are heightened, with consequences to biodiversity conservation and livelihoods of the local people.

Ground truthing efforts to assess whether the reported impacts of COVID-19 have resulted in heightened poaching and illegal harvesting of other resources in protected areas will be an important step in order to separate perception from reality. The information obtained would help design species recovery and ecological restoration plans.

REVENUE LOSS

This survey identified inadequate financial resources as the most important challenge facing PAs, weakening their capacity to cope with the impacts of COVID-19. However, funding shortage is not a recent phenomenon. Several studies have shown that many African protected areas are not functioning effectively, mostly because of underfunding (Cumming (2004), Makochekanwa, (2013), Hartley et al, (2007), Lindsay et al (2018). Lindsey et al (2018) examined 238 protected areas across Africa and found that 88 to 94% of PAs with lions were inadequately funded. COVID-19 has made a bad situation even worse, with most countries losing 60-100% of the revenue from tourism and other sources during the lockdown period. This loss has huge implications, including disruption of most PA conservation and management functions, inability to meet most financial obligations, including payment of salaries; loss of employment and livelihoods for staff and reduction of salaries and benefits of those retained. Debt burden will certainly escalate due to inability to honour third party obligations. Tourist facilities that have been abandoned in remote places may have deteriorated over time causing significant capital losses to the investors. Outside PAs, the closure of tourism-related community enterprises over the long-term will impact the

livelihoods of local communities and in some areas, increase the risk of poaching for subsistence to supplement food shortage caused by a multiplicity of COVID-19 related factors.

PA agencies will have to rethink how to create stable and sustainable revenue generation mechanisms and sources. However, tourism will remain a key player in funding PA operations. As part of the tourism recovery strategy, the United Nations World Tourism Organization (UNWTO) has advised countries to try to make optimum utilization of available resources, knowledge and experience to put the sector back on track. The UNWTO “COVID-19 Tourism Recovery Technical Assistance Package which offers guidance to both public and private tourism sector stakeholders is available at (<https://www.unwto.org/tourism-covid-19>). PA agencies should explore this and other opportunities aiming to aid the recovery of the tourism sector.

WEAKENED SECURITY

A possible spike in poaching calls for strengthening of regular patrols and enhancement of security measures, including anti-poaching, gathering of intelligence and conducting targeted investigations that have been weakened by COVID-19. Other immediate effects of the pandemic have been reduction in crime prevention, detection, arrests and prosecutions, and insufficient deterrence to poachers and other criminals.

Human-wildlife conflict has an important security component including threats to human life and destruction of crops, with implications on food security. Reduced capacity to manage human wildlife conflicts may drive impoverished communities into subsistence poaching for the pot, increasing vulnerability to both people and wildlife. Other impacts of human wildlife conflicts are increased intolerance to wildlife, deterioration of relationships with local communities and reduced incentives for local communities to protect biodiversity.

Although not quantified yet, COVID-19 pandemic has caused the deterioration of general security both inside and outside PAs, increased vulnerability to PA resources and values and contributed to loss of livelihoods for neighboring communities. It will take some time to understand the full damage and range of impacts caused by this pandemic. However, immediate support should be provided to PA agencies and other actors to help reduce poaching and eliminate illegal wildlife trade.

REDUCED COLLABORATION WITH PARTNERS

An important goal of many PA partners is to enhance the agenda of these areas. Some provide resources, expertise and information in order to maximize conservation and other PA outcomes. Local communities and private land owners provide space for wildlife and traditional knowledge for better conservation and management. Other arms of government provide funding, legislation and policies, security, prosecution and judicial services to support PA mandates.

COVID-19 has impacted the collaboration between PA managers and all categories of collaborators, further withdrawing the diverse resources they contribute to strengthen the conservation, management and governance of protected areas and the neighboring communities.

The pandemic has not spared any activity associated with protected areas. Besides weakening conservation and protection capacities of PAs, it has also reduced their ability to offer training and constrained conservation education and outreach efforts that would help in creating awareness of COVID-19 to vulnerable rural communities.

