WORLD PHEASANT ASSOCIATION REPORT

SPECIES SURVIVAL COMMISSION ACTION PLAN EVALUATION

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EXECUTIVE SUMMARY

The Species Survival Commission has been publishing Action Plans under the auspices of IUCN since 1986 and now more than 60 plans have been published in what is now a well-established series. There are, however, doubts about the amount of real conservation action that they stimulate and so SSC has commissioned an evaluation of some aspects of its Action Plan Programme. The first phase of the evaluation assessed the type of actions that were recommended in 42 Action Plans. Although the way in which recommendations were categorised was artificial, some clear conclusions did emerge. The two most significant were that there was little consistency between plans in the way that recommendations were developed and presented; there was a broad division between general recommendations and specific actions; and that research of one form or another comprise a large proportion of the recommendations: 54% of all recommendations, and 39% of specific recommendations.

Phase 2 sought to assess the implementation of recommendations in a subset of 12 plans. Data were received on only six, four (equids, lagomorphs, otters and crocodiles) of which were complete assessments of the status of all priority projects identified in the Action Plans. A further response (cetaceans) provided information on the status of 50 of 56 priority projects and the sixth plan (canids) was only partially completed. The four complete responses reported on the progress of 284 recommendations, 18% of which were considered complete, 50% ongoing and 32% not started. A lack of resources (funds and/or personnel) was the reason that nearly half had not been started and political sensitivity accounted for a further 17%. Using the artificial categorisation of actions adopted in Phase 1, nearly 70% were classified as either research or ecological management.

This report presents Phase 3, which was designed to be a case study of three Action Plans that had been involved in Phase 2. Five plans were assessed to some degree, equids, lagomorphs, cetaceans and canids in some detail, and crocodiles to a lesser degree. In addition, the SSC management of the process was assessed, as was the value of the plans to a selected external (i.e. non-SSC) audience. It is recognised that the plans evaluated were a self-selecting groups plans that have been produced by exceptionally motivated and active Specialist Groups. Therefore, rather being a representative sample of SSC Action Plans they should be seen a selection of the most actively pursued plans.

There has been a considerable amount of action on Action Plan recommendations, and this has involved individuals from government research and management, universities and non-governmental organisations. Furthermore, the plans are seen as valuable resources by stakeholders as diverse as multilateral environmental agreement (CITES and International Whaling Commission), non-governmental organisations (Wildlife Conservation Society, WWF-US and the People's Trust for Endangered Species) and other parts of IUCN (Protected Areas Programme). It is difficult to say the degree to which conservation actions have taken place solely because of the publication of the Action Plans, and to some extent this question is not the correct one. The correct question would be "Do Action Plans play an important role in the conservation process?" This is because Action Plans are tightly bound up with the Specialist Groups, and those that produced the Action Plans evaluated here are very active. They appear to have strong leadership that stimulates action, usually centred on the Action Plans. As the compilation of Action Plans is typically inclusive, there is a degree of buy-in of the recommendations anyway, and this aids implementation.

Despite these successes, the changes both inside and outside SSC suggest that the Action Planning Programme is not sustainable as it is now structured. There has been a large increase in the number of plans reaching the Secretariat each year since the late 1980s and as other demands on Secretariat staff time have increased, the result is decreasing capacity to manage the process. Furthermore, obtaining funds for the printing of plans is also becoming more difficult. Given that Secretariat resources are now very stretched it is likely that having spent some much time actively encouraging Specialist Groups to compile Action Plans, a reduced ability to see draft plans through to publication will have an adverse impact on Secretariat-Specialist Group relations.

There has been little guidance provided to the Specialist Groups on how recommendations should be developed, and whilst the Secretariat had been hoped that these would not be limited to biological recommendations, there was no clarity in how these wider recommendations could be developed realistically. Two additional problems with framing recommendations were the breadth and diversity of the target audiences that the plans sought to reach, and a lack of any Action Plan recommendation implementation framework. Together, these meant that plans varied significantly in their recommendations: some recommend actions that the Specialist Groups themselves could implement within a five-year period, whereas others made more broad and ambitious recommendations.

The importance accorded to Action Plans within SSC appears to have changed considerably in the 15 years that the programme has been running. From being at the core of SSC's activities, the taxon plans now barely feature in the 2000-2010 SSC Strategic Plan. It is, however, not clear on what basis Action Plans have been demoted down the SSC workplan, other than the untested assumption that they are not having a significant impact.

The options are: 1) continue with the current process; 2) stop publishing taxon-based Action Plans; and 3) change the Action Planning Programme. Continuing with the current process does not appear feasible, partly because of SSC Secretariat resource constraints, but also so many different audiences now demand information on issues facing biodiversity and assessments of conservation priorities. It is almost certain that a single document cannot satisfy all of these demands and therefore, at the very least it is desirable to tighten the focus of the plans and target them towards explicitly stated audiences.

If SSC was to stop publishing Action Plans, it is likely that some Specialist Groups would find this very difficult to comprehend, having been so actively encouraged to produce them in the past. Should this option be chosen it would have to be very carefully managed and the change explained as a positive one, if at all possible. In terms of conservation impact, it is likely that some information that is important to the conservation process, and on the ground conservation action has resulted from the implementation of some Action Plan projects. It is appears that the combination of Action Plan, active Specialist Group and the IUCN and SSC 'seal of approval' are a strong force for conservation. Therefore, stopping the Action Plan process altogether would reduce the amount of conservation action.

The final option, changing the Action Plan Programme would appear the most appropriate course of action. The key elements to refine would be: the relationship with other SSC Programmes, especially the Red List and Species Information System; clarity and comprehensiveness of recommendations; and a clear support strategy for the implementation of the recommendations. The plans could include the detail of the Red List assessments, but concentrate on amplifying the Conservation Measures Needed, using the categories identified in the Conservation Measures Authority File to ensure that all possible areas of action are considered. If the plans dealt with a selection of species (e.g. those that are Critically Endangered), SSC could produce plans for the world's most threatened species. The UK Biodiversity Action Plan format may provide a suitable model to adapt to SSC's needs. Spatial referencing of these recommendations would add significantly to the proposed Red List Index that will be based on Conservation Measures Needed. Another component could be detailed analysis of the key issues, (i.e. "Conservation Management Guides"), which may fulfil the role envisaged in the SSC Strategic Plan for issues based Action Plans.

This evaluation has identified some audiences that believe strongly in the SSC Action Plans and it would seem desirable to build partnerships with them This may help provide additional resources, but would not only bring greater clarity to the products being produced, but would also expand the stakeholders that will assist with implementation. This means that implementation would not be left to voluntary Specialist Groups. Such a partnership would also help identify priorities for action (e.g. groups of species not covered by CITES, issues such as local community use and appreciation of species). The ultimate aim would be provide the most urgently needed information on the highest priority species as efficiently as possible.

1. INTRODUCTION

Since the first SSC Action Plan (Oates 1986) was published, more than 60 plans have been compiled, edited or authored and printed in a series of publications that is now well recognised. In April 1991 a joint Fauna and Flora Preservation Society (now Fauna and Flora International, FFI) and SSC meeting was held at London Zoo on Action Plans and their implementation. This was only four years after the first plan had been published and at the time 16 had been published, and many more were in draft stages Morris (1991). A message from the SSC Chairman, George Rabb stated that "The subject of Action Plans and their implementation is at the core of the Species Survival Commission's work." At the time of the meeting, SSC had just received a donation of USD1 million for the preparation of Action Plans and promoting their implementation (Morris 1991).

The majority of the plans have covered mammals, especially the larger charismatic species, such as primates (e.g. Mittermeier *et al.*1992, Oates 1996), Asian rhinos (Mohd. Khan 1989, Foose and van Strien 1997) and wild cats (Nowell and Jackson 1996), but there are also Action Plans for orchids (Hágsater *et al.*1996), conifers (Farjon and Page 1999), dragonflies (Moore 1997) and several groups of birds (e.g. cranes: Meine and Archibald 1996; parrots: Snyder *et al.*2000; and pheasants: Fuller and Garson 2000). These plans contain a wealth of information on these species and it is claimed by SSC on the back of all plans being published that this series:

> " … assesses the conservation status of species and their habitats, and specifies conservation priorities. The series is one of the world's most authoritative sources of species conservation information available to natural resources managers, conservationists, and government officials around the world."

The SSC Action Plan guidelines (version last updated March 1999) state that simply publishing information on species is not sufficient to ensure that action results and so Action Plans should "make prioritised recommendations **specifically designed for** key players". Furthermore, the guidelines state several specific purposes of Action Plans, as follows:

- **To serve the interests of the Specialist Group members**

First and foremost, the Action Plan serves the interests of SSC members. It is a compendium of their knowledge and expertise in one package, helping to guide future activities.

- **To provide a baseline record against which to measure change**

As the Action Plan is a "snapshot in time", it serves as a baseline set of data and information against which to measure change and monitor progress, indicating where changes of emphasis or direction may be needed to conserve the species.

- **To expand on the IUCN Red Lists of Threatened Species**

The Action Plan elaborates on the species information presented in the IUCN Red Lists of Threatened Species by describing the current threats to a species, what is currently being done to address these threats, what further actions need to be taken, by whom these actions should be taken, and their order of priority.

- **To provide scientifically-based recommendations for those who can promote and support species conservation**

Action Plans provide the rationale, information, and recommendations that need to be conveyed to audiences throughout the world, particularly those who could support SSC's work.

- **To provide a common framework and focus for a wide range of players**

By virtue of their contents, Action Plans become an authoritative resource to guide species conservation activities. They provide a common framework and focus for a range of players from decision-makers at the governmental level, to those who will implement the conservation recommendations on the ground. Scientists, resource managers, agency officials, funding organisations, and political leaders utilise them when deciding how to allocate available resources.

- **To provide a convenient and accessible conservation resource**

There are few resources available that provide species information in the framework of conservation action. Action Plans can provide additional guidance through references and a concise bibliography

section. This is especially important to conservationists and researchers who work under isolated conditions.

- **To establish priorities in species conservation**

Action Plans identify gaps in species research and policy and give direction for future endeavours through prioritised conservation activities.

- **To aid fundraising**

Action Plans can be used as an aid to raise funds for the recommended actions.

All plans are compiled by Specialist Groups with the single exception of the Parrot Action Plan (Snyder *et al.*2000), for which there was no Specialist Group in existence at the time. The effort expended by the groups in synthesising information and assessing needs is considerable, and the majority of compilation is carried out voluntarily. There is also a significant cost in editing and printing the plans.

1.1. The value of SSC Action Plans

[Note: This is taken from the draft evaluation of three Galliformes Action Plans undertaken by the World Pheasant Association and the Megapode SG, the Partridge, Quail and Francolin SG, and the Pheasant SG: see Appendix 3.]

The practical value of Action Plans has been questioned by Collar (1994) and McNeely (2000) and it is apparent that demonstrating the effectiveness of these plans in preventing species extinctions is not easy (see Gimenez-Dixon and Stuart 1993). McGowan *et al.*(1998) discussed the findings and opinions of Collar (1994) and Gimenez-Dixon and Stuart (1993) and felt that despite the problems of clearly demonstrating that the three 1995 Galliformes Action Plans have led to definite conservation gains on the ground, the plans had served very valuable conservation functions.

McNeely (2000) suggests that whilst Action Plans contain a wealth of information relevant to the conservation of particular species, the priorities seem removed from the practical requirements of the species being reviewed. He exemplified this by stating that of the 105 actions proposed in the Wild Cats Action Plan (Nowell and Jackson 1996), 75 (71.3%) were for surveys and other research. This, he said, implied that the greatest problem facing the cats was a lack of information on their status and distribution, which he felt was not the case.

McNeely's similar assessment of the Asian Rhino Action Plan (Foose and van Strien 1997) revealed a rather more even distribution of effort between various conservation actions, including intensive protection and anti-poaching, habitat management research and other activities. However, McNeely, still felt that the fundamental needs of these large mammals were not being addressed, as it was development and policy issues that had to be tackled to ensure the survival of these species and implied that Action Plans failed to stimulate these actions.

1.2. SSC Strategic Plan

The SSC Strategic Plan for 2000-2010 (SSC 2000) states the current role of these taxonomic Action Plans as follows:

> "The Commission's activities are based on the work of over 120 Specialist Groups. Some cover taxonomic groups of plants or animals while others focus on topical issues such as reintroduction of species into former habitats and sustainable use of species. The groups have manifold structures and pursue diverse sets of activities. All of them collect information on the status of their species, many develop action plans and formulate conservation recommendations. Some are taking their activities considerably further by initiating, and in certain cases implementing, a range of conservation projects in the field."

In then goes on to indicate that Action Plans have a role in achieving the first of its objectives (Decisions and policies affecting biodiversity influenced by sound interdisciplinary scientific information). This is amplified as follows:

> "During the past few years, SSC has already moved from the traditional species red lists towards more integrated analyses (regional studies, action plans), but this is now to be taken on to much

higher levels still. Through the development of the Species Information Service (SIS) more problem-orientated analyses and outputs will be possible in response to the increasingly complex questions being addressed by national and international biodiversity agencies. Problem-oriented integrated Action Plans (e.g. for specific regions or countries) will receive higher priority than the traditional taxonomic-based ones."

It was not, however, stated explicitly why this change in emphasis was required. In the paired-ranking exercise used to determine priorities, the importance of the 'problem-orientated' Action Plans compared with taxonomic Action Plans is indicated by the adoption of "Problem-oriented, interdisciplinary Action Plans addressing significant conservation issues published and delivered to relevant target audiences" as the joint fourth highest priority. The action proposed for taxonomic Action Plans is the evaluation of existing ones, which was considered the 17th most important activity of SSC during the implementation period.

1.3. Terms of reference

1. Decide on three Action Plans to involve in stage three of the evaluation.
2. Design a telephone based evaluation method for these Action Plans.
3. Undertake a series on in-depth telephone interviews with appropriate individuals, including researchers, project managers, donors, and other relevant stakeholders.
4. Produce, by 30th September, a report incorporating the specifics of the findings from the case study telephone interviews, a summary of Phases I and II of the evaluation, and an overall summary of the findings of the Action Plan evaluation. Include in this report the available findings of Action Plan evaluations conducted by Specialist Groups, such as the Pheasant SG.

2. METHODS

2.1. Decide on three Action Plans

The choice of Action Plans was largely contingent on their inclusion in the second phase and evidence that the Chairs and others would be responsive to further requests for information. Initially a second criterion was used, and that was the nature of the priority actions recommended. This was considered because it was felt that it would be valuable to assess what action had occurred on recommendations other than surveys and research: i.e. where recommendations had involved policy or action by governments departments, had the Action Plans made a difference?

Plan	Response to Phase 2	Variety of project types	Chair
Zebras etc	Good	Variety of survey and management projects	Dr Patricia Moehlman
Cetaceans	Good	Largely survey/research	Dr Randall Reeves
Rabbits etc	Good	Variety of survey and management projects	Dr Andrew Smith
Wild dogs etc	Partial	Variety of survey and management projects	Chair: Dr David Macdonald Contact: Dr Claudio Sillero-Zubiri
Crocodiles	Good	Many survey/research projects, but also management	Chair: Prof Harry Messel Contact: Dr James Perran Ross

However, it became evident that it would be difficult to obtain a complete set of responses from individuals in the variety of areas listed in the third term of reference (i.e. "appropriate individuals, including researchers, project managers, donors, and other relevant stakeholders": see Section 1.3 above). Therefore, it was thought to be more realistic to consider contacting individuals involved with all five plans, as the Specialist Group personnel had clearly demonstrated a willingness to contribute

to this exercise. Furthermore, different plans had stakeholders from very different areas and an overall assessment of the impact of these plans would benefit from this broader base of input.

In addition several people were contacted outside the SSC network who may represent potential target audiences for the plans. The variety of the potential audiences is considerable, and the increasing size of the community dealing with conservation issues is so large that it is clearly difficult to assess the degree to which all sectors are aware of, and use, IUCN Action Plans. Therefore, those selected represent only a small sample.

2.2. Design a telephone interview method

The approach for the evaluation was based on that used by the IUCN Monitoring and Evaluation Unit. This approach uses a matrix that has four column headings: Performance area, Rationale/relevance, Effectiveness/efficiency, and Long-term implications. A matrix recently compiled for the Strategic Review of the IUCN European Office identified five performance areas, as follows:

Performance area	Rationale/relevance	Effectiveness/efficiency	Long-term implications
Mission and mandate			
Programme and strategy			
Constituency and governance			
Financial viability			
Management			

The SSC Staff Meeting in May 2001 was then used to determine which performance areas were most appropriate to the Action Plan process and four such areas were identified. These were:

Performance area	Rationale/relevance	Effectiveness/efficiency	Long-term implications
Specialist Group planning and process			
Product quality and distribution			
Management by IUCN Secretariat			
Implementation of action plan priorities			

Finally, questionnaires were designed that would allow information to be collected so that each performance area could be evaluated. One additional questionnaire was designed that was targeted specifically at non-SSC users.

2.3. Carry out a series of in-depth telephone interviews

Once the questionnaires had been finalised, individuals were identified who were involved in the various performance areas for each of the target Action Plans. An additional small group of people were identified for evaluating the perception that external audiences had of the plans.

2.4. Summarise findings of all three phases of the action plan evaluation and those of other SGs

An Executive Summary is presented on pages 3 and 4 that draws on the results in Section 3 and the Discussion of the issues in Section 4. The earlier two phases of the Action plan evaluation were obtained and assessed. The evaluation carried out on the 1995 Galliformes Action Plans (Dekker and McGowan 1995; McGowan and Garson 1995; McGowan *et al.*1995) was also obtained (see Appendix 3) and summarised. This was carried out by the World Pheasant Association with the Megapode Specialist Group, the Partridge, Quail and Francolin Specialist Group, and the Pheasant Specialist Group during preparation of the 2000-2004 Action Plans for these groups.

2.4.1. Phase 1

Phase 1 was concerned with assessing the type of actions that were identified as priorities in the Action Plans and determining whether these had changed over time. Forty-two Action plans were included in this assessment (carried out by SSC intern Joshua Shachter). The full report is presented at Appendix 1.

2.4.2. Phase 2

Phase 2 was concerned with assessing the degree to which the priority actions identified in a set of Action Plans had been implemented. Twelve Action plans were identified at the start of this assessment (carried out by SSC intern Ammy Gillesberg), although replies were received on only six. The full report is presented at Appendix 2.

2.4.3. Phase 3

The present study was the third and final stage of the evaluation and it was designed to assess whether the Action Plans had influenced the amount of conservation action that had taken place. Given the variety of problems associated with this kind of study (see Gimenez-Dixon and Stuart 1993), the approach that was adopted (see Terms of reference in Section 1.3) was to carry out case studies of three Action Plans (see Section 2.1).

