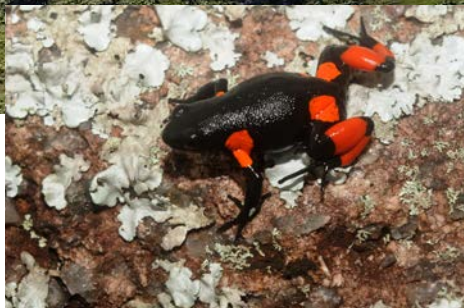


New Action Plan *Mantella cowanii* 2021-2025

Report from the workshop



Zoologie et Biodiversité Animale



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New Information

To provide new information to update this report of the workshop for the action plan, or correct any errors, e-mail: Gerardo Garcia, g.garcia@chesterzoo.org

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ACRONYMS AND ABBREVIATIONS

ACSAM	A Conservation Strategy for the Amphibians of Madagascar	IUCN SSC ASG	Madagascar Amphibian Specialist Group
Bd	<i>Batrachochytrium dendrobatidis</i>	MATE	Man and the Environment / L'Homme et l'Environnement
BIODEV	BIODEV International Environment consultancy agency	MEDD	Ministère de l'Environnement et du Développement Durable
CEPF	Critical Ecosystem Partnership Fund	MV	Madagasikara Voakajy
CI	Conservation International	MISA	Association Miaro ny Sahona
CISCO	Circonscription Scolaire	Mitsinjo	Association Mitsinjo
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora	PBZT	Parc Botanique et Zoologique Tsimbazaza
DREED	Direction Régional de l'Environnement et du Développement Durable	VOI	Vondron'Olona Ifotony / Community Association
IGA	Income Generating Activity	WCMC	World Conservation Monitoring Centre
IUCN	The International Union for Conservation of Nature	ZAP	Zone d'Administration Pédagogique

GLOSSARY

Anthropogenic: Caused by humans or their activities.

Bd: *Batrachochytrium dendrobatidis*. A microscopic disease-causing fungus affecting amphibians worldwide, contributing to population declines and extinctions.

Candidate (species): A species identified (i.e., thanks to morphological and/or genetic analysis), but not yet formally described.

Climate change: Significant changes in global temperature, precipitation, wind patterns and other measures over several decades or longer due to human activities.

Dina: A set of local customs and social norms for managing natural resource use.

Endemic: An animal/plant whose distribution is restricted to a certain geographic area.

Fomisame: Fohisokina Miaro ny Sahonamena, the local community group managing the Fohisokina / Vohisokina site

Habitat: The place or environment where a plant or animal naturally or normally lives.

Hybrid: An animal or plant derived from the mating of two different species.

Savannah: Open grasslands, usually with scattered bushes or trees

Pet trade: The trade of wild animals for human pleasure or companionship.

Syntopy: the joint occurrence of two species in the same habitat at the same time.

Sympatry: Term used to describe populations, varieties, or species that occur in the same place at the same time.

Tavy: Slash-and-burn-agriculture, one of the main causes of deforestation in Madagascar.

SUMMARY

The Harlequin mantella, *Mantella cowanii*, is likely one of the most threatened Malagasy amphibians. This striking iconic *Mantella* species has a very scattered range, and none of its known populations is currently included in any protected area. Until 2003 has been collected unsustainably for the pet-trade. Studies on *M. cowanii* were began in 1995 by BIODIV International, confirming the restricted distribution of this frog. The results of this study led to the inclusion of this species in Appendix II of CITES and ultimately a total suspension of export of live wild specimens from Madagascar applied in 2003. Further field studies in the early 2000s confirmed that collection for the pet trade still posed an important threat to the species, along with habitat loss and degradation primarily caused by land conversion to slash-and-burn agriculture (the so-called *tavy*). Furthermore, erosion of genetic identity by hybridisation with *M. baroni* at a site close to Antoetra (where the two species occur syntopically) was also confirmed. All these data led to the identification of *M. cowanii* as a species in need of immediate conservation and classification. This workshop and consequent new action plan summarises the current state of knowledge of the *Mantella cowanii* population status, its taxonomy and ecology, and of the threats facing it, and describes the institutional framework for conservation management in Madagascar. It lists the key stakeholders in the action plan, and the vision, goals, objectives, and activities. Each activity has a responsible institution(s), an approximate costing, a time, frame and key risks and opportunities in achieving it.

The strategic mission is “Ensure the conservation of *Mantella cowanii* in its natural habitat through the transmission of knowledge for a sustainable development in respect of the environment”.