The absence of emergency response guidelines and an overall weak preparedness capacity to deal with a pandemic of this proportion was recognized as a key weakness in PA management. This, coupled with national COVID-19 response strategies prioritizing health and issues of water and food security have seen protected areas being seen as “non-essential services” hence not able to access emergency funding that is made available to sectors that offer essential services. As a result, PA management capacity and effectiveness have been weakened and the overall mandate of protected area agencies significantly compromised.

6. CONCLUSIONS

It is evidently clear that majority of Africa's PAs were grossly underfunded before the COVID-19 outbreak and thus had limited capacity to respond to the many challenges arising from the consequences of the pandemic. The survey shows that 79% of the PA agencies in Africa could only sustain their basic operations for up to 6 months. The first step in responding to the pandemic should be to provide sufficient funding to support the core business of protected areas so as to safeguard the values and benefits they confer to nature and humanity. This is in line with the call to action recommended by Hockings et al (2020) and Spenceley (2020).

COVID-19 pandemic has created an opportunity to argue for higher levels of funding for nature conservation and to mainstream efforts to reduce environmental degradation, while creating employment to sustain local communities. As governments approve stimulus packages to support job creation, reduce poverty and promote development and economic growth, protection of nature must be seen as a critical pillar on which the success of all these other efforts and investments hinge on. African governments, and indeed the entire African fraternity must understand that efforts to restore nature will be daunting and costly, but this cost pales in comparison with the price we are paying during the period of lockdown for neglecting nature. Even the diehard capitalists have been made to realize that a healthy future for humanity and a healthy continent go hand in hand.

Partnerships are key factors in enhancing the sustainability of protected areas and in supporting communities living next to them. COVID-19 has revealed that the local people are critical PA partners. They remain on the ground when all others are locked out. The message is clearer than ever before: It is in the interests of PAs to plan and act beyond their legislated boundaries. Governments must also be made to appreciate that addressing rural poverty must become an important goal in the overall effort to protect nature and that local communities who normally bear disproportionate burden of conserving wildlife must be given support commensurate with the value that the society attaches to wildlife. Going forward, empowered local communities should be equated to promoting sustainable development. They should be specifically recognized and adequately compensated for protecting critical ecological space for the benefit of nature and humanity. A post-COVID-19 strategy will need to invest in capacity development, increased awareness, better land use planning, appropriate infrastructure and technology to empower communities and to maximize opportunities for diversification of revenues and improve returns from their investments. These will reduce the dependence of local communities on PAs and, hopefully, lift them to a position where they can materially support some conservation initiatives. As part of diversifying income sources, more attention should be given to sustainable use of biodiversity resources to benefit local people and conservation. This is cognizant of the fact that although tourism will remain an important source of revenue for PAs and local people, overreliance on traditional tourism must be diminished in the new post-COVID-19 era.

Protected Areas specific emergency preparedness measures for coping with the current pandemic and preventing future crises of this nature should be developed immediately. Towards this end, protected areas will need to develop standardized guidelines that provide a **comprehensive** approach to emergency management, which includes balanced efforts across prevention, mitigation, preparedness, response and recovery functions that address vulnerabilities and risks. Protocols for handling animals during research or translocation activities must also be enforced to minimize contacts with wildlife.

It has become obvious that blanket restrictions imposed globally as a way of controlling the spread of COVID-19 is having detrimental effects on the management of protected areas. In future, lockdowns should allow some crucial experts and actors to remain active and on the ground. These and their roles should be clearly articulated in the emergency preparedness guidelines for protected areas.

Equally important must be the effort to protect healthy ecosystems and restore ecological systems to sustain biodiversity, improve ecosystem resilience and re-establish an ecologically healthy relationship between people and nature. Part of this important step is to develop policies that support healthier ecosystems and deliver transformational change for nature and people, create resilience to future crises and reduce the risks of future pandemics. This is a critical path in the fight against COVID-19 and future pandemics.