2.4.4. Other SG evaluations

The World Pheasant Association (with the relevant Specialist Group) undertook an evaluation of the value of the three 1995-1999 Galliformes Action Plans when these were revised in 1999. The emphasis and approach were different from the present study, as the data were collected through a questionnaire survey of the people that had carried out each project (Principal Investigators). In this survey they were asked reasons why they had carried out the project, how the objectives related to those stated in the Action Plan, whether the Action Plan and the Specialist Group endorsement was important in securing funds and what publications and reports, and conservation action had resulted from the work. A draft manuscript from this evaluation is presented at Appendix 4, and is not for further circulation.

3. RESULTS

3.1. Decide on three Action Plans

The Action Plans that have been selected for this exercise are:

1. Rabbits, hares and pikas (Lagomorphs: Chapman and Flux 1990);
2. Zebras, asses and horses (equids: Duncan 1992);
3. Dolphins, porpoises and whales (cetaceans: Reeves and Leatherwood 1994); and
4. Foxes, Wolves, Jackals and Dogs (Ginsberg and Macdonald 1990)

Some information was also collected on

5. Crocodiles (Thorbjarnarson *et al.* 1992)

These were the groups that provided the most complete responses to Phase 2 of the evaluation.

3.2. Design a telephone interview method

The questionnaires are appended at Appendix 4 and their content is summarised below.

- SG planning and process

The intent of this questionnaire was to determine why an action plan had been compiled, what its objectives were and the nature of the compilation process. It was targeted at compilers, authors or editors.

- Product quality and content

This questionnaire was designed to assess the confidence that users had in the plan. A question in the 'non-SSC' questionnaire also addressed this.

- Process management and distribution by IUCN Secretariat

This was really designed to describe the process by which the Secretariat manages the compilation of Action Plans and then promotes them to those able to act.

- Implementation of Action Plan recommendations

The intent of this questionnaire was to ask researchers, government officials and others about the degree to which they have take notice of the priorities stated in Action Plans in their work, and whether the plans guided their efforts to any great effect.

- Utility of Action Plans for non-SSC people

This questionnaire was designed to ask those people not involved in SSC about their perceptions and use of the plans. The interviewees were also asked whether the plans did not cover areas that they would find useful.

3.3. Carry out a series of in-depth telephone interviews

Telephone interviews were carried out with:

- SG planning and process

Josh Ginsberg (Canid AP co-author)
Patrick Duncan (Equid AP editor)
John Flux (Lagomorph AP co-compiler and co-editor)
Randall Reeves (Cetacean AP co-compiler)

- Product quality and content

Mariano Gimenex-Dixon (Programme Officer)
See also those listed under "Utility of Action Plans for non-SSC people", where there were two questions related to this (see Appendix 4).

- Process management and distribution by IUCN Secretariat

Mariano Gimenez-Dixon (Programme Officer)
Linette Humphrey (Publications Officer 1987-2000)
Simon Stuart (Species Programme until 2001: also some questions on planning and process and quality and content)
Craig Hilton-Taylor (Red List Programme Officer)

- Implementation of Action Plan recommendations

Ann Oakenfull (Equid AP)
Ken Sugimura (Lagomorph AP)
Brian Smith (Cetacean AP)
Fernando Cervantes (Lagomorph AP)
Gopinathan Maheshwaran (Lagomorph AP)
Peter Novellie (Equid AP)
Claudio Sillero-Zubiri (Canid SG)
Perran Ross (Crocodile SG: electronic feedback only – no telephone interview)

- Utility of Action Plans for non-SSC people

Greg Donovan (International Whaling Commission: Cetacean AP)
Ger Bergkamp (IUCN Wetland and Water Programme)
David Sheppard (World Commission on Protected Ares, IUCN: e-mail response to questionnaire)
Valerie Keeble (People's Trust for Endangered Species)
Karen Baragona (WWF-US)
Josh Ginsberg (Wildlife Conservation Society)

Phil Clapham (National Marine Fisheries Service, US: e-mail discussion)

3.4. Summarise findings of all three phases of the action plan evaluation and those of other SGs
The earlier two phases of the Action plan evaluation were obtained and assessed. The evaluation carried out on the 1995 Galliformes Action Plans (Dekker and McGowan 1995; McGowan and Garson 1995; McGowan *et al.*1995) was also obtained (see Appendix 3) and summarised. This was carried out by the World Pheasant Association with the Megapode Specialist Group, the Partridge, Quail and Francolin Specialist Group, and the Pheasant Specialist Group during preparation of the 2000-2004 Action Plans for these groups.

3.4.1. Phase 1
The major conclusion drawn from Phase 1 is that research actions were the most common priorities proposed in Action Plans. However, the way that the actions had been split into the categories to classify 'types of action' adopted in Phase 1 may indicate that this conclusion is not as straightforward as it first appears. For example, Shachter states that "researching legislation affecting a species" would be listed under research, rather than under legislation.

Inspection of Schater's categorisation of actions that he used in his review (see his section Methodology in Appendix 1) reveals a degree of overlap between some of them. For example, 'research into captive breeding' would fit into both "Research" and "Ex-situ management" and the division of protected area activities between his categories for "Ecological management" and "Legislation and policy" seems somewhat arbitrary. The impression, therefore, is that the categories are artificial in places and do not fully reflect the conservation process. In other words, perhaps it does not best reflect the logical sequence of information requirements in order to underpin sensible conservation interventions: i.e. what is being aimed at and what information is needed to get there (please see scheme presented in Galliformes Action Plan evaluation at Appendix 4 in Section 6.3).

Schachter states that when all actions (both general and specific: see below) are combined, 54% of actions are research. In the context of species ecology and conservation 'research' would more usually be restricted to field research and, therefore, the first impression of Schachter's finding is that 54% of actions recommended involve surveys and field research and this is not the case, as it includes research into legislation, management etc. Nonetheless, there is a clear emphasis on clarification of taxonomy, baseline surveys to discover the distribution of species and their status, and research into threats and solutions.

A second important point to emerge from Schacter's assessment is the distinction between "general" and "specific"recommendations. The latter were those recommended actions that covered single species or a small number of species, rather than general recommendations for all species in the Action Plan. Interestingly, when dealing just with specific recommendations, the proportion of "Research" actions dropped from 54% to 39%, implying that the fairly general statements he identified in the Action Plans refer more to research actions than other kinds of action. This is despite his assertion (under Section 3. Sources of bias" in Appendix 1) that non-research recommendations were typically stated in more general terms and therefore often not recorded in his assessment. It is also worth noting that Schacter felt that some recommended actions were too vague to be included, such as "protect species habitat" or "improve protection of protected areas".

Finally, Schacter did look at the type of action recommended in different Action Plans. He concluded that there was little consistency between Action Plans in the way that they identified the conservation priorities for their species or species groups. These differences included both the presentation of actions (where in the plan they appeared and their layout) and the detail that supported each recommendation. For example, in some cases, the recommendation was simply a statement of what was required and in other cases there was more information on how the recommendation might be carried out, or even project summaries.

In summary therefore, therefore the three main issues arising from Phase 1 were:

1. the evaluation did suggest that a large number of recommendations were research orientated, although this may be overstated in this evaluation because of the way in which recommendations were classified;
2. some actions were presented in a very specific manner and others were presented as more sweeping aspirations. The relative merits of these two approaches seem likely to depend upon the audience; and
3. there was little consistency in the way that priorities for action were presented, both in terms of format and content.

3.4.2. Phase 2

Phase 1 was concerned with assessing the degree to which the priority actions identified in a set of twelve Action Plans had been implemented. The full report is presented at Appendix 2.

Information was gathered on the progress of all recommendations in four Action Plans (lagomorphs, equids, otters and corcodiles), virtually all projects in the cetacean plan and some of the actions in the canid plan. These four plans had made 284 conservation recommendations. The responses indicated that 18% were complete, 50% were ongoing and 32% were not started. Of the actions not started, lack of resources (both funding and people) was the most significant factor, although impracticality and political sensitivity were also important reasons.

Gillesberg classified the actions that been proposed into the categories used by Schacter and concluded that nearly 70% were "Research" or "Ecological management". "Ex-situ management" and "Legislation and policy" recommendations were fairly equally represented and together accounted for a further 20% of recommendations. It is not clear which type of actions comprised the recommendations that were completed and which were ongoing, but figures were presented for the actions not yet started. These suggest that 57% were "Research" and "Ecological management".

In summary, the four main issues arising from Phase 2 were:

1. of the four Specialist Groups that responded, 68% of the recommendations that they made in their plans had been initiated and were either ongoing or completed;
2. reasons for recommendations not being implemented were mainly concerned with lack of human and financial resources, although practicality and political sensitivity were also important;
3. it could be surmised that the only source of information on the implementation of recommendations was the (usually volunteer) Specialist Group concerned; and
4. Specialist Groups vary in their capacity to monitor and report on this.

3.4.3. Phase 3

As background to the assessment of the effectiveness of each plan, the way that SSC has managed the process over the last 10-12 years was reviewed through interviews with Simon Stuart, Mariano Gimenez-Dixon and Linette Humphrey. After these results are presented, the assessment of the plans themselves is presented as a series of case studies.

1. Process management and distribution by SSC Secretariat

Some of the early background to the SSC Action Plan process is provided in a report of a meeting held by Fauna and Flora Preservation Society (now Fauna and Flora International) and SSC that was held at London Zoo in April 1991. This report was found in the WPA files, but it is not clear whether it was published or not: it did not appear in *Oryx*, although a short news piece indicated that a meeting had been held (see *Oryx* 25:235, October 1991). It will be referred to here as Morris (1991), as it is initialled J.M.M. at the end of the report and this presumably refers to Jacqui Morris, the former editor of *Oryx*.

SSC Action Plans were first produced in the 1970s (for elephants, rhinos, primates, marine turtles and crocodiles) for WWF, which was then the fund-raising part of IUCN. In the mid-1080s Simon Stuart was employed with the task of promoting a rather different Action Plan programme that would be aimed at a broader target audience. Indeed the audience was seen as any organisation or government that might be in a position to implement them. In 1990, SSC had received the 'Oman gift', which was a USD1 million donation from the Sultanate of Oman that was allocated to Specialist Groups for the preparation of Action Plans and for promoting their implementation. This gift was a significant boost to the Action Plan programme. In April 1991 SSC had 3227 members.

The programme was designed to re-orientate the idea behind the plans that were compiled for WWF in the 1970s. The relaunch was seen as a way of re-invigorating Specialist Groups and encouraging them to develop a clear idea of what the priorities were for their group of species. The objectives were stated very broadly and included; the bringing together of all information on the species group, especially conservation information; a review of the information available and assessment of status; the setting of priorities; and a statement of what action was needed for the species group. It was clearly stipulated from the start that each Action Plan must be comprehensive and not just deal with a few species within a species group. For example, a Cat Action Plan could not concentrate on charismatic species such as the African lion or the tiger, but must cover all species. This comprehensiveness was a new feature.

The projected shelf-life of the Action Plans was not explicitly stated, but it was felt that they would be relevant for about five-years. Different plans were able to incorporate a broad array of recomendations to varying degrees. For example, the lagomorph and cetacean plans recommended that more research was required in many cases, but Action Plans for rhinos and crocodiles contained more management recommendations. The hope was that the recommendations would be able to go beyond the research needs of species.

The SSC Secretariat saw the whole global conservation community as responsible for acting on the priorities stated in the plans and so this was effectively the target audience, although there was no structure developed to ensure that action followed. For example, there was no mechanism for ensuring that the recommendations were incorporated into the programmes of IUCN Regional Offices. Some Specialist Groups did have success for external (i.e. non-SSC Secretariat) reasons: e.g., the Primate Specialist Group virtually has a dedicated fund in the Margot Marsh Fund and so can provide some support for the pursuit of priority actions. The Asian and African rhino Action Plans were seen as blueprints for the conservation of these species and became linked to the UNEP process on rhinos.

Since about 1995-6, SSC stopped pushing Specialist Groups to produce Action Plans if they did not wish to compile them. It is accepted that the success of the Action Plans relies on the Specialist Group driving their implementation. The Secretariat does not have the capacity to do this.

Technical aspects of the Action Plan process were discussed with Mariano Gimenez-Dixon, who as a Programme Officer has been involved with the compilation of many Action Plans, and the editorial side was discussed with Linette Humphrey, who as Publications Officer has overseen the production of most Action Plans.

The early plans had no guidelines and the idea was that people would not be constrained in what they were writing. The first guidelines to be produced were a couple of pages that outlined what SSC thought were good aspects of the plans that had been completed. Secretariat staff (Simon Stuart, and then Linette Humphrey and the Programme Officers) would guide people in the development of plans. Once guidelines were in existence, most plans did fit the Action Plan guidelines that were in force at the time, and the guidelines have continually evolved. The Action Plan guidelines became more complicated when IUCN provided guidelines for publication as an IUCN title (liaison, style etc). The guidance on content was always provided by SSC.

It is considered that the plans have helped contribute towards SSC's targets, although the degree to which they have contributed has varied over time. Initially, Action Plans were the focus of activity for new Specialist Groups and were something tangible that they could work on. At the very least they were seen as a snapshot in time, a baseline against which to measure change in the status of species or their needs.

Overall, SSC believes that the plans have been of a high technical standard. They contain the best available information and recognise that there is often very little available. They are typically written from a biological perspective and so there is a bias towards natural science information, which means that areas such as socio-economics are not discussed under either issues or solutions. This means that whilst most of the relevant biologists and species-orientated organisations are involved in compilation, the coverage of the issues from a non-biological perspective is patchy. Furthermore, the ability to deal with priorities and actions is impaired, as areas that the Specialist Groups have no expertise in are, inevitably, not covered.

As noted above, some plans have difficulties in setting priorities, as there is no established method for doing this within SSC. All of this means that the plans have mixed success in stating the real priorities facing the species that they cover. For example, discussion of potential solutions that involves national level policy making and management is typically fairly weak as there is a sensitivity in being seen to tell governments what they should do: i.e. interfering in the internal matter of a sovereign state. An additional complication is that knowledge of national policy and legislation may be insufficient to make realistic recommendations.

The plans tend to be reviewed mainly by the Programme Officer as far as the SSC Secretariat is concerned, but if there are sections relevant to SSC programmes, then other SSC staff who have a professional interest (e.g. Red List, Wildlife Trade) or a personal interest will be circulated with the appropriate parts of the text. It is not usually believed to be necessary to rely on review by other specialists, but this is done if there is a need. The amount of time that has been spent on reviewing individual Action Plans has probably dropped over time, as the number of plans per year has increased and the other demands on Programme Officers' time have increased. However, there are now plenty of models for new compilers to follow and so the template is largely established.

Initially, there were maybe one or two plans a year, but towards the end there were about 12-15 in varying stages of compilation and this clearly represented a great deal of editorial and review work. The Publications Officer would estimate that it would take a month to edit the final draft of each plan, although further time would have been spent in the earlier stages (which some Specialist Groups thought was the final stages). If the draft was of a reasonable standard, the aim was that would be 3-4 months from receipt to publication. The first SSC intern to work on Action Plans was in about 1996 and since then interns have been central to the editing process.

Essentially, the process relies on the Specialist Group ensuring that the material is correct and reviewed as it feels appropriate, especially the factual details on the species concerned. The amount of work that the Secretariat has to carry out on the content varies from plan to plan: for some plans there is little to do, but for others there is a great deal. The Secretariat has always tried to be involved from the first stage of compilation so that it is active throughout the whole process. The Publication Officer would then try to lighten some of the dry academic style, if appropriate.

The way that the plans present the priorities varies in its ability to satisfy the expectations that the Secretariat had for the Action Plans. A common Secretariat reaction to early drafts was 'nice book, but what about the action'. Many compilers had to be prompted to write actions and then often the actions did not relate to the problems that they had stated earlier in the plan. Not all Action Plans made it clear what the priorities were and how these might be achieved. For example, some would only propose actions that might be achieved over, say a five-year period, but others would be far more ambitious. Some authors were just not realistic and others were too vague. The Secretariat response to recommendations was often "but is it feasible?"

By the time they were published, some plans presented recommendations in the way that the Secretariat had intended and of those plans being evaluated here, the Cetacean Action Plan is a good example. Others partly meet SSC expectations and these cover many species and have global coverage so that, by the nature of the species groups that they deal with, they have in-built difficulties in providing a comprehensive assessment of necessary action. The lagomorph and equid plans are examples. Where possible there was a hope that single species recovery plans would be inspired, e.g. the African wild dog and European wolf plans that followed the Canid Action Plan and that these would detail the necessary action more specifically.

As far as the Secretariat was concerned everyone who had something to offer was invited to contribute to the Action Plan compilation, although inevitably some relevant people do not become involved. This is for a variety of reasons, including lack of time, philosophical differences and personal rivalries. On average, each plans takes up a moderate amount of Secretariat time, involving both the Programme Officer and interns.

Once plans are published, the SSC Secretariat undertakes no, or very little, promotion of the recommendations contained with each plan. Although the plans are sent to all relevant parts of IUCN, they are pushed, it at all, only to some parts and it is perceived as a shame that the IUCN Secretariat could not be persuaded to use them. Promotion outside IUCN is considered to be opportunistic at best. Within SSC the plans are used by the Programme Officer only in responding to queries, and are used by the Wildlife Trade and Red List Programmes where relevant. The Secretariat itself has a partial idea of the target audience and believes that the plans partly reach this audience. Feedback on the use of the plans is opportunistic.

The Secretariat finds it difficult to say whether the plans have had a significant impact on the conservation status of species, and feels that this question is best addressed by the Specialist Groups. The factors affecting the impact of the Action Plans include:

1. an active Specialist Group that use the plan to sell their own activities (i.e. as a workplan);
2. identifying the correct audiences. SSC finds it difficult to identify the correct contacts in each and every case, even if it knows of the type of audience and the general target. For example, it will know a relevant government department, but knowing the person with explicit responsibility or interest in a species, area, issue etc requires more precise targeting; and
3. the ability to combine with existing instruments, such as the cetacean plan with the International Whaling Commission.

It is now harder to raise funds for Action Plans and there are more of them being compiled. Therefore, resources are more and more squeezed. The cost of printing them is increasing and staff time is decreasing, both for editorial work and also for technical review. SSC did hope to produce them on CD-ROM, but this did not happen. Electronic publication may also be more realistic to consider.

The Specialist Groups have put a huge amount of effort into plans, but it is difficult to say if it is worth it. There were always lots of ideas from the publications team on how Action Plans could be improved, but limited feedback on the value of the plans from end-users inhibited these being putting into practice.

Red List Programme. The Programme does consult Action Plans to provide the documentation for species included on the list where the Red List Authority has not provided this, usually as a consequence of lack of time. In these cases, the plans would be consulted and the Specialist Groups contacted to ensure that they are happy with the information that is being used as documentation. In most cases they are happy, as the burden of work shifts from them to the Red List Programme. Although some of the plans are old, even these may provide valuable sources of information, such as habitats used. More recent interactions between the Red List Programme and the Specialist Groups that are compiling Action Plans have been dynamic and fruitful.