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Outside Madagascar our thanks to Jade Newton-Youens for sharing her unpublished data and information during the studies in Madagascar.

Special thanks to Chester Zoo and the Critical Ecosystem Partnership Fund (CEPF) funding the workshop allowing all participants to contribute in this project.



Justification

With 365 described species and at least other 200 candidate new species of frogs (Viètes et al., 2009; Perl et al, 2014) Madagascar is one of the countries with the highest amphibian diversity, containing close to 7% of global amphibians. All the species (excepting three introduced ones) are exclusive to Madagascar and several are microendemic, with small, sometime extremely small, areas. Habitat destruction and degradation are currently the major threats to the unique frog diversity of Madagascar, together with climate change, emerging diseases and invasive species (Andreone, 2008; Andreone et al., 2005, 2008; Stuart et al., 2004).

To find a strategy to fight this multiple threats, two workshops entitled “A Conservation Strategy for the Amphibians of Madagascar” (ACSAM) were held in Madagascar in 2006 (Antananarivo) and in 2014 (Ranomafana). The aim of these workshops was to implement the global Amphibian Conservation Action Plan (ACAP) on a regional scale, with the aim to conserve the amphibian fauna of Madagascar (Andreone, 2008; Andreone et al., 2016). These workshops led to the development of the “Vision Sahonagasy” (“sahona” in Malagasy means “frog”, while “gasy” is a contraction of “Malagasy”) for the conservation of Madagascan amphibians, implemented through the Sahonagasy Action Plans in 2008 and 2016 (Andreone & Randriamahazo, 2008) Andreone et al., 2016).

Some species of frogs are also worth of particular attention, since they are known by people and amphibian conservation. Beside the well-known golden mantella (*Mantella aurantiaca*), tomato frog (*Dyscophus antongilii*) and the harlequin mantella (*M. cowanii*) deserves particular attention. This wonderful species, characterized by a sharp black and red colouration, is currently only known from a small number of scattered localities in the Haut Plateau of Madagascar.

This action plan aims to sets out the “Vision Sahonagasy” at a species-specific level, bringing together historic and ongoing research on *M. cowanii* as well as the experience of experts to develop a comprehensive assessment of the conservation status and threats faced by this species. By doing this, the action plan aims to mitigate the threats faced by *M. cowanii* and assure its future survival.



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Ambositra Workshop



In December 2018 a two-day workshop (4th to 6th) was hosted in Ambositra which aimed to develop the New Action Plan for *Mantella cowanii*. The species is found in high altitude forests and grassland savannas, and is most active during the rainy season. Threats include exploitation for the international pet trade as well as deforestation, which has left its habitat fragmented and, in some areas, completely lost. *Mantella cowanii* is classified as Endangered by the IUCN and planning is needed to support further conservation actions.

The meeting was established under the umbrella of the of the Action Plan Sahonagasy 2016-2020, the Ministère de l'Environnement et du Développement Durable and in conjunction with the IUCN Amphibian Specialist Group for Madagascar. The focus of this workshop was centralised on four main themes; *in situ* conservation, *ex situ* conservation strategies, research and funding.

The two-day action planning workshop was attended by representatives of 18 organisations and associations, with a total of 30 participants. The action planning involved different stakeholders including individuals from Malagasy government, local communities and international organisations interested in developing and supporting conservation actions for *Mantella cowanii* in Madagascar.

The workshop began with a first session composed of nine presentations related to the four core themes, updating the work that has been done to date with the species. This was followed by a general discussion which led to a group activity identifying the threats for the species. With the threats identified between groups, they then set out to bring solutions to them. The participants continued working in small groups and on plenary activities identifying the Vision, Objectives and Actions for the species. Once these actions were determined the exercise was finalised by identifying the partners involved, an actions prioritisation exercise and an estimation of budget. The last part of the workshop presented a summary of the outcomes during a press conference with the national media.



RESULTS

This document and the Action Plan resulting from this workshop are the outcome of this collaboration and the following review by the participants.

The first outcomes of the workshop were the identification of the threats of the species which hasn't much changed from the previous action plan.

Threats

Habitat fragmentation

The distribution of *Mantella cowanii* is highly fragmented, with most populations isolated from all the others. Such isolation increases extinction risk through inbreeding, genetic drift and reducing adaptive potential. Habitat change and degradation of corridors connecting populations poses potential risks through increasing the isolation of the different populations.