There are reports that many urban dwellers have flocked to their rural homes to avoid being locked in congested city environments. Without adequate law-enforcement personnel on the ground, poaching, illegal wildlife trade and other crimes against nature are likely to escalate, putting at great risks the conservation gains achieved in the recent past, with dire consequences to sustainable development, human health and well-being. We must come up with policies and actions that protect nature – so that nature can help to protect us.

Finally, the COVID-19 pandemic helps to emphasize the message from the 2014 IUCN-World Parks Congress that protected areas represent one of the most positive, tangible and enduring demonstration of the planet's commitment to long-term protection of nature, and are models of environmental stewardship and an important legacy to be preserved for present and future generations. The Healthy Parks Healthy People Initiative (Townsend et al, 2015) has demonstrated the fundamental link between **healthy** ecosystems and human **health** and well-being and more specifically the role that **parks** and protected areas can play in improving human **health** and well-being. This is an initiative that Africa understands very well, being the continent that has arguably more people interacting directly with nature and living out of it than any other continent. No wonder many African urbanites reportedly migrated to their rural homes during the COVID-19 lockdown where they could live out of the land. It is reported that 80% of the emerging world's population relies on traditional medicine for therapy

(Mahomoodally (2013), and Africa is estimated to contain 5,000 medicinal plants (Gurib-Fakim and Mahomoodally (2013) most of which are mainly found in protected areas.

The time has come for the entire African citizenry to make the often-quoted challenges facing conservation of biodiversity in the continent a tale of the past. The pandemic should serve as a “red card” that habitat loss and fragmentation, poaching, illegal wildlife trade and loss of biodiversity must be addressed now. In the words of IPBES Experts Professors Josef Settele et al, (27 April 2020), “Future pandemics are likely to happen more frequently, spread more rapidly, have greater economic impact and kill more people if we are not extremely careful about the possible impacts of the choices we make today”.

The ambition of the African Protected Areas Executive Directors Forum will be to spearhead Pan-African efforts to implement measures that address the plight facing protected areas and position them at the centre of sustainable development and human well-being.

NOTE

The results of this survey were discussed in a conference that brought together the Directors of Africa’s protected Areas on April 22 and 23, 2020. The proceedings of the conference can be found at https://www.awf.org/sites/default/files/2020-06/PADs_Conference_Report_ENGLISH_0.pdf and https://www.awf.org/sites/default/files/2020-06/PADs_Conference_Report_FRENCH.pdf

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3. APPENDIX

SURVEY LIMITATIONS

There were several basic assumptions in this study. First, it assumed that the 23 operations presented to the directors were important for fulfilling the mandates of protected area agencies across the continent. They were (1) Protecting endangered species, (2) Conducting field patrols, (3) Managing human wildlife conflicts, (4) Maintaining communications within the organization, (5) Maintaining critical infrastructure, (6) Ensuring security of tourists and related facilities, (7) Handling emergency wildlife incidents, (8) Monitoring illegal wildlife trade, (9) Conducting search and rescue missions (10) Supporting conservation outside protected areas, (11) Carrying out conservation education and outreach programmes, (12) Conducting research and monitoring activities, (13) conducting training programmes, (14) carrying out anti-poaching, (15) Intelligence gathering, (16) Conducting investigations, (17) Generating revenue from tourism, (18) Generating revenue from other sources, and maintaining collaborations with: (19) Local communities, (20) Private land owners, (21) Non-governmental organizations, (22) Other arms of government, and (23) Researchers. However, the respondents were provided with space to include other operations.

The second assumption was that all heads of protected area agencies in a continent that is geographically expansive, culturally and linguistically diverse, with many official languages, including French, Amharic, Portuguese and Arabic could respond adequately to a survey conducted in English.

Third, it was assumed that every protected area director across the continent had access to internet and could access the questionnaire either from home or office, depending on the local restrictions.

Finally, the questionnaire was sent out on April 7, 2020 and the directors requested to provide responses by April 17, 2020, a narrow window, indeed.

Despite these limitations, 19 countries from across the continent had provided input by the time of starting analysis of data.



*****END*****