The Red List and the Species Information System have both adopted Authority Files (see < www.iucn.org/themes/ssc/sis/authority.htm>) for the coding of information for Habitats, Major Threats, and Conservation Measures. When identifying conservation measures needed "assessors are asked to be realistic and not simply select everything. The selection should be for those actions which are most needed and which could realistically be achieved in approximately the next five-years." Although assessors can add more detail for each measure, it is expected that most will simply state the action needed as one or more bullet points. Therefore, there is a clear link between this part of the Red List and the function that the Action Plans are perceived to serve. It is anticipated that one of the indices that will be published every four years or so will be an index of how many of these needed actions have been carried out. This document will then be used for advocacy purposes.

2. Rabbits, hares and pikas Action Plan

Production of the Action Plan. The Lagomorph Action Plan was compiled because SSC requested that it be done. The final chapter, which stated what the conservation priorities were for this group of 80 species, was produced once the other chapters were written. Different people who were involved had different ideas about what the objectives of compiling the plan should be. Broadly, there was a desire to bring all information together and assess the status of species. However, there was concern that a lack of information on some species meant that there was not even a basic idea of what the conservation needs were for those species. As a result, some field visits were carried out beforehand to talk to relevant people, e.g. visiting Sumatra to collect local information to include in the plan and one SG member travelled from the UK to India to look for the hispid hare so that some comments could be made about its conservation requirements.

The plan took more than two years to compile, which was too long, but it was not really possible to make this time any shorter as the reliance on volunteer effort was so significant. There were 5-10 Specialist Group members heavily involved in the compilation and a further 11-20 provided a smaller amount of input. Most of the relevant people who were known to the compilers were involved, although there were some specialists who would not join groups like the Lagomorph Specialist Group. The SSC Secretariat was involved in the process right from the start and was very responsive to all matters that arose.

The plan was not written with a definite shelf-life in mind and so it was not explicitly stated that the recommendations should be implemented within a five or ten year period. There were probably two limitations to the type of action that was proposed. The first was that because there was such a lack of information for some species, it was just not possible to state what action was required with any confidence. For example, the highest priority stated for the Sumatran rabbit *Nesolagus netscheri* was to locate the species in the wild. The second limitation was that the plan was largely written by biologists and so the recommendations were largely proposed from that perspective.

There was no strategy to implement the plan once it was published and it was felt that project initiation would be opportunistic. Rather it was intended that the plan be targeted at the global conservation community, and especially at students given that many of the projects proposed involved the gathering of information. Action Plans were sent to universities in countries where the lagomorphs occurred. Other target audiences included the European Commission, as one recommendation was that lagomorphs should not be introduced into Europe for hunting purposes as they may bring in disease. Although the plan was sent to the EC, the movement of rabbits has now started (by hunting groups) and there are concerns about the disease implications of this. It was also hoped that IUCN would be able to provide seed money for some projects.

The Action Plan was very valuable in bringing people together and gave the Specialist Group an aim and led to new contacts being made. At the time of the publication of the Action Plan, the Chair of the Specialist Group changed and the new Chair set about implementing the projects recommended. He felt that the detailed approach in the early chapters of the plan ensured that the conservation recommendations were built on solid conceptual framework and he used the resulting recommendations to restructure the Specialist Group. Therefore, he started from zero members and

then tried to find members in-country to carry out the recommendations, so that there would not be people from Europe or North America, for example, discussing issues about a lagomorph in another country when there were capable members in that country. The interest in these species in Mexico is a significant example of the success of this approach.

Mexico is one of the most important countries for threatened lagomorphs, if not the most threatened. The restructuring of the Specialist Group meant that a Mexican biologist who had been active in research since 1979/80, but who had not been involved in the compilation of the Action Plan became a member. Since then he has been instrumental in pursuing many of the recommendations in the Action Plan and there is now an active and highly competent group of lagomorph conservation biologists in Mexico. For this biologist taking on the priorities of the Action Plan was straightforward as broadly they coincided with those that he had identified. The plan reinforced his conclusions and has proved very successful in highlighting the plight of these species to the federal government, and in showing that others are concerned in Mexico's threatened lagomorphs.

The Chair has sought to implement the recommendations exactly as they were identified in the Action Plan. For example, he wrote to the Japanese Ministry of the Environment about the plight of the Amami rabbit and, although he did not hear about this directly, some USD80,000 was subsequently released for work on this species. Elsewhere, different approaches were required, such as in South Africa which is more interested in big mammals and which required a German biologist to initiate action on behalf of the riverine rabbit.

Many of the projects have led to both unpublished conservation reports and peer-reviewed papers, although there are projects that have not resulted in written reports or papers. Where reports have been produced they have been disseminated to conservation decision-makers who can act on the results. For example, a Population and Habitat Viability Analysis was conducted on the South African riverine rabbit. Initially WWF South Africa was not interested in this and it was funded by Philadelphia Zoo. However, now WWF-South Africa has set aside some money and is taking on the conservation education of land managers.

The Action Plan has been important in releasing funds for a variety of projects in the Lagomorph Action Plan. This includes the USD3000 for the riverine rabbit Population and Habitat Viability Analysis and the funds for the Amami rabbit work (both mentioned above). It also includes work such as the current assessment of the hispid hare in Jaldapara Wildlife Sanctuary, West Bengal, northern India, which is being funded by the Wildlife Conservation Society. Three examples briefly illustrate the role that the Action Plan has played in affecting conservation action.

Implementation of threatened recommendations for threatened lagomorphs in Mexico. As noted above, the conservation priorities outlined in the Lagomorph Action Plan reflected those that Mexican researchers had identified. The Action Plan was, therefore, only partly responsible for stimulating the researcher contacted to carry out this work. The other reasons were his long-standing interest in the species group and the fact that conservation work on two or three species was of national importance.

The Action Plan is cited in proposals and there is a belief that this helps. Funds have been attracted from the Mexican government and from US zoological societies (with the Lagomorph Specialist Group Chair's support). As far as the Mexican government is concerned, this shows that there is international interest in these species and this is important: the Action Plan is written by specialists and provides more information upon which the government can make a decision.

Most of the objectives stated in the Action Plan have been achieved and many reports on the projects have been sent to funding organisations (whether Mexican government or abroad), state governments and local people where relevant. The appropriate part of government is the Ministry of Environment and Natural Resources, which is the conservation part of government and which also provided funds for some of the projects.

Direct conservation gains have followed. For example, as a result of a big project on the status and abundance of *Lepus* carried out in the mid-1990s, he suggested to the Mexican government that that they should not allow the most threatened species to be hunted when they were writing the regulations that determined the hunting season. The government agreed and omitted the species. However, there is illegal hunting.

Implementation of Amami rabbit recommendations in Japan. Work on the Amami rabbit began in 1985 with funding from the US based East-West Centre and subsequently WWF-Japan, and then a private Japanese insurance company. This work is being carried out by the Research Head of the Environmental Planning Laboratory of the Forest Management Division in the Japanese Forestry and Forest Products Research Institute. In 1985 clear felling was a problem for this and other Amami species. Introduced species were seen as a problem in 1992. The Japanese governmental researcher is involved in this work only partly because it is in the Action Plan, the other main reasons being that it is a national priority for non-governmental organisations in Japan, and through his interest in Amami. He began this work when he was asked by WWF-Japan to go to Amami. Amami, Okinawa and Iriomote Islands are perhaps the most special area in Japan with various endemics (the rabbit plus bird species) and the Action Plan reflects that work and is important because of that.

Having been involved in the compilation of the Action Plan recommendations, he is seeking to carry out the project as it is written in the plan. The objectives have been partly completed and the project is ongoing. Reports have been written, but only in English and sent only to scientists, the implication being that managers do not read English. Nonetheless, action has resulted as the control of invasive species is being tried following a large-scale government funded project that was conducted between 1992 and 1995. The introduced mongoose is now a big problem for Amami species and the financial situation is not good for this work because of the economic downturn.

Implementation of the hispid hare recommendations. Current work on the hispid hare seeks to implement Action Plan recommendations on this species. This work is being carried out only because it is in the Action Plan. The researcher had previously worked in the grasslands of northern India and was keen to carry out conservation research on the hispid hare and was soon in contact with the Chair of the Lagomorph Specialist Group. The current project is seeking to carry out the project as written in the Action Plan, with more detail in some areas and expansion in others.

The project's inclusion in the Action Plan was a key factor in obtaining funds (from the Wildlife Conservation Society). New proposals for further work have gone to the Department of Science and Technology and to the Ministry of Environment (both in Delhi) and these both cite the Action Plan. The researcher believes that citing the Action Plan in these proposals is important, as it shows that there is international interest in this work. So far, all objectives have been achieved, although the investigation of breeding biology requires the use of radio-transmitters and the applications to the Department of Science and Technology and to the Ministry of Environment are for this work. Permission has already been granted to catch a small number of animals for this purpose.

3. Zebras, asses and horses Action Plan

The production of the Action Plan. The Equid Action Plan was compiled to focus action on the species group by stating how many species there were and where they were found. The objective was to state the action that was most needed for the group, but in order to do this, the various stages of information gathering and synthesis had to be undertaken. As with the Lagomorph Action Plan, the SSC Secretariat was involved in the process right from the start and was very responsive to all matters that arose. The Re-introduction and Veterinary Specialist Groups were consulted during compilation, as was the Antelope Specialist Group, but no other parts of IUCN were contacted, as there were no functioning parts that were relevant.

Altogether it took about four years to compile the plan, and this was probably not too long. This is because of the practical issues of dealing with an entire voluntary group of contributors, but also because the preparation was envisaged as a long-term and not a short-term exercise, and so it was

accepted that a lengthy compilation was in the nature of the exercise. Furthermore, it compilation of the plan was seen as part of the process of conserving equids, and that the publication did not mark an end to a discrete activity. It was envisaged that the plan would have a shelf-life of about five-years.

The recommendations were made using biological criteria only and, with hindsight, perhaps some consideration should have been made of operational criteria, such as funding levels and availability. The recommended actions were confined mainly to biological aspects, although it would have been desirable to have made more broadly based recommendations, such as those dealing with sustainable use and human community issues.

The Action Plan included the name of a Specialist Group co-ordinator for each species in the hope that they could co-ordinate the implementation of the recommended actions. However, there were no resources dedicated to these actions and the co-ordinators had no funds at their disposal to promote the implementation of action plan recommendations. IUCN had no resources to contribute and although nothing was promised in advance, there was the hope that as IUCN had pushed the compilation of the plans, there would be some resources available to carry out the recommended projects. The Chair was put in touch with at least two SSC fund-raising people, but neither of these led to significant funds begin obtained. Whilst he readily accepted that no support was promised in advance, the overall result of the lack of post-publication support was that the Chair resigned, as he and the other Specialist Group members had full-time jobs and so had no time to fund-raise for Action Plan projects. Consequently, it was in effect hoped that the global conservation community would take up the Action Plan recommendations.

Once the plan was published, the Specialist Group really left it up to each species co-ordinator to implement the actions recommended for each species. As noted above, however, there were no resources centrally available to the Specialist Group to promote this. This lack of interface between SSC and fund-raising was seen as a major obstacle to promoting species conservation priorities.

Despite the lack of resources dedicated to pursuing priorities when the Action Plan was published, there has been a considerable amount of progress towards implementing priority actions. A key factor in this appears to be way that the Specialist Group functions by effectively adopting the Action Plan as a core activity. This is exemplified by the way that several related projects have been pursued in two general areas: genetic conservation of equid populations and work on the mountain zebra in South Africa.

Implementation of genetic conservation recommendation. Work on this problem started in the early 1980s at San Diego Zoo and so it predates the publication of the Action Plan. It has continued since then, but is heavily dependent upon both funding and the availability of samples from wild animals, over which there is no control. This work is still being pursued, partly because it is in the Action Plan, but also because the investigator is interested in the conservation of the species group anyway. As the techniques are not scientifically novel, there is no purely scientific reason to carry out this work and so it is the conservation application that is the main motivating factor.

So far some of the objectives have been achieved, but as the project is ongoing not all have been achieved yet. The investigator's employment now makes it more difficult to pursue this technically demanding project unless dedicated funds are available and so that is a constraint on progress. It does appear that the recognition of the importance of this work through its publication in the Action Plan has been important in attracting funds. The investigator does believe that disseminating information arising from this project is their responsibility and once work is at a stage where it can be communicated to those able to act on the results, they will do so. To date, outlets such as *Species* have been seen as important places for updates to appear.

This project clearly relies on the interest and support of other equid researchers and so a degree of awareness amongst other Specialist Group members is important. The co-ordination amongst these

people that has resulted from the compilation and publication of the Action Plan is good. For example, the Specialist Group tries to meet annually.

Implementation of mountain zebra recommendations in South Africa. Mountain zebra conservation efforts began in South Africa with the proclamation of the Mountain Zebra National Park in 1937 and the programme has been run by South African National Parks. By the late 1970s the population inhabiting the park had become large enough to consider using these animals to re-populate other areas, and this began in the early 1980s. So the project is not a direct response to the compilation and publication of the Action Plan. Information on the project fed into the Action Plan, which was seen as a vehicle for exposure and comments on the programme. Publication in the Action Plan has been useful because it has served as a focus for looking at the data and analysing results. The implication is that this would not have taken place had the Action Plan not been published.

The programme is part of the national programme of South African National Parks and is ongoing (for example a PhD is looking at the genetics of the zebra). It is therefore, a national priority as the species is considered rare. As the project is a national priority, the inclusion of the project in the Action Plan has been not been instrumental in securing funds, presumably as the programme is a core activity of a federal government agency. However, the project is being carried out as specified in the plan, presumably because the species co-ordinator was involved in the identification of Equid Action Plan priorities. Furthermore, the Action Plan has been important for at least two reasons.

First, as noted above, it has concentrated attention on an assessment of the project progress to date and what action would be necessary in the future (the analysis of data and the interpretation of results). Second, it has stimulated co-operation between responsible management agencies that were previously not working together. This is because the mountain zebra is the responsibility of several agencies: the federal South African National Parks and the provincial protected area agencies in the Eastern Cape, Western Cape and the Northern Cape. In addition, the species occurs in Namibia. The distribution of the two subspecies, (including introduced populations) further complicates the proposal of an overall management plan. The Action Plan has stimulated co-operation between these various agencies. Most Action Plan objectives have been achieved, and the closer co-operation between agencies that is now evident should ensure that additional recommendations are achieved. A meeting of the Equid Specialist Group resulted in a publication in the peer–reviewed scientific journal *Acta Oecologica* and the dissemination of information arising from the projects is ongoing

Wherever possible both information and animals from the programme are disseminated to those who can act on them and take the conservation efforts further. For example, South Africa National Parks is about to take part in a meeting on Game Capture and Population Re-establishment in mid-October. This will involve game managers, and South Africa National Parks' work with the Western Cape will be presented. The difficulties of managing small populations are not widely understood in the private sector in South Africa (e.g. founder population size) and so they will present on this. As efforts to build up numbers of mountain zebras have proved successful, animals are being dispersed to other areas, including private game ranches where appropriate and there is a big demand for the zebras.

Additional action has included assistance towards land acquisition in the Mountain Zebra National Park and also the Karoo National Park. Funding for this came from the private sector and the data collected on the mountain zebra as part of this programme helped focus attention.

In summary, the value of the Action Plan is that although Equid Specialist Group and SSC have not played a strong role in the project, they have acted as a focus and stimulation for thinking about it: e.g. influencing direction. The plan has stimulated co-operation between agencies. The mountain zebra is an uncomplicated situation because although numbers are low, habitat is available (if fragmented). Therefore, building up numbers has been straightforward and there has also been an economic incentive to do this amongst private game-ranch owners.

4. Dolphins, porpoises and whales Action Plan

Production of the Action Plan. The plan reviewed here, the 1994-1998 version was produced as a response to perceived expectations. There was an Cetacean Action Plan published in 1988 and which was updated in 1989. Then the Chair of the Specialist Group changed and the new Chair believed that the Specialist Groups were expected by SSC to produce plans at five-yearly intervals.

Broadly speaking, the aim was to provide an authoritative but necessarily superficial review of information, especially that which was relevant to conservation. This was based on the premise that the Action Plans were seen by others, especially in areas where access to information is poor, as a global information review and statement of what action was needed. Beneath this broad objective, there were a variety of different objectives for the Action Plan: one was to produce a reference book for a conservation audience. Another was to set priorities and this involved changes in structure to the previous Action Plans (e.g. costings were dropped and project descriptions were made more substantial), and related to this was the statement of action that was most needed for the species group. These actions were not seen as the territory of the Specialist Group, and it was hoped that others would take up the challenges of carrying out these actions.

Contact with the SSC Secretariat started as soon as compilation began and all contact was very efficient. There was little contact with other Specialist Groups or other parts of IUCN, although there was some discussion of proposal implementation with the IUCN office in Sri Lanka. Compilation took nearly two years and this was thought to be too long, although with the voluntary nature of the Specialist Group it is hard to do anything about this. Five to ten Specialist group members were heavily involved in compilation and a further 11-20 helped to a lesser degree. Most of the key people were involved, although some simply did not have the time to take part. It is important to note here that the Specialist Group is not run with the intent of being the major body of global cetacean expertise as there are too many people involved in this area of conservation activity to make this practical. Therefore, it is seen as part of the wider global cetacean conservation community.

The recommendations were made within the context of the plan having a five-year shelf life. These were limited to a natural sciences orientation and emphasised small cetaceans. The emphasis on small cetaceans was due to an understanding that the issues surrounding the larger cetaceans fell to the International Whaling Commission and that the Cetacean Specialist Group dealt with the smaller ones. It is worth noting here that the IWC has management responsibility for the larger cetaceans, but 'only' scientific responsibility for the small cetaceans. This responsibility is met through the Small Cetacean Sub-committee, which shares members with the Cetacean Specialist Group. This committee considers currently available science and makes recommendations to member national governments (rather than global recommendations). The Action Plan can be an important part of this process as personnel overlap. In some cases recommendations made independently of IWC (through the Specialist Group) can have more impact as the Specialist Group is seen as technically sound and independent. So the Chair tries to steer the Specialist Group towards issues not covered by IWC and so the Specialist Group and IWC cover different areas that are intended to be complementary.

At the time of publication it was envisaged that the Specialist Group and the global conservation community would take up the responsibility of implementing the recommended actions. Although the Specialist Group did not explicitly state that the Action Plan was to become its workplan, it was soon the effective focus for activity in the group.