Habitat loss and degradation

A small number of *Mantella cowanii* populations occur in primary montane forest habitats (e.g. Antsirankambiaty) (Conservation International team and partners, pers. comm.). These populations are at risk from habitat degradation through illegal logging, harvesting, and

habitat loss as a result of conversion to agriculture, typically carried out by slash-and-burn techniques (locally known as *tavy*).

The majority of *Mantella cowanii* populations occur in montane savannah habitats which are believed to be of anthropogenic nature (e.g. Antoetra) (Andreone et al., 2007). As such, these populations have likely already experienced population declines as a result of habitat conversion. These populations are not at risk of habitat loss from deforestation but remain vulnerable to habitat alterations. Such populations occupy microhabitats within the savannah with very specific environmental conditions (e.g. bare rock hillsides with percolating water). Any minor alteration to these microhabitats (e.g. pollution, anthropogenic development, invasive plant species, etc...) could be enough to promote local extinction of *M. cowanii* at these sites.

Climate change

Warming caused by climate change can cause an upslope elevational shifts in suitable microclimates for herpetofauna (Raxworthy et al., 2008). This can lead to the loss of suitable habitat from protected areas or even the disappearance of suitable microclimates from a region. Species most at risk are small-ranged montane endemics, such as *M. cowanii*. *M. cowanii* at Vohisokina are only active in the early mornings and evenings, retreating to refugia in the middle of the day due to high temperatures (Newton-Younes, unpubl.). Any further increases in temperatures can have a strong impact on *M. cowanii* populations survival.

Diseases

Infectious diseases have emerged as a major cause of amphibian decline worldwide (Lips 2016). Chytridiomycosis is a fungal disease caused by the chytrid fungus *Batrachochytrium dendrobatidis* (Bd), known to have cause catastrophic population declines in many places (Skerratt et al., 2007). First large scale screening of Bd in Madagascar (Weldon et al., 2008) and 2012 (Vredenburg et al., 2012) found no evidence for Bd in Malagasy amphibians, however screening of specimens exported to the USA in 2012 identified the presence of Bd in Madagascar. This finding was later confirmed by the analyses of multiple samples collected across the entire country from 2005-2014 where Bd has been identified in multiple places, including in the 2014 survey of the *Mantella cowanii* population at Soamazaka (Bletz et al., 2015). Further research is needed to explore the patterns of presence, prevalence and virulence Bd in Madagascar.

Hybridisation

Mantella cowanii has been found to hybridise with the *M. baroni* (classified as Least Concern by the IUCN Red List - IUCN SSC Amphibian Specialist Group, 2016) in the locality where the two species are known to occur in syntopy (Farimazava) (Chiari et al., 2005). Here, up to 10% of the *M. cowanii* population was found to be of hybrid origin (Chiari et al., 2005; Rabemananjara et al., 2007). Potential range shift of *M. baroni* into higher elevations stimulated by climate change (Raxworthy et al., 2008) poses *M. cowanii* at higher risk of hybridization.

Collecting

Mantella cowanii has been collected unsustainably for the pet trade since at least the late 1980s. Research on *M. cowanii* led to a total suspension of export of live wild specimens from Madagascar applied in 2003, confirmed as a zero export quota in 2005 (United Nations

Environment Programme & World Conservation Monitoring Centre, 2009). Further field studies of *Mantella cowanii* in the early 2000s identified that illegal collection for the pet trade still pose a threat to the species. Data on WCMC website indicated that Madagascar exported 3642 individuals of *M. cowanii* between 1998 and 2004. The maximum was in 2002 with 1520 individuals.



Mission and high priority objectives

“To ensure the conservation of *Mantella cowanii* in its natural habitat through the transmission of knowledge for sustainable development in respect of the environment”.

The development of the *Mantella cowanii* action plan links to a number of components and priorities of ACSAM 2 to secure the future for the amphibians of Madagascar. This will, most importantly, help Malagasy organisations and researchers to build capacity in country, and to connect with the local communities.

The objectives identified in the workshop to be achieved by 2025 are:

- Habitat protection and management of *Mantella cowanii* populations
- Conduct scientific studies of all populations of *Mantella cowanii*
- Local development program
- Environmental awareness
- Training, sharing information and long-term sustainability of activities

Whilst all of the objectives listed above are needed to address all of the threats facing *Mantella cowanii*, it was recognized that the from the five objectives are some of overriding importance in attempting to recover the species and accordingly contain the highest priority actions.

Protection and management of M. cowanii populations.

By 2025 it is intended to have clarified definition of the boundaries of protection to develop a habitat management plan. This should include different alternatives to control and safe from wildfires the land. For this approach is necessary to identify their landowners and discuss potential transfers of management for these species' areas (e.g. DINA, VOI, etc). Protecting key areas, ensuring no losses of valuable *M. cowanii* habitat and enhancement of key areas to mitigate the anticipated effects of climate change is vital to develop the complete network of protected populations.

Field research to acquire a better understanding of the distribution and conservation status of all the populations of M. cowanii.

The complete distribution, genetic health between the last relict populations and status of them is urgent to generate effective conservation actions. The ecological and population studies are required to determine the specific needs for each population to be sustainable in the long term. From relatively recent studies has been highlighted the urgency to develop a safety net population which can support biological studies of the species. To produce frogs for release, captive breeding facilities will be established in and outside Madagascar.

Local development program.

The work to protect the species and habitat goes in parallel with the investment and support of the local communities. Socio-economic studies to identify the needs and infrastructures (e.g. development of IGAs).

Promote environmental awareness.

A complete programme of re-valorisation of the *M. cowanii* areas raising awareness of the environmental values and the importance of the species as a flagship species will be a direct objective focused on the local communities. This programme will also focus on building in country capacity to work in this species and disseminate the experience protecting this species to apply in other areas of Madagascar.

Sustainability of all activities (funding and coordination).

Identify local, regional and international funding sources for project activities under the plan becomes an immediate objective to secure the recovery of the species. As the actions are happening will be a programme of monitoring, evaluation leased by a specific coordinator for the New Action Plan.

Sharing of information and training among stakeholders.

A national committee with external advisors will be set up to regularly monitor the New Action Plan and secure the involvement of all the partners, communication and support between the different activities.



OBJECTIVES AND ACTIVITES

OBJECTIVE 1: HABITAT PROTECTION AND MANAGEMENT									
	Project and Activities	Priority	Agencies responsible	Partners	Cost (MGA)	Timescale	Indicators	Risks	Opportunities
1.1	Identify the specific conservation features for each of the known localities with <i>Mantella cowanii</i> .	LOW	PARTNERS FOR EACH SITE, MV	ALL PARTNERS	<25M	Year 1 to 2	List of options adopted for each site.	Needs a specific and site-oriented approach.	Adaptation to each site.
1.2	Identify landowners for each of the localities where <i>Mantella cowanii</i> is present and collaborate with Property Department.	HIGH	MUNICIPALITY	MUNICIPALITY, DOMAINE SERVICE	<25M	Year 1 to 2	Number of management models.	Long process & needs a person coordinating.	Definition of study and protection area.
1.3	Apply and adapt the Management Plan for the areas of presence/influence to the species localities (purchase, rental, partnership VOI...).	MEDIUM	PARTNERS FOR EACH SITE	ALL PARTNERS	<25M	Year 1 to 2	Number of management models.	Long process & needs a person coordinating.	Adapt models to single needs.
1.4	Development a Management Plan for the areas of presence or influence of the populations of <i>Mantella cowanii</i> .	MEDIUM	VOI, DREED	PARTNERS, MUNICIPALITY, DISTRICTS	<25M	Year 1 to 2	Finalisation of the MP.	Perceived as a copy of the New Action Plan.	Define objectives.
1.5	Continue the development of local community forest groups.	MEDIUM	DREED	PARTNERS, MUNICIPALITY, DISTRICTS	<25M	Year 1 to 2	Number of VOI.	Coordination needed and time-consuming.	Assure management.