There were a number of difficult balancing acts that have had to be managed when compiling the Action Plan and pursuing implementation. For example, promotion of some policy changes that are based on science would be valuable, but advocacy is a difficult area as there is so much involved in cetacean conservation anyway. Consequently, the value of the Specialist Group is that it is science-driven in a world where passions, money and personal interests have led to a great diversity of NGOs interested in cetaceans

The Specialist Group has made significant progress on the implementation of many of the projects stated in the Action Plan. There are projects, notably those on the right whale (projects 2 and 3) that are being pursued by the United States National Marine Fisheries Service that do not involve the Specialist Group and are not influenced by the Action Plan. The issues here is that the work is being covered by the relevant US governmental agency. However, the Action Plan's summary of the status of the stock and the problems facing it is in accordance with that of the United States National Marine Fisheries Service. There would be merit in IUCN maintaining better contact with the Service to see if there are areas where they have a mutual practical interest. Overall, these are a very small minority of projects that fall into this category, and they may even be just the right whale projects.

In contrast, many other projects have been attempted primarily because they are in the Action Plan. The most striking examples include work in Asia, where a great deal of effort has gone into implementing priority projects. One person, the Asia co-ordinator of the Specialist Group has been involved with many of these projects and first started working under the auspices of the Specialist Group in 1990. In 1996 he became the Asia Co-ordinator. The projects that were identified in the Action Plan were those that were realistic and thought to be practical at the time.

Implementation of Asian projects. The 1994 plan (and his increased involvement with the Specialist Group) was the Asia Co-ordinator's inspiration and catalyst that has shaped the activities that he has pursued since then. It has been a good framework for him to work within and as such his emphasis since 1996 has been implementing Action Plan projects in Asia. He believes that the Action Plan has helped in obtaining funds for priority projects as it highlights the global needs of the species group. This has certainly been the case with some work supported by WWF-US and by the Whale and Dolphin Conservation Society.

Although the emphasis was on trying to carry out projects as described in the Action Plan, the ability to carry out projects changed over time as new knowledge was gained and new contacts were made. The Action Plan was not seen as the complete description of what is required to solve all cetacean problems because of the massive issues that exist. Some of these issues are perceived as simply too big to be tackled in Action Plans that the Specialist Group believes it will have to implement itself with volunteer effort within five-years. Also, other issues arose as the Action Plan projects were being implemented and some difficulties were encountered. For example, philosophical differences with Chinese colleagues over baija in the Yangtse meant that action there was limited.

The Asia Co-ordinator of the Cetacean Specialist Group did not feel that any project had been implemented 100% successfully, although others, including the Specialist Group Chair believe that some have. This highlights an important difference in perception between the people involved. Some people see these projects simply as part of a continuous process and so as long as action is needed to secure the long-term survival of a species they will see the project as ongoing. However, others will see the completion of a discrete set of activities that form a part of this ongoing process as the successful completion of a project.

The findings of the Action Plan projects have been disseminated to those who can act on the information obtained. However, whether or not action has resulted depends on these conservation managers and it requires a different approach to ensure that the findings are acted upon. Certainly in some cases action can be demonstrated, such as the designation of a protected area, but whether this park is adequately resourced is a different matter again. For example, a sanctuary has been designated for the Asian river dolphin, but this does not necessarily mean that it has been established effectively. Also, management plans have been written, but it is not known whether they have been implemented. Hence, this again indicates that Action Plan projects and their recommendations are part of a long-term ongoing process involving many different people and organisations.

The Asian Co-ordinator does see it as his responsibility to disseminate results and promote conservation action, but it is not possible to force recommendations on national governments or local communities. He believes that it has to be their own will once they have been apprised of the facts and

the potential solutions. Therefore, his responsibility is to disseminate the biology to managers etc. and in some areas biologists have done all that they can. An example from outside Asia is that there are social issues that need to be addressed, such as finding alternative employment for gill-netters in the Gulf of California, and biologists have done all that they can on the cetacean conservation issues there. He did indicate that he felt that the emphasis of the Action Plans was biological. In the new Action Plan (currently being compiled), non-biological areas of action such as community awareness were considered, but it was felt that SSC (i.e. the Cetacean Specialist Group) should play a support role in these areas and that they were not a formal part of the Cetacean Specialist Group mandate. The Specialist Group fully supports these activities, however, and recognises their importance.

All of this means that he sees the Cetacean Specialist Group as the Scientific Advisory Group for the conservation of species in the process. If IUCN fostered greater links between its constituent parts this would help establish mutual support between SSC and, for example, the Regional Programmes and so these links should be strengthened. These links could also be designed to help stimulate national governments and local communities in some cases, and it these constituencies that need to take action if there are to be long-lasting conservation benefits.

The Cetacean Action Plan has proved very valuable to at least two important external audiences: the International Whaling Commission and the WWF-US Whale and Dolphin Conservation Programme.

The value of the plan to the International Whaling Commission. The Head of Science has found the Action Plan very useful in his work and is now joining the Specialist Group and is involved in the consultation on the new Action Plan. He has had high regard for the technical standard of the plan and has found the assessment of key issues the most valuable component. The Action Plan gave useful pointers to action and in the past has been research orientated, as was required, but now there is sufficient knowledge to base policy upon it. The difficulty is translating biological knowledge into action. This is not simply a question of making recommendations based on science, but if the recommendations are to be practical and therefore useful, knowledge of local issues is critical. This is vital if the recommendations are to have local ownership.

As noted above, the work of the International Whaling Commission and the activities of the Cetacean Specialist Group are complementary in many ways. The independence of the Specialist Group is important as it allows issues to be debated on scientific grounds, rather that emotional ones. Therefore, the Commission may be able to help with policy recommendations, because the scientific integrity of the Specialist Group is widely regarded. Because of this the Commission can promote Action Plan recommendations to member governments. As noted above, an additional factor here is the overlap of both personnel and recommendations between the Specialist Group and the Small Cetacean Sub-committee of the Commission. The Action Plan could also be put on the Commission's website.

More direct co-operation between SSC and the International Whaling Commission would help in promoting the actions recommended in the plans, but this is slowly developing (e.g. the Head of Science has accepted an invitation to join the Specialist Group). It was emphasised that the critical step is turning science into realistic recommendations and the Head of Science feels that they are moving towards this. The Action Plan is really developed for small cetaceans and the conservation problems facing these species are in areas that are difficult to address. This is because the International Whaling Commission's responsibility for small cetaceans is only scientific, although it can make recommendations to governments (this is the level at which action for small cetaceans is required). These recommendations must be realistic and use local knowledge to ensure that recommendations stand a chance of working. Finally, it was felt that if IUCN promoted the Cetacean Action Plan to its members it might make a big difference to the action carried out on behalf of cetaceans.

The value of the plan to the WWF-US Whale and Dolphin Conservation Programme. The head of this programme has found the Cetacean Action Plan very useful indeed, although the age of the

plan means that it is now used less and a new plan is eagerly awaited. This is because although the broad needs are similar, different activities are now required to address them. The Action Plan proved a very valuable overview of issues and a good introduction to the Specialist Group and it is this contact with the Specialist Group that is now more important. All parts of the plan were valuable, but the assessment of key issues was most important initially. The indication of priorities was also very important as this provided a guide as to where resources should be spent. The final part of the plan that was very often used was the listing of taxonomy and conservation status.

The Head of the programme had a very high opinion of the technical content of the plan and this is now bolstered by respect for many of the authors that she has now dealt with. The plan was a great resource in creating the programme as she was determined not to overlap needlessly with other work, but to find a discrete and valuable niche. In considering what areas might be useful, it was felt that more material on the Red List would be useful, such as the biological data that were used to determine which criteria were met.

It would be possible to promote an Action Plan to other members of the WWF family and it has already been important in highlighting the importance of by-catch to cetacean conservation. The Action Plan was used in justifying this to WWF-US and now WWF-US is building this initiative up and hopes that other offices will help and take this on. There is to be a meeting on the by-catch issue in January 2002 to be attended by both cetacean conservationists and fisheries personnel. The Head of the WWF-US Whale and Dolphin Conservation Programme also co-ordinates action on threatened whales, dolphins and porpoises for the whole WWF family and so keeps track of all WWF projects.

In concluding, she was very aware of the immense amount of work that the Specialist Group members put into running the group and Action Planning. Therefore, despite a very tight budget, she indicated that if some intern support or similar was required to help finalise the new Action Plan she would endeavour to see what could be found in her budget and 'chip-in'.

5. Foxes, Wolves, Jackals and Dogs Action Plan

The production of the Action Plan. This Action Plan was effectively authored as it put together by a postdoctoral research fellow working at Oxford University with the Canid Specialist Group Chair. SSC had asked the Canid Specialist Group Chair to compile an Action Plan and there had been some work over the previous two years towards this, although progress had been slow. Broadly speaking, the plan aimed to carry out most of the functions that have been ascribed to Action Plans, namely bring all conservation information on the species group together, review the information that was available on the species and assess their status, set priorities, and state the action that was most needed for the group. With hindsight, the priority-setting is now seen as the weakest part and it is felt that perhaps this part should have been put at the front.

Contact with the SSC Secretariat started right at the beginning and was good throughout. The other parts of SSC that were contacted were the Trade Programme and the Wolf Specialist Group. The Law Centre was the only part of the rest of IUCN that was contacted. The plan took just under a year working full-time to produce, and could not have been done any faster. Text was drafted and then sent to all relevant people to comment on and suggest revisions, as this solicited more responses than asking other individuals to write sections. In total around 130 people would have commented on parts of the plan.

When considering the recommendations, it was felt that they had to be tractable. Whilst grand frameworks and objectives would have been comprehensive, the guiding principle was effectively that "Conservation is messy" and that action would more realistic at site and national levels, rather than at other scales. Once published, the Specialist Group did use the plan a lot as the group was becoming established, and also to justify to donors the work that it was doing. Implementing the plan did become a key activity for the Specialist Group as it looked for specific individuals to implement projects, but this was often opportunistic and not systematic. It had been hoped that the SSC

Secretariat and the wider IUCN would use the plan, but they did not. It was also hoped that others in the global conservation community would pick up the plan and use it.

Overall, it was (and still is) believed that Action Plans provide hard data that can be used to make decisions affecting the conservation of species. The key is making this information more accessible. If the data and recommendations were to be geo-referenced and so become spatially explicit, it would greatly enhance synthesis across Action Plans. This would allow national and regional plans to be produced. It would also allow access to information at a finer scale (i.e. point localities).

The problems facing Action Planning are the budgets for their compilation and their production. For example, he suggested that perhaps each plan may cost an average of USD50,000 to compile if the time to write/compile/edit them was paid for. As there are now more than 60 plans published these may represent more than USD3 million donated to SSC. Technically, the lack of meta-analysis across plans is a big problem, e.g. analysis of patterns of threat.

Implementation of Canid Action Plan projects. [Note: there is clearly a philosophical difference between this response and that above involving the production of the plan. Therefore, it would be valuable to gain a broader array of opinion on this plan than has been possible in the time available before a sound judgement can be made on the plan's success at stimulating action.]

Viewed now, it is seen that there was little concerted push to implement the recommendations in the Canid Action Plan. There has been a great deal of work on canids since 1990, but the perception from the Conservation Officer in the Specialist Group is that the plan has been seen more as a blueprint of what is desirable, rather than a detailed statement of all the urgent actions that are necessary. However, it should be noted that he perceived the production of the 1990 Action Plan as a desk exercise and clearly did not see it as participatory. In contrast, he felt that the two single species plans to have been published (on the African Wild Dog (Woodroffe *et al.*1997) and the Ethiopian Wolf (Sillero-Zubiri and Macdonald 1997) were much better examples of collaborative compilation.

He considers that the new Action Plan, which is currently being compiled, is a much better example of a "multi-authored consensual document". It will treat all threatened canids and will list actions for each species, ranked for importance. The compilation of the new Action Plan has been used to bring in more people who are from the range States of threatened canids and the group now has just over 100 members from 32 countries, with much better representation of Asia, South America and African biologists than before. The SSC name is a big draw for many of these "developing country" biologists and he believes that being involved with SSC and working on Action Plan recommendations may enhance their ability to obtain small amounts of money for action on some of the lesser known species. It is planned that the new Action Plan will be a significant influence on the activities of the Canid Specialist Group.

The Conservation Officer has concentrated more on promoting certain projects rather than all of those in the Action Plan. This is because as a research biologist working on contracts he has a difficult job to balance the needs of all canids with his need to earn a living, which he does working on the Ethiopian wolf. To this end, he believes that the Ethiopian Wolf Action Plan has helped with raising funds, but that the Canid Action Plan has not.

When it comes to implementing the 1990 Canid Action Plan, the Canid Specialist Group Conservation Officer is very explicit that he does not believe that the Canid Specialist Group is an implementing organisation. If it is expected that the Specialist Group should implement the Action Plan recommendations, then SSC changes from a network of volunteers to an implementation organisation and there are no resources to support this. Where possible, however, the Specialist Group will help to facilitate the carrying out of recommendations. The responsibility should lie with governments and those involved in specific programmes.

Overall, he feels that many of the actions in the Canid Action Plan were vague and that the recommendations that stand the best chance of being implemented are those that are manageable. For example, 'reduce habitat loss' is simply too big an issue, and how would it be tackled? Within the bounds of a five-year plan, any recommendations must be realistic and specific. He feels that there is no direct evidence that the plan has influenced decision-makers or conservation managers. In contrast there is some evidence that the two single species plans have achieved this.

The two single species plans were collaboratively written by those working on the relevant species programmes and therefore the Canid Specialist Group Conservation Officer feels that there is clearer guidance in those plans on what action is required than in the plan for all canid species. This clarity extends to the type of project, its duration and cost and in the case of the Ethiopian wolf, the plan has been cited in all applications made since 1996 (e.g. to the Born Free Foundation, Fauna and Flora International and St. Louis Zoo.). Whilst generally dismissive of the support provided by IUCN for any activities, he did concede that the names and logos of both IUCN and SSC were useful when making these applications. Indeed, he felt that this was the only advantage provided by the Action Plan process and suggested that the same content without the IUCN and SSC authority would have less impact.

It was noted that it seemed anomalous to have the European wolf in a separate Specialist Group. Apparently this species is the best canid for raising funds and to have it in a separate group when its appeal could be helping other canids was seen as unfortunate. This, his believes should be addressed. Indeed, perhaps it would be sensible to link the carnivore Specialist Groups in some way so that resources can be pooled and effectiveness increased.

Donors. Comments below under "People's Trust for Endangered Species" seem likely to be especially relevant to this Action Plan and the Canid Specialist Group. This is because the Trust has a good relationship with the Chair and has funded Ethiopian Wolf work amongst its projects.

6. Crocodile Action Plan

The Crocodile Specialist Group has secured a core group operational budget of about USD65,000 per year, largely from private sources and so is able employ a Programme Officer to pursue the implementation of Action Plan priorities (both editions), amongst other activities. As part of this role, nearly USD130,000 has been secured to address Action Plan priorities as follows:

Tomistoma *surveys*
Chicago Board of Trade USD7,000
Global Guardian Trust (Japan) and Japan Reptile Trade Association, matching funds for Chicago Board of Trade at 10:1 USD70,000
Private donor USD1,000
Fauna and Flora International USD3,000

Chinese alligator
Chicago Board of Trade USD5,000
Wildlife Conservation Society (partnership funding- not transfer of funds from them to us) USD20,000
Private donors (about 20 donating to special Chinese Alligator Fund- see our website) USD10,000
Australia-China Council USD5,000
American Zoo and Aquarium Association USD4,000 (pending/pledged)

Siamese crocodile (Cambodia surveys)
Private donor USD7,000
(Note FFI and WCS have independently funded extensive survey work on this species in SE Asia.)

Orinoco crocodile (workshop)
Private donor USD1,500
Japan leather Industry Association USD2,000
WWF-US USD2000

Cuban Crocodile (production of meeting proceedings)
Japan Bekko Association USD5,000

Philippine crocodile national recovery plan
Receiving substantial technical and financial support from Melbourne Zoo through Crocodile Specialist Group member Chris Banks, but the exact figure is not available.

Gharial and *C. cataphractus*- none applied for or received.

7. Value of plans to non-Specialist Group audiences

This section deals with organisations that fall within the very broad 'target audience' that SSC hoped the Action Plans would influence. As indicated in the Introduction, the plans are aimed at "natural resources managers, conservationists, and government officials". Organisations that are concerned with a specific plan (e.g. International Whaling Commission and the WWF-US Whale and Dolphin Conservation Programme) have been discussed above, and the organisations outlined here are potentially interested in several Action Plans.

Clearly the number and diversity of organisations and individuals that the plans could be said to be aimed at is huge. The demand for information on biodiversity is continuing to increase and the target audiences are now evermore broad. However, many of these audiences require information presented in a specific way: for example, the information needs of a conservation biologist will be different from those of a provincial level land manager or water engineer. As the range of relevant agencies, organisations and individuals is potentially so vast, it was decided to concentrate on those organisations that are arguably closest to the core target audiences. These were other parts of IUCN, CITES (Secretariat and the EU CITES Unit), the People's Trust for Endangered Species, a UK-based grant-giving trust, and the Wildlife Conservation Society (of New York).

IUCN Wetland and Water Resources Programme. The Action Plans are not currently used by the person contacted, who is a geographer and hydrologist in this programme. The plans themselves are not known to water managers, water policy makers, scientists or non-governmental organisations concerned with water issues. If they were known the content would be alien because it is exclusively biological. He feels that the plans are supply-driven and not demand driven: i.e. they contain what species specialists want to say and not what those who can act require. In their current form the plans are not the best tool to achieve what he needs to achieve. If they were re-orientated towards derived products (e.g. short concise 'Action Pages') with concrete actions, then he may be able to use them. They should emphasise that responsibility for biodiversity is not limited to biologists.

The plans would be much more valuable to the sectors that he works with if they contained discussion of national, regional and international level policy and management issues, community level socio-economic issues, and especially large-scale development issues. The Specialist Groups, as presently constituted are largely made up of biologists and this is reflected in the content of the plans. In order to produce the 'demand-driven' documents that this respondent desires, he suggests that the Specialist Groups should be more multi-disciplinary and should contain multi-stakeholders (for example, possibly include poachers) so that Action Planning becomes a process. At the very least this would broaden feedback on the plans and their implementation. The Wetland and Water Resources Programme could help with identifying regional people who would be able to comment on draft material, and they may be prepared to help draft some material. Elsewhere within IUCN, the Secretariat could help identify people involved in ecosystem management and economic incentives for example.

A key consideration here is how to communicate the recommendations that the plans identify. This is not being effectively done at present, but then IUCN as a whole has no overall communication strategy to assist in this. The Wetland and Water Resources Programme has a fledgling communication strategy of its own.

The brand of the Action Plans is recognised by biologists but not more widely amongst those who make decisions affecting biodiversity. They have much potential, but require simplification (or consolidation). There are increasing demands on many managers as, for example, the Convention on Biological Diversity is placing more and more demands on them. Therefore, the Action Plan would be seen by these managers as just one more set of actions to try and implement. This means that serious thought should be given to how plans can consolidate all these requirements so that they can replace some of these other demands by providing the means to deliver several things at once. In other words, if the Action Plan recommendations are carried out, what else is achieved: can they help deliver Convention on Biological Diversity requirements?