1.6	Development and enforcement procedures using local customs and social norms (DINA) to protect the known sites for <i>Mantella cowanii</i> .	MEDIUM	DREED	PARTNERS, MUNICIPALITY, DISTRICTS, COURT, VOI	<25M	Year 1 to 2	Number of DINA homologues.	Difficulties to assure its application.	Involvement of local community.
1.7	Formalize the transfer of management of all the sites.	MEDIUM	VOI, DREED	ALL PARTNERS	<25M	Year 2 to 3	Number of transfers.	Long process & needs a person coordinating.	Officialization of <i>Mantella cowanii</i> sites as conservation areas.
1.8	Define the boundaries of the protection and conservation actions for each of the localities.	HIGH	VOI	DREED, MUNICIPALITY, FKT, PARTNERS	<75M	Year 2 to 5	Number of fully identified sites.	Long process & needs a person coordinating.	Definition of study and protection area.
1.9	Controlled access in all sites.	MEDIUM	VOI	DREED, MUNICIPALITY	<25M	Year 2 to 5	Number of regularized sites.	Difficulty to assure a control.	Allowing a better control.
1.1	Develop legal protection for all sites where <i>Mantella cowanii</i> is present.	HIGH	PARTNERS	DREED, REGION, VOI	>75M	Year 3 to 5	Number of protected sites.	Difficulties to assure its application.	Officialization of <i>Mantella cowanii</i> sites as conservation areas.
1.1	Monitoring and execute a programme of forest control in all localities.	MEDIUM	DREED	VOI	<75M	5 years	Number of checks performed.	Needed people's participation.	Reduce conservation threats.
1.1	Establish firebreaks around sites and maintain them.	HIGH	VOI	DREED, MUNICIPALITY	>75M	5 years	Length compared to surface.	Manutention needed.	Reduce fire risks with a quite limited cost.
1.1	Specific study for each site to restore and reforest the area of presence of <i>Mantella cowanii</i> .	LOW	VOI, PARTNERS FOR EACH SITE	DREED	>75M	Year 3 to 5	Surface restored / reforested.	Difficult of perennisation.	Possibility to involve government and local communities.

OBJECTIVE 2:SCIENTIFIC RESEARCH

	Project and Activities	Priority	Agencies responsible	Partners	Cost	Timescale	Indicators	Risks	Opportunities
2.1	Determine the fully distribution of <i>M. cowanii</i> .	HIGH	ASG /MISA	ALL PARTNERS, CHESTER ZOO	>75M	Year 1 to 3	Number of sites visited with presence/absence.	Associated with insecurity.	Assure a better understanding of species distribution.
2.2	Genetic mapping of all populations of <i>M. cowanii</i> .	HIGH	ASG /MISA	ALL PARTNERS, CHESTER ZOO	<75M	Year 1 to 3	Number of samples collected.	Difficulties in obtaining research permits and need to get funds.	Good definition of the species differentiation.
2.3	Develop ecological studies for each of the known populations.	MEDIUM	ASG /MISA	CHESTER ZOO, MV	>75M	5 years	Number of populations studied.	Quite a long and time investing process.	Good definition of the species ecological requirements.
2.4	Estimate population size and status of the known populations and develop a population monitoring programme.	HIGH	ASG /MISA	CHESTER ZOO, MV	>75M	5 years	Number of populations studied.	Difficulty of being put in practice due to ingent human and time investment.	Comparison of populations.
2.5	Feasibility study of establishing an <i>ex situ</i> safety net population.	HIGH	CHESTER ZOO	MITSINJO, ASG, MV	<25M	Year 1	List of populations kept and bred.	Enough specimens to start the breeding programme. Availability of facilities, staff and funds for the programme.	The need to move on with captive breeding.

2.6	Pilot programme of national and international captive breeding programme.	HIGH	MITSINJO / CHESTER ZOO	CHESTER ZOO, ASG	>75M	Year 2 to 3	Report successful breeding of the species.	Agreement at national and international levels needed.	Important to create population nuclei in captivity.
2.7	Establish training programme on captive husbandry for technicians.	HIGH	MITSINJO / CHESTER ZOO	CHESTER ZOO	<25M	Year 2 to 5	Number of technicians being trained.	Time investing.	Needed to get expertise.
2.8	Monitoring Bd in the known localities with presence of <i>Mantella cowanii</i> .	LOW	ASG/MRSN/CIBIO	CHESTER ZOO	<25M	5 years	Number of samples analysed.	Time investing Needed to export samples.	Integration with the national monitoring and control of populations Obtaining a good scenario of pathogens.

OBJECTIVE 3: LOCAL DEVELOPMENT

	Project and Activities	Priority	Agencies responsible	Partners	Cost	Timescale	Indicators	Risks	Opportunities
3.1	Develop alternative income generating activities (IGA) specific for each locality where the species in present.	HIGH	PARTNERS FOR EACH SITE	DREED, REGION, VOI	<25M	Year 1 to 2	Number of AGR identified.	Considerable time dedicated to work out these IGAs.	Involvement of local community.
3.2	Establish the identified alternative income generating activities (IGA) specific for each locality where the species in present.	MEDIUM	PARTNERS FOR EACH SITE	DREED, REGION, VOI	<25M	5 years	Number of plans developed.	Considerable time dedicated to work out these IGAs.	Involvement of local community.