It may be appropriate to combine some species plans together. A dryland conservation strategy, for example, would appeal to a Ministry of Planning, whereas a species plan would not. Hence the target audience would change and so the plans should be repositioned in terms of target audiences and, therefore, content. Hence the current product, which may be considered the "Armani suit" (highly technical and detailed biological consideration of what the issues are and potential solutions), would be replaced by a product which is less biologically specialised but which more people can buy into, such as agricultural engineers for example. These plans would be much shorter.

Action Plans have plenty of potential, especially if linked to the Red List, which is gaining more attention from non-biologists and is a widely recognised brand. In contrast Action Plans are currently trapped in limited options, and so they may just discuss protected areas for example, but not participatory riparian farm management, involving set aside and compensation.

In essence, he feels that the approach adopted by marketing people should be consulted. This would involve:

1. taking the brand of the Action Plans;
2. simplifying the brand;
3. repositioning the brand; and
4. addressing replenishment – i.e. a help desk for people to contact and get answers to queries on Action Plans, recommendations, issues etc.

IUCN Programme on Protected Areas. Action Plans are useful to the work of the programme, particularly in relation to wildlife/species management. The most useful sections are those dealing with the assessment of potential solutions and the setting of priorities. The technical standard is perceived to be high, although there is a need to ensure that recommendations are proposed which can be practically achieved. This requires close interaction between those who prepare the plans and those who are responsible for protected area management. The implication here is that this link could be strengthened.

The plans would benefit from stronger linkages between species issues and protected area management policies and strategies, as well as better linkages between individual species action plans. In order to achieve this, the Programme on Protected Areas could help facilitate greater consultation with protected area managers. The Programme could also help ensure that action plan recommendations are directly incorporated/reflected in individual management plans for protected areas, as well as systems plans under article 8(a) and 8(b) of the Convention on Biological Diversity.

The programme could help disseminate information about the plans through the World Commission on Protected Areas network, which contains 1,400 of the world's leading protected area specialists/managers. It would also be happy to include any material in the World Commission on Protected Areas newsletter. SSC should consider having a strong presence at the World Parks

Congress in Durban, South Africa in September 2003. Effective networks of protected areas are fundamental to effective species conservation and the Programme on Protected Areas feel this link needs to be developed in a more effective way. As many Action Plan recommendations concern protected area management (see Section 3.4.1 and Appendix 6.1) this would clearly be appropriate.

European Commission CITES Office. The Scientific Expert of the CITES Office said that Action Plans are used by the office to a moderate degree. He believes that he does not see all of the plans and is not aware which ones have been published and which are near to publication. Those that have proved useful include the orchid, crocodile and caprinid plans. As the Office is not systematically informed of publication (or near publication), there are almost certainly decisions that have been taken that may have been different if the office and the constituents they serve had been aware of the plans. The most useful part of the plan is the review of information on species and he has a high degree of confidence in the technical standard of the plans. There is probably sufficient biological information in the plans for his purposes, but additional discussion on national and international level management and policy issues would be useful, as would discussion of community level socio-economic issues. Of most interest would be an assessment of whether local communities value species as a resource. It was, however, acknowledged that the Specialist Groups are comprised of volunteers and that it is difficult for them to address these needs as they would require a lot of additional work.

The EU CITES Office would not feel able to offer anything that could broaden the usefulness of the plans but could probably assist with making the recommendations more widely known. The Office is re-designing its website and the new sites is intended to provide a resource for the Parties. It could either include a complete list of Action Plans on its site, or a hyperlink to the SSC site where the Action Plans are listed.

CITES Secretariat. There is a great deal of variation in the degree to which the Secretariat uses Action Plans and this depends upon the species group covered and its comprehensiveness and date of publication. For example, the Sturgeon Action Plan was extensively used by the Parties when drafting resolutions, and the caprinid, bear and cat plans have all proved very useful and have had wide audiences. Where they have been used, all sections of the plans have proved valuable (review of information on species, assessment of key issues, assessment of potential solutions and the setting of priorities). The least useful is the specific 'down-to-earth' project proposals.

The CITES Secretariat does not tend to go through the plans to pull out the recommended actions, as it simply does have the time to do this. It would, therefore, be interesting to compare the recommendations made by the Parties with those made the "scientific experts" (i.e. the Specialist Groups). The degree of confidence in the technical standard of the plan is considered to be moderate overall. The standard depends upon the Specialist Group and the overall assessment is influence by a poor opinion of one or two plans where greater research for a listing proposal had revealed that the relevant Action Plan was not of the desired standard. Typically, however, they provide a good up-to-date synthesis and a valuable bibliography. If references were provided electronically, this would be very useful.

The degree to which the biological discussions of status and issues meet the CITES Secretariat's demands varies from plan to plan. The main issues that would benefit from greater coverage are the national and international level management and policy issues, and the discussion of community level socio-economic issues. Where these have been provided they have been widely used. For example, the Caprinid Action Plan contained a hunting policy for rare sheep and this was taken as the basis for EU policy on the importation of trophies. An up-to-date discussion of the by-catch issue for cetacean conservation would be valuable for CITES. It was acknowledged that Specialist Groups are volunteers and so providing this variety of detailed discussion would be difficult.

The Secretariat itself could bring its experience of CITES to the Action Planning process. For example, its experience with the Significant Trade Review, and the information gathered through that process. It could help with discussions of the importance of CITES issues to general conservation

issues, and these are basically concerned with the management of species. For example, has CITES listing worked? The Secretariat could help with dissemination to relevant CITES Parties, such as to range States of the taxon concerned and by making them available at appropriate meetings.

Overall, it was accepted that there is a need for a balance between generic recommendations and the specific description of action that can address particular issues and that this can be difficult. The more specific recommendations are also those that are more tangible. The plans themselves do not have a standardised presentation and that can be an obstacle to an audience that has an interest in more than one plan. The Secretariat would like CITES to be an audience for the Action Plans: there are some heavily traded groups that are not covered by any plans and they would clearly benefit from such a synthesis, such as reptiles.

In general terms, the Specialist Groups devoted to charismatic species and which have charismatic leaders and which can gain access to funds are those that have produced Action Plans. These are not necessarily the Specialist Groups that are dealing with conservation priorities. For example, as well as reptiles, the rodents are of concern. They are widely hunted and so how should they be managed as a food resource? Also, the Parties could do with more information on cryptic species that would help them to manage them better.

Perhaps, a better approach would be to produce a "Conservation Management Guide" rather than an Action Plan. The choice is really whether the plans are designed to be "low key" and are available to those that can track them down, or whether they are designed to be comprehensive statements of what action is required. The more standardised the approach and presentation the better it would be, and the last five or six years has seen an improvement in this. The specific target audiences must be considered critically and identified.

People's Trust for Endangered Species. The Trust uses Action Plans when it receives applications that concern relevant species. When consulted, the Action Plans are a very valuable resource and they play a significant role in the funding decisions that the Trust makes. As important is the link with Specialist Groups, especially the Canid Specialist Group and the Chair is used as a referee for relevant project proposals. The Trust does not believe that it has all Action Plans and so does not think that it is on the normal distribution list. This is unfortunate, as it has provided support in the past (GBP5000 per year) for Action Plans to be distributed to those who were thought best able to implement the recommendations. Indeed, of the selected case study Action Plans, the 1994 Cetacean Action Plan carries the logo of the Peoples' Trust for Endangered Species. The Trust is also a member of IUCN.

The most useful parts of the plans are the assessment of key issues and the setting of priorities, and it is these sections that are used for determining the suitability for support from the Trust when relevant proposals are received. When considering the sections that it would be desirable to have, the most relevant is the assessment of community-level socio-economic issues. This is because the Trust is keen to work at the local level so that communities can see benefits accrue. In addition, some discussion of national and international level policy would be useful to ensure that the Trust is not supporting projects that are not in accord with the policies of sovereign governments.

As currently prepared, the Action Plans are fine for the Trust's uses. The non-biological sections (policy, management and local community socio-economic issues) really require local knowledge to be valuable and so input would have to be at that scale if these sections were to be included and be practical. Prioritisation of recommendations within each species would be useful so that there is a clear statement of what the most important action is for each species. When Action Plans are reviewed, progress on these recommendations should be stated. A valuable extension of this would be a searchable database so that donors could see what action is taking place and whether an application really does address a priority. They could then add to this when they fund new projects. Guidance on what are the over-riding global priorities would also be useful (i.e. not for each species).

Wildlife Conservation Society. This interview was carried out with one of the regional directors, who has also been involved in producing Action Plans. He found the Action Plans very useful in his work, but the difficulty in obtaining some of them was a significant disadvantage. All parts of the plans were useful, with the review of information on species of most value, followed by the assessment of key issues and the setting of priorities. Overall, the assessment of potential solutions was perceived as the weakest part. The degree of confidence in the technical standard of the plan was generally high, but in some cases it fell short of this. The critical factor is the scientific training of the author or compilers which influences their ability to reliably assess information. The extent of peer-reviewing is also important and there is perhaps a need for guidelines on this.

Considering the content of the plans, the discussion of all of the biological aspects (knowledge of the species, assessment of the issues and the biological recommendations) tends to be satisfactory, but there is always scope for improvement. Dealing with national or international level policy and management issues is problematic in plans that cover many species that inhabit several countries. It may be possible to cover these in single species plans in sufficient detail to be useful. Discussion of community-level socio-economic issues is not really appropriate to SSC plans that should be biologically driven.

Overall, there is trade off between scale and grain: the bigger the scale (i.e. the more species), the coarser the grain (i.e. the less detail). In the late 1980s Action Plans were seen as an amplification of the Red List process, but this does not seem to be the case now.

3.4.4. Other Specialist Group evaluations

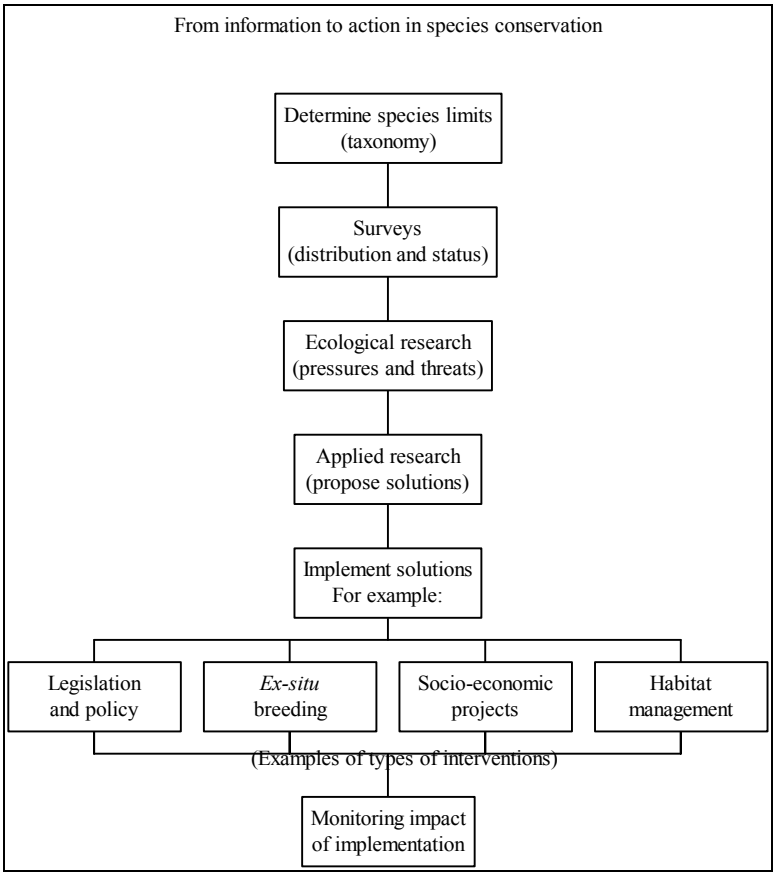
The World Pheasant Association (with the relevant Specialist Group) undertook an evaluation of the three 1995-1999 Galliformes Action Plans when these were revised in 1999. The emphasis and approach were different, as the data were collected through a questionnaire survey of the people that had carried out each project (Principal Investigators). In this survey they were asked: reasons why they had carried out the project; how the objectives related to those stated in the Action Plan; whether the Action Plan and the Specialist Group endorsement was important in securing funds; what publications and reports had been produced; and what conservation action had resulted from the work. A draft manuscript from this evaluation is presented at Appendix 4, and is not for further circulation yet.

The conclusion is that a substantial amount of conservation-relevant output was achieved from Action Plan-based projects. The results also show close involvement by the relevant Specialist Group in funding applications (bearing in mind that the Specialist Groups themselves have no funding directives) and that Principal Investigators were making the link between the profile of an Action Plan project and the chances of securing funding. Perhaps, however, there is room for this link to be strengthened even more.

After breaking down the projects into individual objectives, the picture was slightly different, with fewer of the original objectives being achieved. This was interpreting as showing that projects necessarily evolved as they were carried out, and suggested that it would be unrealistic to expect every specific objective mentioned in the original Action Plan project description to be carried out to the letter. This implies that species-specific project proposals should be written in a way that allows (and even encourages) this evolution, but within a specific framework ensuring that the information collected is useful in directing conservation action.

The concrete conservation actions that arose from Action Plan-based projects represent actual change on the ground in the cause of Galliformes conservation (see Table 2 in Appendix 4). The results also demonstrated that work carried out in the name of the Action Plans has led to significant conservation-orientated outputs. The number and variety of outputs from the research activity reveal a healthy level of communication of research findings, something the Galliformes SGs have always been keen to promote.

The over-riding conclusion of the evaluation was that the function of species-based synthesis (i.e. Action Plans) has to be seen as part of the conservation process from the collection of basic information, through the gaining of more sophisticated understanding of issues and solutions to direct intervention and the monitoring of its impact. The synthesis itself cannot be expected to lead to major policy changes at governmental levels simply by virtue of being published. Its essential function is to provide and referee good quality conservation-relevant information and recommendations and so to form of the continual process leading from information gathering to action. Others must play their part if the Action Plans are to be successful in helping to stem the loss of biodiversity.



4. DISCUSSION

The Action Plans evaluated here have clearly resulted in conservation action, whether they have stimulated it directly, served to prompt the rigorous assessment of the direction of a conservation programme, or inspired people to tackle the issues that they raise. However, the big question that is often asked is "Have the Action Plan led to real conservation gains on the ground?" Almost without exception, the Specialist Groups covered here see the plans as part of a continual process of seeking to understand conservation needs and prompt action accordingly. To view the Action Plans as the complete statement of what is required to ensure the survival of the species groups is simplistic. Whilst the title of the plans may suggest that they claim to be complete recipes for species survival, the variety of purposes that SSC acknowledges the plans can fulfil imply an acceptance of the breadth of fronts on which conservation makes progress. Furthermore, the lack of a clear framework to assist Specialist Groups in setting targets so that all possible avenues of conservation action (policy, site actions, awareness etc) are considered must hinder the production of concise and tightly focussed Action Plans.

The comments of McNeely (2000) in stating that the real needs of the cats were not addressed in the Wild Cat Action Plan indicate a lack of understanding of the way that SSC has managed its Action

Plan Programmes. Whilst knowledge of the distribution and ecology of cats may well be adequate for conservation decisions to be made, and indeed the problems facing them require considerable interventions, the absence of any context within which to realistically address these needs must make it difficult for the Specialist Group to know who recommendations are being aimed at. Such a context would require clear guidance on the kind of recommendations that SSC wishes to see, and an explicit strategy for their implementation. The reason Action Plan recommendations take the form that they do is because they suggest actions that Specialist Groups are familiar with and that they can endeavour to carry out.

When the current Action Planning programme began in 1986 it comprised a significant part of SSC's activities and was seen as a key activity both in consolidating Specialist Groups and in making information on the conservation status and needs of species available to the conservation community. In the first few years, the number of Action Plans produced each year was small and there was one staff member dedicated to working with Specialist Groups to compile Action Plans, as well as a Publications Officer, whose job included editing Action Plans. Soon after this. SSC secured a major donation for the compilation and implementation of Action Plans. As noted in the Introduction, by 1991, the SSC Chair, George Rabb stated that "The subject of Action Plans and their implementation is at the core of the Species Survival Commission's work." (Report of FFPS/SSC Meeting: Morris 1991).

Since that time, there have been a great many changes, both inside and outside SSC that mean that Action Plans appear to have lost their pre-eminence in the SSC workplan. Indeed it is not advertised as a programme any more, as the website and other documentation refer to the Wildlife Trade Programme, the Red List Programme, the Plant Programme and the Species Information System, but not the Action Plan Programme. Why is this? The presumption must be that SSC considers them they ineffectual. In order to examine whether this is true, each of the key issues that arise from the results of the questionnaire interview survey are examined in turn.

A second, originally seemingly unwritten, objective was to provide a focus of activity that would create and bind Specialist Groups. The evidence of the plans assessed here is that this has been successful and a common goal for the groups has proved to be a great stimulus to them. However, this seems to have suffered a significant blow in some cases when Specialist Groups were left, as they saw it, to implement the plans as well, and with no resources. Having been prompted by SSC to spend many hours voluntarily compiling Action Plans, several groups have felt frustrated if not aggrieved that they have not been helped by SSC or the rest of IUCN to put the recommendations into practice (i.e. the resignation of the Equid Specialist Group Chair and the views of the Canid Specialist Group Conservation Officer).

4.1. Issues

4.1.1. The objective(s) of the Action Planning Programme

Fifteen years ago the objective was stated very broadly and, were to have been simply to make information on the conservation status and needs of species available to governments and anyone else able to act on the recommendations that were made. The objectives that individual Action Plans seem to have been a mixture of: the compilation of biological information (usually especially that relating to conservation); assessment of issues facing the species; proposal of potential solutions; the assessment of priorities; and statements of action considered necessary to mitigate threats. Whilst all of these are seen as essential to sound conservation planning, it is now arguable that all of these objectives cannot be met equally in one volume. The precise objective(s) that should be set for the Action Planning process must be unequivocally stated and agreed by all parties. The exact objective(s) are likely to be influenced by the target audience(s) of the plans.

4.1.2. Target audiences: implementing the action plans

This is one of the most difficult issues of all, and one that it appears has never really been addressed adequately. Originally, the target audiences were seen as anyone that could act on the recommendations. However, was this diversity of audiences ever really sensible? Without any form of

promotion to governments and other organisations was it really feasible to expect that any action would follow? In practice it was left to the Specialist Groups to drive the implementation of the Action Plan recommendations, and so the target audiences were effectively the Specialist Groups themselves and those that they came into contact with and promoted the plans to.