3.3	Establish socio-economic studies on the localities with <i>M. cowanii</i> identifying the needs of the communities.	HIGH	PARTNERS FOR EACH SITE	ASG / MISA	<75M	Year 1 to 2	Rapports.	Considerable time required for this study.	Involvement of local community.
3.4	Identify, build and rehabilitate community infrastructures as core areas of conservation dissemination (e.g. interpretation centre, school...).	MEDIUM	PARTNERS FOR EACH SITE	REGIONAL GOVERNMENT, MUNICIPALITY, CHESTER ZOO	>75M	5 years	Number of infrastructures put in place or rehabilitated.	Considerable time required for this study.	Involvement of local community.

OBJECTIVE 4: ENVIRONMENTAL AWARENESS

	Project and Activities	Priority	Agencies responsible	Partners	Cost	Timescale	Indicators	Risks	Opportunities
4.1	Development and dissemination of education and awareness tools for the communities.	MEDIUM	PARTNERS FOR EACH SITE	CHESTER ZOO	<25M	Creation year 1; Diffusion 5 years	Number of tools developed and shared.	Need people specifically dedicated to this project.	Knowledge dissemination via unconventional ways.
4.2	Establishment of a global awareness campaign with Day of <i>M. cowanii</i> in all the communities.	HIGH	ASG /MISA	CHESTER ZOO	<75M	5 years	Number of events organised, participants and visitors.	Better to associate with amphibian day.	Involve local community.
4.3	Develop network communication between the different interpretation centres and community kiosks.	MEDIUM	PARTNERS FOR EACH SITE	CHESTER ZOO	<25M	5 years	Number of materials distributed.	Local community is required.	Involve local community.
4.4	Educational school visits related with the conservation of <i>M. cowanii</i> and its habitat.	MEDIUM	PARTNERS FOR EACH SITE	CISCO, ZAP	<25M	5 years	Number of schools visited.	Local community is required.	Involve local community.

4.5	Training and dissemination of experiences in conservation education between the different partners.	LOW	PARTNERS FOR EACH SITE	CHESTER ZOO	<25M	5 years	Number of training initiatives per site.	Local community is required.	Involve local community
4.6	Develop guided field trips to the localities by the communities.	MEDIUM	PARTNERS FOR EACH SITE	ASG / MISA	<75M	5 years	Number of visits to the communities to develop activities.	Local community is required.	Involve local and international community.
4.7	Participation in national and international conservation events.	LOW	ASG/MISA	REGION, MUNICIPALITY, CHESTER ZOO	<75M	5 years	Number of activities.	Local community is required.	Involve local community.

OBJECTIVE 5: TRAINING, SHARING INFORMATION AND LONG-TERM SUSTAINABILITY

	Project and Activities	Priority	Agencies responsible	Partners	Cost	Timescale	Indicators	Risks	Opportunities
5.1	Development of a strategic plan for fundraising the activities of the New Action Plan.	HIGH	ASG /MISA	CHESTER ZOO	<25M	5 years	Number of grant proposals submitted and succeeded.	Difficulty of duely following this by the concerned entities.	Assure economic independence.
5.2	Program monitoring and evaluation of all activities.	HIGH	ASG /MISA	MV, CHESTER ZOO, CPSG	>75M	5 years	Follow up reports.	Difficult to implement and follow.	Requires strong coordination.
5.3	Establish a coordinator for all the New Action Plan.	HIGH	ASG /MISA / MATE	CHESTER ZOO	>75M	Year 1	Coordinator in place by end of Year 1.	Difficulty to identify an available experienced person in country.	Need to assure funds for coordinator.
5.4	Identify and coordinate training needs for all the partners and stakeholders.	MEDIUM	ASG / MISA	ASG / MISA	<25M	5 years	List of training needs.	Difficult to implement and follow.	Requires strong coordination.

5.5	Establish the training agenda for the New Action Plan (identify trainers, creation of tools, training sessions, evaluations and retraining).	MEDIUM	ASG / MISA	ALL PARTNERS	>75M	5 years	Number of programmes and training activities.	Difficult to implement and follow.	Requires strong coordination.
5.6	Create a national committee for the monitoring of the New Action Plan.	LOW	ASG /MISA	CHESTER ZOO	<25M	5 years	Annual follow up reports.	Requires strong coordination.	Requires strong coordination.

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