Despite the lack of a strategy for the implementation of the Action Plan Programme as a whole, individual plans and their recommendations have reached a great variety of governments, inter-governmental organisations, non-governmental organisations, individual researchers and donors. There can be little doubt that there are successes that almost certainly would not have occurred otherwise (i.e. without Action Plan publication), such as action on the Amami rabbit (undertaken by the Japanese Forest and Forestry Research Institute), the hispid hare (carried out by an NGO researcher in India) and Mexican lagomorphs (part of a research programme at the National Autonomous University of Mexico), as well as the work that the Cetacean Action Plan has stimulated in Asia, the influence that it has had in the formation of the WWF-US Whale and Dolphin Conservation Programme, and the esteem that it is held in within the International Whaling Commission. Amongst the Galliformes plans evaluated, the audiences are primarily biologists, but they are widely encouraged to discuss their work with conservation managers wherever this is relevant, and this does happen.

CITES, at various levels, finds the plans a great source of information and the role that the Caprinid Action Plan has played in the framing of the European Commission policy on the importation of trophies of rare sheep is a clear success story. These are but a few examples. Whilst there are likely to be nominal target audiences that have not found the plans useful at all, the fact remains that there are audiences that will act on the plans, especially if they are able to develop a relationship with those individuals who have the created them.

When the Action Planning Programme was relaunched in 1986 it was probably realistic to say that the conservation of species and habitats was widely seen as the domain of the biologist and natural historian. The Specialist Groups were comprised of such people and had little knowledge of policy, management and community-level issues compared with today. Now, the potential audiences for the plans, although they can be identified by similar words (i.e. "natural resources managers, conservationists, and government officials around the world") to the audience perceived 10 or 15 years ago, are arguably more demanding in the information that they require and the way that it is presented to them.

This is because biodiversity conservation has been 'mainstreamed' in many significant ways since Action Planning started, and the variety of multilateral environmental agreements is one such example of this. Therefore, many potential audiences are not biological specialists and whilst these audiences did exist, albeit much reduced 10 years ago, their hunger for information is now much greater. The many different audiences now actively seeking biological information inevitably means that this information and the way it is presented are now receiving very critical scrutiny. This should not be seen as a failing of the original targeting of Action Plans, but rather reflect the great demand that now exists.

There is little doubt that the plans evaluated have played important roles at the very least in stimulating a great deal of conservation-orientated research and its dissemination. There is also little doubt that the non-SSC audiences interviewed also found the plans useful (with one single exception and that was the IUCN Wetlands and Water Resources Programme.

The plans selected for the current evaluation were effectively self-selected, as these were produced by the Specialist Groups that had been most communicative during Phase 2 of the Action Plan evaluation. Whilst this is a source of bias in an evaluation of the entire Action Plan Programme, it can also be viewed as indicating what the Action Plans can achieve if the conditions are right, and so it is worth examining what these conditions are. The audiences interviewed were also selected largely through the author's personal experience or were recommendations from others involved in SSC

Action Plans. Therefore, they are for the most part a sympathetic audience. Again, this is biased, but it does indicate what the potential impact of the plans could be.

It is clear that there is a great many potential audiences for Action Plans. The smallest audience is that which is the most specialised (in terms of biological understanding and the biological detail that it seeks). In contrast, the largest variety of audiences is that which requires least biological detail, but perhaps information in other areas, such as appropriate land-use or appropriate policy changes. These audiences might include planners and hydrological engineers, development agencies, agricultural and forestry agencies etc, none of which require detailed biological information. Is it realistic to aim a single document at all of these audiences? Given that almost every single potential audience will have too much paper on their desks and too many targets to meet, the answer is almost certainly no. A broadly targeted document will not satisfy the demands of the conservation biologist and a document that is biologically highly technical will be incomprehensible to a non-specialist.

Which target audience Action Plans should be aimed at will be affected by the abilities of the compilers to provide relevant information (and the resources available to do so), and the likelihood that these audiences will act on the recommendations. A clearly defined target audience is arguably the single most important factor in determining the success or otherwise of any future Action Plans. The successes illustrated in this evaluation have all been drawn from audiences that might be considered closer to the specialist end of the spectrum, rather than the more generalist audiences. Perhaps, therefore, the sensible approach is to consolidate these successes rather than to continue trying to provide one product to satisfy the needs of a great many audiences, which in reality bear little resemblance to each other.

4.1.3. The resources available for compilation

Action Plans are written almost entirely voluntarily, although some groups have Programme Officers that drive the process. The SSC Secretariat has decreased the resources that it devotes to Action Plans since the mid-1980s, as other demands are made on staff time. This means that it is not realistic to propose any objectives for the plans that will mean that more resources (time or personnel) are required for them to achieve these objectives, unless resources are available for this additional work. As such, it is difficult to envisage how the plans can be more broadly written to include significant discussion of socio-economic issues for example, as the personnel capable of providing this input (e.g. elsewhere within IUCN) are unlikely to have the time to do this. Therefore, it would seem inevitable that the plans would remain biologically based, although this does, of course, not mean that derived documents cannot address other audiences, if dedicated resources become available.

Currently the only resources specifically allocated to Action Plan production are apparently a small budget at IUCN that is sufficient for three Action Plans to be published each year and some element of SSC Secretariat staff time. With the larger number of plans that now may be in varying stages of production during a year, this amount will clearly not go very far. Therefore, additional funds have to be raised and whilst there are some regular donors, some applications have unexpectedly failed recently and this has meant that SSC has not been able to print Action Plans. Indeed, two Galliformes Action Plans (Megapodes and Partridge, Quail and Francolins) were only published in 2000 after the intervention of the World Pheasant Associaiton, which committed some funds, and the Chair of the Megapode Specialist Group who raised the rest.

In the current economic climate, it is probably unacceptable to simply say that IUCN should provide more resources. However, it does appear anomalous that SSC has urged many Specialist Groups to undertake a significant amount of voluntary work and then is not prepared financially for the logical consequence of that encouragement: i.e. the resources to edit and print the plans. Therefore, the resourcing of this stage of Action Plan is likely to have an impact on the Specialist Groups' relationships with SSC. Given these considerations, it would seem desirable to form a partnership with organisations and other bodies that may have an interest in the publication of Action Plans. As so much work is done voluntarily, in real terms the amount of money that is spent on publication is a small proportion of the real cost of Action Plan production, if the time spent writing plans was costed

in. Such partners should be those who have most interest in the final products and promoting their recommendations.

4.1.4. The nature of the recommendations

As Phase 1 of this evaluation concluded, there is little consistency between plans in the way that recommendations are formulated. This appears to partly due to a lack of any kind of guidance of how to determine what action is needed (i.e. formulate recommendations), but also because of a desire by the Secretariat not to inhibit the Specialist Groups by being too prescriptive. The first of these can surely now be overcome and the second is now arguably of dubious value as there is little reason why plans cannot have a consistent approach to determining what action is required. The lack of consistency was highlighted as an issue in this evaluation, although there were not enough opinions on this to be sure what all of the audiences would find most valuable.

The fundamental dichotomy is between the very detailed statement of what action is needed, right down to costed project outlines, and the much more general recommendations that are almost aspirational in nature. Both approaches have their advocates and which is most appropriate almost certainly depends upon who is expected to act on them.

A second fundamental difference of opinion is the degree to which Action Plans can and should go beyond the biological recommendations. Whilst many potential audiences feel that this is desirable, the resources to provide the necessary extra input are likely to remain in short supply. For example, the IUCN Wetland and Water Resources Programme feel that broader input would make the plans much more useful to their constituents and this would obviously be good news. However, when the plans are compiled largely voluntarily, there is unlikely to be a positive response to such a suggestion unless there are resources (either people or funds) to allow appropriate text to be drafted. Consequently, however desirable it may be to discuss broader issues of policy and local communities for example, it is likely that these will remain difficult to address within current resource constraints.

Since the IUCN Action Planning Programme started several other action plan programmes have been launched and it may be useful to see what lessons can be learnt from these programmes. In addition, as mentioned under Red List Programme in Section 3.4.3, both the Red List and the Species Information System have developed an 'Authority File' for Conservation Measures, and this is relevant here.

As part of its response to the Convention on Biological Diversity, the United Kingdom has identified species and habitats that are in the most urgent need of conservation attention. For these, Biodiversity Action Plans have been produced. Each of these plans has a standard set of headings and summarise the available information under these headings. For action required, there is a broad statement of what is required and which agency or organisations has the lead responsibility for achieving targets. This standardised approach may be suitable for concentrating attention on what needs to be done for each species that is of concern. The headings used for each UK Biodiversity Action Plan are:

1. Current status
2. Current factors causing loss or decline
3. Current action
4. Action plan objectives and targets
5. Proposed actions with lead agencies
    - 5.1. Policy and legislation
    - 5.2. Site safeguard and management
    - 5.3. Species management and protection
    - 5.4. Advisory
    - 5.5. Future research and monitoring
    - 5.6. Communications and publicity
    - 5.7. Links with other plans

An example of a UK Biodiversity Action Plan is given at Appendix 5 (Section 6.5); that for the black grouse *Tetrao tetrix*.

The first level headings of the Red List and Species Information System Authority Files seem logical headings for such a standardised assessment of the detailed needs of species covered by Action Plans. As such, the Action Plans would provide more detail on recommendations than either the Red List or Species Information System would seem likely to contain, at least initially, and would be valuable documents for promoting the implementation of actions. The first level headings in the Conservation Measures Authority File are:

1. policy-based actions
2. communication and education
3. research actions
4. habitat and site-based actions
5. species-based actions
6. other

With the creation of the Conservation Measure Authority File, the first step has been taken towards providing very specific guidelines on how to recommend what action is necessary: i.e. construct a recovery programme. This whole target-setting is a difficult area and the Action Planning Programme will benefit from learning lessons from the Red List and Species Information System as they develop the Conservation Measures components of their programmes.

A second important consideration here is the target audience. If the Action Plan Programme were to become a partnership, as suggested under Section 4.1.2: Resources available for compilation above, then there would be greater involvement in the implementation of the recommendations. Therefore, the nature of the actions would become clearer, as the areas that relevant partners could address would become evident.

4.2. What are SSC's options?

SSC has several options on how it manages the Action Plan Programme in the future. In broad terms these can be summarised as follows:

1. Continue with the current process;
2. Stop publishing taxon-based Action Plans; and
3. Change the Action Planning Programme.

The current squeeze on resources and the increasing number of plans that have been through the SSC Secretariat in recent years mean that maintaining the publication flow is very difficult practically. Furthermore, the significant expansion of the Red List Programme and the priority accorded to the Species Information System within SSC mean that some of the functions of the Action Plans have been subsumed into these other programmes. It also seems that SSC 'management' has made an untested assumption that the taxon-based Action Plans have little impact and that there is relatively little desire to continue with their publication (e.g. see Strategic Plan 2000-2010). The latter is a shame as many plans have been compiled primarily because the SSC Secretariat specifically asked the Specialist Groups to compile them. Nonetheless, the changing world does make it imperative that SSC husbands its resources, including the goodwill of the Specialist Groups, as carefully as it can. Therefore, all of these three options should be considered.

4.2.1. Continue with the current process

Whilst the plans evaluated here can be said to have played a significant role in some aspect of the conservation of the species that they cover, there are probably plans that have had little impact. The broad objectives set for the plans are almost certainly now outdated as the products can easily try to achieve too many objectives and address too many target audiences that have widely different demands. As a result they may fail on many fronts.

The increasing demands placed on the Specialist Group members both in their day jobs, as well as by SSC may well have resulted in reluctance to produce the kind of Action Plan that SSC anticipates. Nonetheless, they have a great deal of information and expertise that can be better utilised to help conserve the world's threatened species. Even in the self-selected sample of plans evaluated here, there are cases of expectations of assistance and impact upon completion of Action Plans being dashed and so unless there is a clear implementation strategy, it is likely that these unfulfilled expectations will be repeated as new groups produce plans.

As far as SSC's Strategic Plan is concerned, some of the earlier purposes ascribed to the Action Plans are now probably better achieved through the Red List Programme, and should the Species Information System become operational and sufficient information be provided to its modules, then this will also take over some of the purposes of the Action Plans. Over recent years it appears that the Action Plans have become decreasingly central SSC's core programmes, and with the effective institutionalisation of the Red List Programme and the concerted effort to ensure that the Species Information System follows suit, it is not likely that there will be strong leadership for the current Action Plan process that will maximise the impact of the efforts put in by the Specialist Groups. All of these factors mean continuation with the Action Plan Pgogramme as it currently operating does not seem practical.

4.2.2. Stop publishing taxon-based Action Plans

The sample of plans evaluated here have clearly been effective to some degree and demonstrate that some Specialist Groups are determined to publish them and to pursue the implementation of recommendations. To prevent these Specialist Groups from producing Action Plans, especially when they have been specifically asked by SSC to compile them, would probably provoke a negative reaction, as well as reduce the conservation efforts on behalf of the species concerned.

There are several significant audiences that are concerned with species conservation that find these plans very useful. CITES and parts of the Wildlife Conservation Society are obvious examples, but there are also small grant-giving foundations that deem IUCN Action Plans as a mark of quality and integrity. There are also specific programmes and commissions that have a special interest in single Action Plans, such as the Cetacean Plan. Apparently the rhino plans have enjoyed similar standing with appropriate parts of the UNEP. This means that there is likely to be an adverse reaction from some of the people, both inside and outside SSC that find the plans most valuable for species conservation if the publication of Action Plans was stopped. Whilst some plans may well not be missed if they are never compiled, there are clearly some that will.

4.2.3. Change the Action Planning Programme

The interviews conducted as part of this evaluation have been concerned with some of the people who are most closely associated with Action Plans and who use them the most. Whilst there is broad support for what they try to do, some significant shortcomings have been indicated. Some of these shortcomings may simply be the lack of any significant appraisal of the Action Planning Programme recently, as the world around has changed fundamentally in the way it views biodiversity information over the last 10 years.

Action Planning must clearly be discrete from Red Listing and the functions performed by the Species Information System, if it is to have value. However, the links between these Programmes are clear, as they are all concerned with providing sound information on the status of species and the action necessary to ensure their survival. As one of the Red List indices to be published every few years will be an assessment of the implementation of the Conservation Measures Needed, the Action Plans have a clear role in promoting the implementation of these recommendations for some species or species groups. As this Red List index will be a key advocacy tool, the Action Plans could be a valuable back-up document providing detailed justification and description of the measures that should be implemented.

Given these other information products that SSC is proving, it may be time to re-orientate (and re-brand) the Action Plan Programme. The suggestion made by the CITES Secretariat that what is really needed are "Conservation Management Guides" is definitely worth serious thought. Such guides could be compiled by Specialist Groups and would have a clear focus. These could be more thorough consideration of the key issues (such as hunting or by-catch) and then contain a series of standardised 'Action Plans' for the species most in need of attention. These documents would then be clearly management orientated and accessible to a variety of potential implementers.

The key issue remains of the target audiences. At present it seems that far too much of the implementation is left up to the voluntary Specialist Groups and this is probably not sustainable. Therefore, the solution may be to spread the responsibility by drawing in a wider constituency by forming a partnership that represents some of the most enthusiastic users of existing Action Plans. This could include the CITES Secretariat, the EU CITES Office, the Wildlife Conservation Society, as well as other parts of IUCN, such as the Protected Areas Programme and an appropriate body concerned with sustainable use. If each of these bodies would be prepared to help with resources (either funds or access to appropriate expertise), then there would be a broad partnership of organisations that not only help facilitate the compilation of the plans, but would also be key to the implementation of the recommendations.

A rebranded and tightly focussed Action Plan Partnership would potentially be a powerful tool for implementing action on behalf of the world's most threatened species. Species that should be included in such a programme would include those covered by Specialist Groups that pursue Action Plans in the most enthusiastic manner. These are often the species for which demand is greatest. An alternative approach would be to address the needs of the most threatened species according to Red List. This may, therefore, start with all Critically Endangered species and this would also mean that the Specialist Groups would not need address all species in their species group at once. Instead they would be contributing towards Action Planning for the world's most threatened species.

The overall monitoring of the status of species would be delivered, as now, through the Red List Programme. The important addition of this Action Plan Partnership would be the detailed statement of what is required to save the world's most threatened species. If all information, especially the necessary actions, were spatially explicit and geo-referenced, then analysis of where action is most urgently required would be relatively straightforward. It would even be possible to determine what actions would benefit then largest number of threatened species, such as specific policy change in one country, or site based actions in another. These analyses would greatly enhance the advocacy potential of the Conservation Measures Index to be derived every few years from the Red List.

An alternative model would see Action Plans (using Conservation Measures Authority Files in a UK Biodiversity Action Plan format) being compiled for certain species, and the Conservation Management Guides effectively filling the role proposed for issues based Action Plans in the 2000-2010 SSC Strategic Plans. This would show that SSC is moving along the 'conservation gradient' indicated in the box in Section 3.4.4 from assessment to research into issues and potential solutions.

The essence of this proposal is that there is recognition that the expertise that the Action Plans represent is very important to SSC's information provision role, and that assistance is vital in ensuring that this expertise achieves its full potential. This assistance includes clear guidance on the information that an audience that will act on the recommendations will use, providing help in ensuring that plans (or Species Conservation Management Guides) are compiled as efficiently as possible, and then creating the right context with implementers so that the recommendations will be acted upon.

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The enthusiasm of virtually all interviewees was remarkable and I am very appreciative of the often considerable time that they spent answering my questions. A complete list of interviewees is given in Section 3.3.

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Woodroffe, R., Ginsberg, J. and Macdonald, D. (1997) *The African wild dog: status survey and conservation action plan.* IUCN, Gland, Switzerland and Cambridge, UK.

7. APPENDIXES

7.1. Report on Phase 1 of assessment

DRAFT
Review of Action Distribution in 42 Action Plans
Joshua Schachter

1. Background

This review was undertaken during March and April 1998 to identify trends in the types of actions recommended in Action Plans. Hopefully the understanding gained from this study can serve as the first step in a larger process to evaluate the role and effectiveness of Actions Plans.

2. Methodology

All Action Plans published as of March 1998 were included in this study. The actions in 42 Action Plans were identified and categorized according to the following criteria:

Research
Status Surveys; Distribution Studies; Behavioral, Ecological, Biological and Taxonomic Research; Population Monitoring; Research on Management Techniques, Threats, Captive Breeding, Legislation, etc.

Ecological Management
Management of Species Populations; Management and Restoration of Habitat; Invasive and Introduced Species Management; Development of Future Action Plans; Ecological Management of Protected Areas; Production of Protected Areas Management Plans; Ecosystem/Multi-Species Management Planning; Establishment of Private Reserves; Land Acquisition

Ex-situ Management
Captive Breeding; Reintroduction; Introduction; Plant Nurseries; Cultivation; Hatcheries; Translocation; Rehabilitation

Use Issues and People
Exploitation; Law Enforcement; Trade; Ethnobotanical Use; People-Species Conflict Management; Community-Based Projects, Income Schemes for Local People/Sustainable Use Alternatives (e.g. Captive Ranching); Ecotourism; Work with Private Landowners; People and Protected Areas; Dams, Mining and Related Use Activities

Education & Communication
Public Awareness Raising Activities; Public Workshops; School Programs; Publications

Legislation and Policy
Legislation; Policy-making; International Agreements; Designation of a Protected Area/Corridor; Change Official Status of a Protected Area or Species; Land-Use Planning; Legal/Political Actions Related to Trade and Law Enforcement

Capacity Building:
Technical Training Programs and Workshops; Financial, Technical, Infrastructural, and Staff Support; Institutional Establishment; Building Cooperation and Improving Communication between Individuals, Institutions, Countries and Governments; Establishment and Maintenance of Information Management Systems; Expand Capacity of Specialist Groups

In addition to classifying actions according to the above themes, actions were categorized according to scope. Actions which applied to all species in an Action Plan (referred to as general actions) were separated out from actions that applied to specific species, groups of species, or geographical locations.

An action was only recorded if it truly involved action, rather than purely a statement about existing information or activities.

If surveys (or any other type of action) were recommended for several species, each survey for each species was recorded as a separate action, unless it was stated or implied that the surveys could overlap across species. For example, if the following was stated: "Surveys are needed for the Harris's and bushy-tailed olingos, the white-nosed coati and the cacomistle," this was counted as four separate actions. Similarly, if a list of areas in need of protected area designation was provided, the designation of each area was recorded as a separate action.

If the same action was recommended for one species but in different locations, then each action in each location was recorded separately. For example, if the following was stated: "Survey for the Least Grebe in Arizona, California, the Virgin Islands, western Ecuador, Panama and Brazil," this was recorded as six separate actions.

On occasion an action fit the criteria of two action categories, in which case the action was recorded in both categories.

If an action was too general to categorize, then it was not recorded. Examples of overly generic actions include such statements as: protect species habitat; or improve protection of protected areas.

3. Potential Sources of Bias:

Due to the fact that non-research actions were often more general than research actions, and at times too general to categorize (and therefore not recorded), the number of research actions in relation to other types of actions would be inflated.

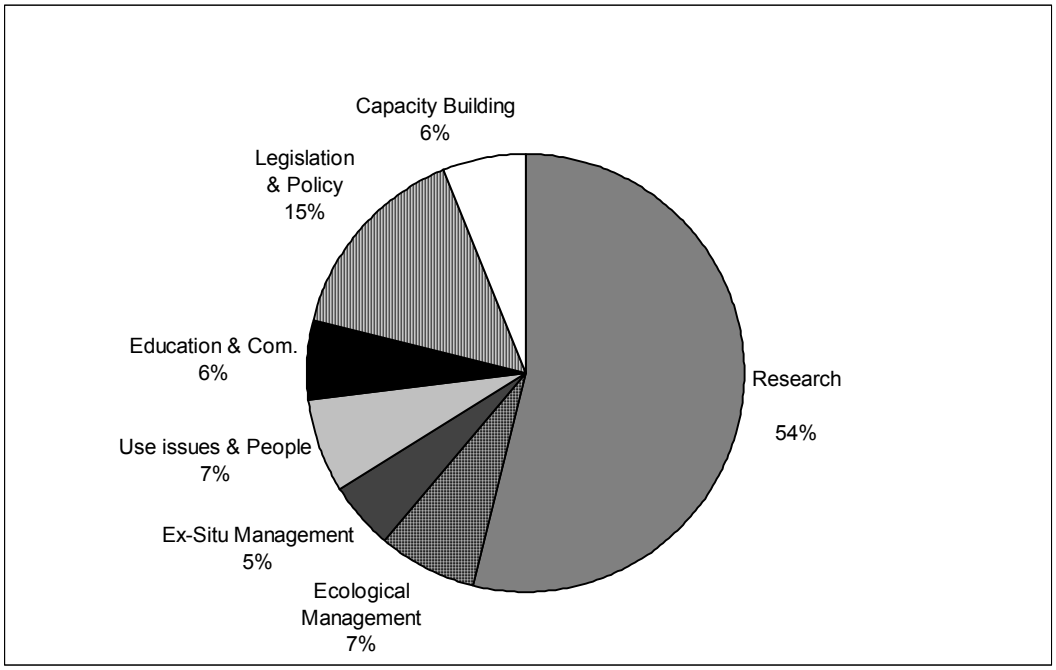
Often the locations of research actions were more clearly defined than for non-research actions. For example, an Action Plan might recommend conducting surveys for a species in five separate national parks in a range country, which would be recorded as five separate actions. Meanwhile, it might recommend establishing a general public awareness campaign for the same species in its range country, which would count as only one action. This would increase the ratio of research to non-research actions.

Within each Action Plan, there were often several different sets of actions, some of which were summaries of actions mentioned elsewhere in the Action Plan. For example, regional actions often repeated actions mentioned in a species-specific action section. Depending on which sets of actions (e.g. Species-Specific, Regional, Global Actions) were counted, the number and type of actions recorded would be affected. To minimize this bias, parallel sets of actions were recorded across all Action Plans. However, due to the inconsistent format of Action Plans, it was sometimes difficult to find parallel actions.

4. Conclusions:

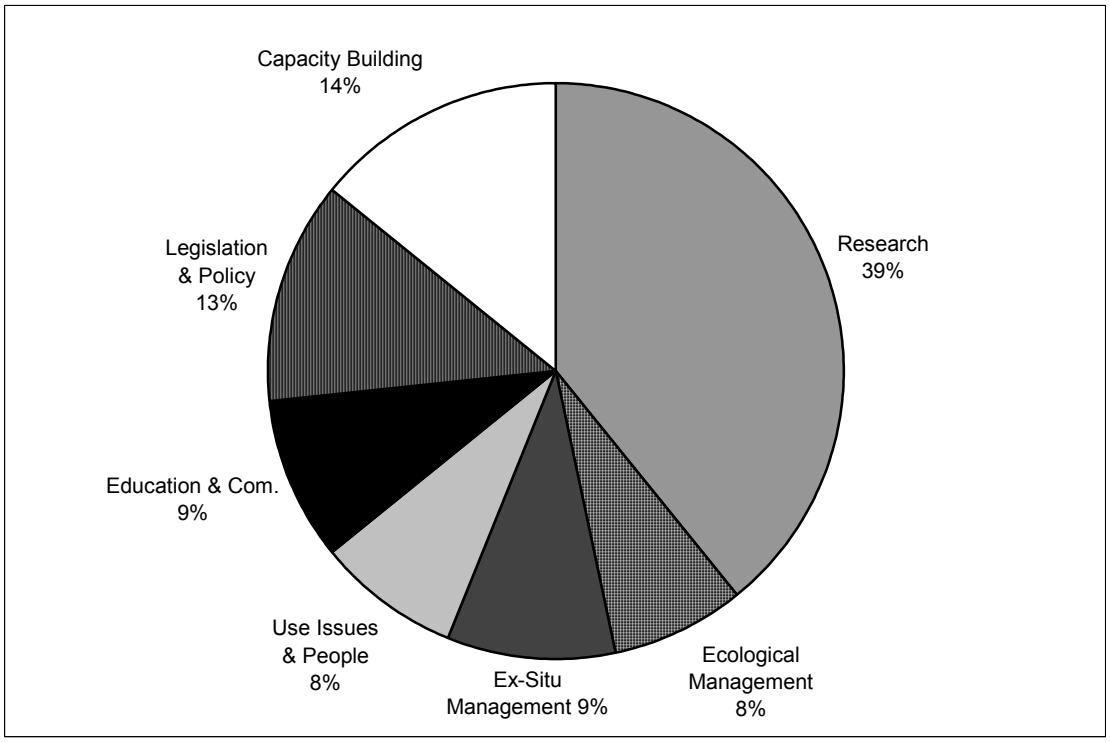
The majority of actions in the 42 Action Plans were research actions, as they comprised 54% of the total actions recorded (Fig. 2). One reason behind the high percentage of research actions may be that many actions involving management, policy, or use issues were often addressed with a research focus. For example, an action would recommend researching current legislation affecting a species, rather than recommending actual actions to change legislation. Legislation & policy actions accounted for the second largest percentage of total actions at 15%. This relatively high number of legislation and policy actions most likely can be attributed to the large number of recommendations calling for the designation of new protected areas.

Figure 2. Type of actions recommended in Action Plans (including general actions)



When general actions were separated out from the total actions in an Action Plan, the distribution of actions became more even (Fig. 3). Most notably, research actions dropped from 54% to 39% and capacity building actions rose from 6% to 14%.

Figure 3. Types of action recommended in Action Plans (excluding general actions)



Figures 4 & 5 illustrate change in the distribution of actions in Action Plans from 1987 to 1997. Research, followed by legislation and policy, were the predominant actions during all three time periods (see Figs. 4 & 5) between 1987 and 1997.

Figure 4. Type of action recommended in Action Plans in three time periods

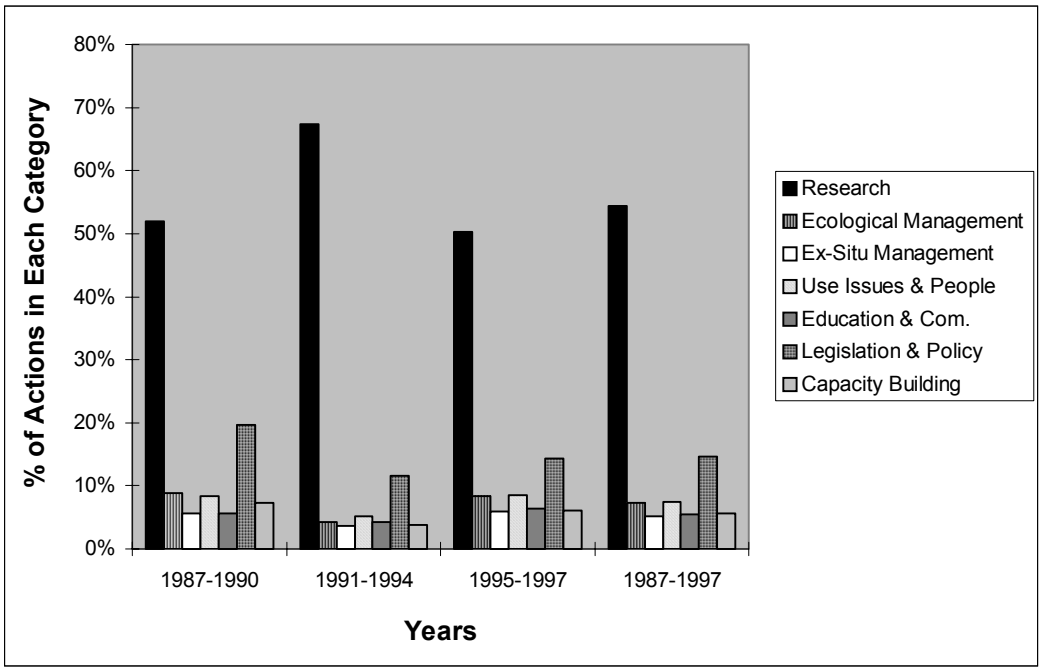
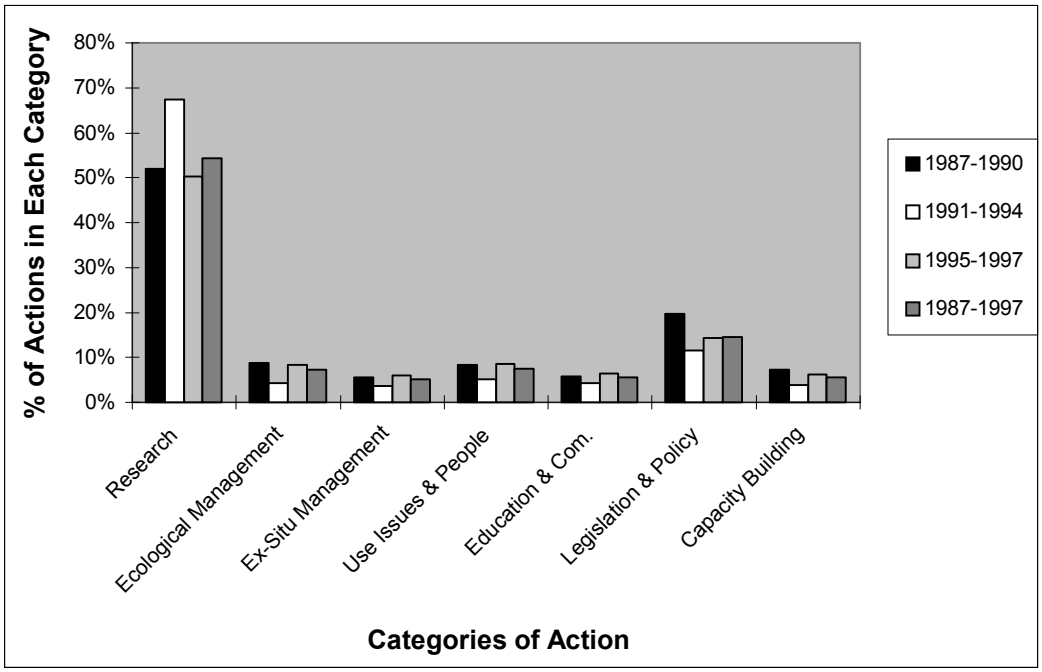


Figure 5. Type of action recommended in Action Plans in three time periods



When comparing plant Action Plans with all 42 Action Plans, there were for the most part minimal differences in the distribution of actions (Fig. 6). The percentage of research actions was slightly lower and legislation and policy actions slightly higher in plant action plans compared to all Action Plans. Only 5% of actions addressed ex-situ management in all Action Plans compared to 10% in

plant Action Plans. It should be noted that because there were only four plant Action Plans it is difficult to make any definitive conclusions.

Figure 7. Type of actions recommended in plant compared with all Action Plans

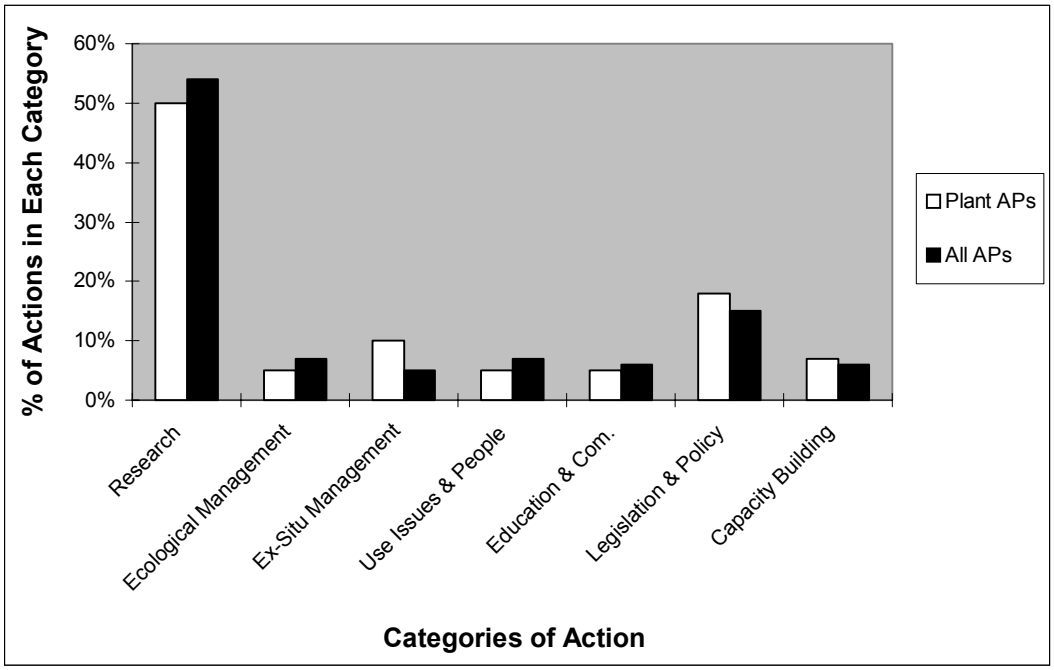
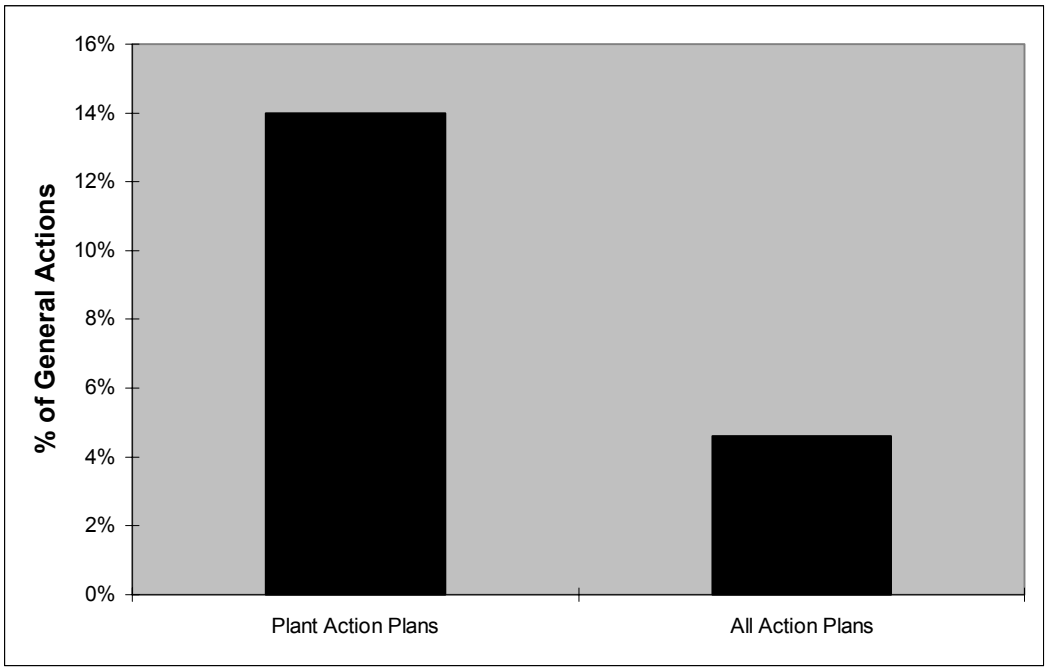


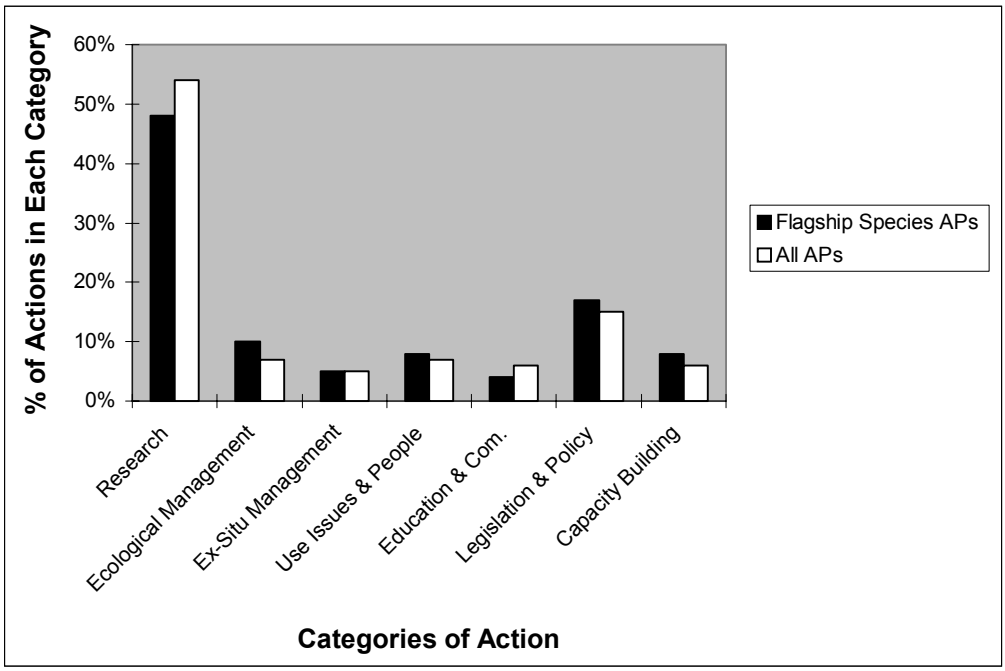
Figure 7 revealed a higher percentage of general actions in plant Action Plans (14%) compared to all 42 Action Plans (4%). This is most likely due to the generally larger number of species within plant taxa compared to animal taxa (maybe with the exception of invertebrates).

Figure 7. Percentage of general actions recommended in plant Action Plans and all Action Plans



There appeared to be little difference in action distribution when comparing flagship species Action Plans with all Action Plans (Fig. 8). There was a slightly lower percentage (48% vs 54%) of research actions and slightly higher percentages of ecological management, legislation and policy, and capacity building actions in Flagship species Action Plans.

Figure 8. Type of actions recommended in flagship species action plans compared with all Action Plans. Note: The Flagship Species Action Plans used in this figure were: Asian Rhinos (1st Edition), African Elephants & Rhinos, Asian Elephant, Dolphins, Porpoises & Whales (2nd Edition), Wild Cats, African Primates (1st Edition), and Asian Primates



5. General Comments on Action Plans:

There is little consistency across Action Plans:

Many Action Plans have global and regional recommendations, while others only have species-specific recommendations.

Some Action Plans have actions at the end of chapters, while others have all the actions at the end of the Plan. In other cases specific actions are recommended throughout the Action Plan, and a summary of those actions in the form of budgeted projects is provided at the end of the Plan. In this case, I found it particularly useful when the actions in the body of the text were cross referenced with the projects listed at the end of the Action Plan.

In some cases, recommended actions were more statements than actions. Moreover, Action Plans sometimes recommended an action but did not explain how it was going to be undertaken. For example, an action might call for reducing poaching, but it did not explain whether to do this through sustainable use projects, legislation, increased anti-poaching staff, education, etc.

6. Recommended Future Projects on Action Plans

- Evaluate the types of actions that have been implemented as a result of Action Plans.
- Investigate how Action Plans have been used by their authors and others following publication.
- Evaluate if the information in Action Plans could be disseminated in an alternative format which is more audience-specific and cost-effective.

- Establish a central tracking system to determine who is requesting and receiving Action Plans.
- Consider producing a card to insert into Action Plans that would be sent by Action Plan readers to SSC. This card could include a brief series of questions to get readers input on the usefulness and role of Action Plans.

	Research	Ecological Management	Ex-situ Management	Use Issues & People	Education & Communication	Legislation & Policy	Capacity Building
ACTION PLANS							
Action Plan for African Primate Conservation: 1986-1990	28, 1(G) pp.23-27	14, 1(G) pp.23-27	0	2 pp.25, 26	0	13 pp.23-27	6 pp.23-27
Action Plan for Asian Primate Conservation: 1987-1991	76, 1(G) pp.38-51	18 pp.38-51	5 pp.40-50	13 pp.38-51	7 pp.38-45	21, 1(G) pp.38-51	5 pp.40-50
Antelopes. Part 1. East and Northeast Africa	30 pp.86-88	8 pp.86-89	2, 1(G) pp.87, 89	6, 3(G) pp.87-90	1, 1(G) p.90	17, 2(G) pp.85-91	8, 2(G) pp.85-89
Dolphins, Porpoises and Whales: 1988-1992	61 pp.8-16	5 pp.8-16	0	4 pp.10-15	4 pp.8-15	6 pp.10-16	24 pp.8-17
The Kouprey	8 pp.5-13	2 pp.11-13	9 pp.11-14	1 p.6	3 p.17	1 p.11	10 pp.12-17
Weasels, Civets, Mongooses and their Relatives	97, 5(G) pp.18-70	5, 1(G) pp.25-66	12, 1(G) pp.28-72	7 pp.18-43	2, 1(G) pp.18, 79	21 pp.18-64	1 p.43
Antelopes. Part 2. Southern and South-central Africa	4 p.87	2 pp.88, 90	1, 1(G) p.91	5, 2(G) pp.88-92	2, 1(G) pp.88, 92	9, 2(G) pp.86-92	9, 1(G) pp.87-91
Asian Rhinos (First Edition)	31 pp.8-15	5, 1(G) pp.10-16	11 pp.9-15	8, 1(G) pp.8-16	7 pp.8-14	8 pp.10-15	12 pp.8-15
Tortoises and Freshwater Turtles	45, 2(G) pp.16-36	11, 1(G) pp.16-35	8, 1(G) pp.17-34	12, 1(G) pp.17-34	6, 1(G) pp.16-31	11, 1(G) pp.15-35	4, 1(G) pp.16-31
African Elephants and Rhinos	23 pp.56-60	5 pp.57-60	1 p.59	11 pp.56-60	4 pp.57-59	8 pp.56-60	5 pp.57, 59
Foxes, Wolves, Jackals, and Dogs	26 pp.92-99	2 pp.94, 99	11 pp.92, 101	3 pp.92, 97	12 pp.92-95	16 pp.92-101	4 pp.94-101
The Asian Elephant	31 pp.12-75	16 pp.12-75	6 pp.19-59	12 pp.12-53	1 p.72	60 pp.12-75	11 pp.12-66
Antelopes. Part 3. West and Central Africa	42, 3(G) pp.154-165	3 pp.155-160	4, 1(G) pp.161, 164	18, 6(G) pp.154-165	2, 1(G) pp.155-163	30, 5(G) pp.153-165	11, 3(G) pp.154-165
Otters	197, 6(G) pp.2-79	39 pp.31-73	12 pp.28-79	31 pp.28-79	36, 1(G) pp.2-79	86, 3(G) pp.2-79	10 pp.31-79
Rabbits, Hares and Pikas	44, 7(G) pp.154-167	9 pp.157-163	8, 1(G) pp.154-163	2, 1(G) pp.154, 157	3 pp.159-163	7 (1) pp.154-163	0
Insectivora and Elephant-Shrews	123, 2(G) pp.30-47	4 pp.32-35	3, 1(G) pp.30, 43	5, 1(G) pp.30-45	5 pp. 45-49	13, 1(G) pp.30-36	2, 1(G) pp.41, 45

Swallowtail Butterflies	90, 1(G) pp.14-30	5 pp.14-27	0	12 pp.19-30	2 pp.19, 27	43, 2(G) pp.15-31	4 pp.14-28
Crocodiles	59 pp.81-113	2 pp.93, 99	12 pp.82-113	8 pp.84-106	7 pp.82-106	5 pp.84-109	6 pp.86-101
South American Camelids	63, 14(G) pp.6-24	4, 1(G) pp.6-23	2 pp.6, 18	12, 1(G) pp.6-23	6, 2(G) pp.20-25	17, 2(G) pp.11-25	15, 2(G) pp. 6-25
Australasian Marsupials and Monotremes	52 pp.57-60	13, 2(G) pp.57-63	3 pp.58-62	2 pp.57-58	6 pp.57-61	23 pp.57-61	8 pp.58-62
Lemurs of Madagascar: 1993-1999	69, 2(G) pp.39-47	4, 1(G) pp.39-47	1, 1(G) p.39	2, 1(G) pp.39, 46	9, 1(G) pp.39-47	6, 1(G) pp.39-46	13, 2(G) pp.39-47
Zebras, Asses and Horses	37 pp.24-27	10, 1(G) pp.24-27	8 pp.24-26	5 pp.24-26	1 p.26	14 pp.24-26	4 pp.25-27
Old World Fruit Bats	496, 8(G) pp.37-164	14, 1(G) pp.38-164	14, 1(G) pp.38-165	26, 1(G) pp.61-164	29, 5(G) pp.42-165	54, 2(G) pp.43-164	3 pp.62, 111
Seals, Fur Seals, Sea Lions, and Walrus	55 pp.74-82	3 pp.75, 77	1 p.75	2 pp.74, 76	0	1 p.77	2 p.79
Pigs, Peccaries, and Hippos	183 pp.37-195	21 pp.37-193	13 pp.38-194	16 pp.38-194	15 pp.39-194	38 pp.38-194	8 pp.39-194
The Red Panda, Olingos, Coatis, Raccoons, and their Relatives	94, 5(G) pp.34-43	1 p.39	10, 1(G) pp.35-42	9 pp.38-43	1, 1(G) p.37	7 pp.37-42	0
Dolphins, Porpoises, and Whales: 1994-1998	40 pp. 45-68	2 pp.48, 52	3 pp.49-53	0	2 pp.52, 68	4 pp.48-56	6 pp. 65-70
Megapodes: 1995-1999	34, 6(G) pp.5-33	7, 1(G) pp.6-32	5, 2(G) pp.6-27	3, 2(G) pp.6-32	5, 1(G) pp.6-34	4, 1(G) pp.5-21	0
Partridges, Quails, Francolins, Snowcocks..: 1995-1999	102, 1(G) pp.26-55	12 pp.33-63	3 pp.33-49	4 pp.35-49	1 p.33	16 pp.26-56	3, 1(G) pp.54, 59
Pheasants: 1995-1999	118 pp.8-102	7, 1(G) pp.11-55	18, 1(G) pp.11-53	9, 1(G) pp.11-50	7, 1(G) pp.11-38	31, 1(G) pp.11-55	3, 2(G) pp.61-63
Wild Cats	114, 4(G) pp.275-306	12 pp.276-303	7, 1(G) pp.279-299	12 pp.281-305	9 pp.281-304	7 pp.286-299	14, 4(G) pp.275-297
Eurasian Insectivores and Tree Shrews	290, 1(G) pp.70-94	10 pp.74-94	1 p.92	0	2 pp.92, 94	5, 1(G) pp.69-91	1 p.91
African Primates (Revised edition)	42 pp.25-49, 58	14 pp.26-48	0	16 pp.25-49	5 pp.30-47	11 pp.26-49	7 pp.26-45

The Cranes	346 pp.44-204	86 pp.45-204	57, 1(G) pp.46-210	82, 1(G) pp.44-205	106 pp.46-204	137, 1(G) pp.44-206	64, 8(G) pp.44-210
Orchids	77, 2(G) pp.52-126	7, 1(G) pp.52-123	14, 7(G) pp.57-126	6, 1(G) pp.58-123	7, 7(G) pp.124, 126	16, 4(G) pp.58-126	12, 10(G) pp.67-126
Palms: Their Conservation and Sustained Utilization	67, 6(G) pp.14-85	6 pp.46-84	26, 1(G) pp.19-84	11 pp.45-82	7, 1(G) pp.19-75	22 pp.19-84	4, 2(G) pp.19-86
Conservation of Mediterranean Island Plants. 1	6, 6(G) pp.80, 90	4, 4(G) pp.83-85	2, 2(G) p.82	1, 1(G) p.91	2, 2(G) pp.88, 90	5, 5(G) pp.81,91	4, 4(G) pp.77-90
Asian Rhinos (Second edition)	33 pp.61-95	9 pp.44-72	8 pp.58-93	22 pp.44-90	2 pp.55, 90	2 pp.44, 71	23 pp.47-92
Wild Sheep and Goats and their relatives	148, 7(G) pp.21-335	63, 2(G) pp.26-336	29 pp.19-334	69 pp.19-289	18 p.23-307	117 pp.19-335	28 p.21-336
The Ethiopian Wolf	15 pp.86-94	3 pp.85-94	6 pp.92-94	5 pp.84-85	9 pp.86-95	5 pp.84-93	8 pp.84-95
Cactus and Succulent Plants	141, 3(G) pp.129-144	10 pp.130-141	16, 6(G) pp.129-143	13, 1(G) pp.129-142	13, 3(G) pp.129-142	65, 2(G) pp.128-144	20, 2(G) pp.128-142
Dragonflies	12, 12(G) pp.9-24	4, 4(G) pp.9-22	0	0	1, 1(G) p.11	4, 4(G) pp.10-22	3, 3(G) pp.19, 23
The African Wild Dog	40, 6(G) pp.88-123	4, 2(G) pp.88-122	2, 1(G) pp.100, 121	12, 1(G) pp.88-123	11 pp.118-123	15, 4(G) pp.88-123	0
Tapirs	9 pp.19-45	4 pp.19-55	3 pp.22-55	16 pp.20-55	3 pp.20-44	3 pp.19-55	2 pp.28, 44
Grebes	61, 13 (G) pp.13-43	12, 2(G) pp.13-42	1, 1(G) p.42	0	2, 1(G) pp.17, 43	7, 1(G) pp.16-39	5, 2(G) pp.14-43
Total Actions in Each Category	**3759**	**501**	**358**	**515**	**383**	**1011**	**392**
% of Total Actions (6919)	**54%**	**7%**	**5%**	**7%**	**6%**	**15%**	**6%**

Footnote:
G= General Action. A general action is one which applies to all species in an Action Plan.
All other actions apply to specific species, groups of species, or specific geographical locations.
The first number in each cell indicates the total number of actions (specific + general actions), while the second number refers to the number of general actions.
For example: 61, 13(G). This would indicate 61 total actions and 13 general actions.
The page numbers below the number of actions indicate the range of pages where the actions can be found in the Action Plan.

7.2. Report on Phase 2 of assessment

2001 Action Plan Evaluation: a summary
Anne-Marie Gillesberg

A great deal of time and effort (not to mention money) goes into producing species Action Plans (APs), both on the part of the Specialist Groups and SSC staff. Thus, determining whether or not they result in on-the-ground conservation is an important and worthwhile activity, and one currently called for in the SSC Strategic Plan. Earlier efforts by Gimenez-Dixon and Stuart (1993) and Schacter (1998 unpubl.) set the stage for the latest attempt to assess the utility of APs.

Gimenez-Dixon and Stuart (1993) found the following five factors to have a major impact in promoting Action Plan implementation:

1. Receptive audience. APs are far more likely to be effective if they are directed towards an aware and responsive audience.
2. Prominence of the species involved. Donors tend to respond with more enthusiasm and more monetary support when the species in question are of great economic importance or emotional concern.
3. Persistence with which the Specialist Group promotes implementation. A determined approach toward implementation pays in the long term, despite the inevitable short-term frustrations.
4. Types of projects recommended. In general, implementation is much easier if the recommended actions/projects are very clear, specific, and limited in scope.
5. Random opportunity. Some AP recommendations were simply implemented incidentally and opportunistically.

Results of their investigation also indicated that it is important to explore mechanisms that will allow more effective channelling of AP recommendations to broader audiences that have the ability (and responsibility) to manage natural resources. These conclusions are still relevant today as SSC is constantly seeking to enhance the effectiveness of APs and develop efficient means to evaluate and monitor their success.

Schacter (1998 unpubl.) reviewed the entire collection of APs (n=42) to determine what types of actions were recommended. Actions were divided into seven general categories: research; ecological management; ex-situ management; use issue and people; education and communication; legislation and policy; and capacity building (see draft report for descriptions of categories). The majority (54%) of recommended actions were "research" actions, although when general actions were separated out, this figure dropped to 39%. The "legislation and policy" category accounted for the second largest percentage of the total at 15%. Schacter (1998 unpubl.) attributed this finding to the large number of recommendations calling for the designation of new protected areas.

Schacter (1998 unpubl.) found little consistency between APs in their presentation of recommended actions/projects in the text. In some cases, recommendations resembled statements with little explanation as to how these "actions" were going to be accomplished (i.e., reduce poaching). Such general treatment of conservation recommendations in APs is still prevalent and could hamper their overall effectiveness.

The current effort seeks to evaluate the effectiveness of APs by determining what influence they have had on the implementation of recommendations (e.g., types of actions being implemented as a result). Are APs needed for implementation or would conservation action happen anyway, regardless of their existence? If deemed necessary, then what improvements should be made to increase the overall effectiveness of APs? Schacter (1998 unpubl.) suggested, for example, investigating alternative formats that could be made more audience-specific and cost-effective.

The general approach taken in the 2001 investigation builds on the previous evaluation efforts (considered Phase 1) and involves a preliminary review of a subset of APs (Phase 2), followed by an in-depth analysis of a smaller subset of APs (Phase 3).

Data collection and analysis for Phase 2:

- Twelve APs published between 1990 and 1995/96 were chosen for taxonomic and geographic representation, and in consideration of the responsiveness of compilers. The date of publication was specified to allow sufficient time for implementation to have occurred and to include plant APs in the review.
- Compilers of selected APs (and/or Chairs of the associated Specialist Groups) were contacted by phone or email and asked to respond to a brief questionnaire to determine what had happened with respect to conservation action since publication of the AP (see letter to compilers and response form).
- Responses were collected and tabulated, indicating whether actions/projects were "completed", "ongoing", or "not started". Reasons given for those "not started" were also recorded. Only six responses were received after repeated requests for information from compilers/Chairs. Results should, therefore, be treated as inconclusive.

Results of Phase 2

- Of the 12 APs selected for review and compilers/Chairs contacted, only six (Lagomorphs, Crocodiles, Canids, Cetaceans, Otters, and Equids) responded and, of these, two (Canids and Cetaceans) remain incomplete (*Note: the Pheasants AP was considered well in hand and would represent another response*).
- The four "complete" responses received (Lagomorphs, Crocodiles, Otters, and Equids) listed a total of 284 recommended conservation actions/projects. Of these, nearly 50% were listed as ongoing, about 18% were considered completed, and approximately 32% had not been started. Of the reasons given for those not started, a lack of funding accounted for about 25%, a lack of funding and personnel for 19%, and not practical or politically inadvisable for just over 17%. Other reasons cited included: 1) low priority (6.4%), 2) inactive or cancelled (6.4%), 3) no personnel (4.5%), 4) prior survey work needed, etc. (3.6%), 5) resolution of species questions required (3.6%), 6) formulation of ideas/clear plan of action needed (2.7%), 7) lack of leadership (2.7%), 8) lack of information (1.8%), and 9) changed objectives (0.9%). No reasons were cited for the additional 5.5% of conservation actions/projects listed as "not started".
- Recommended conservation actions/projects were typed according to the categories used by Schacter (1998 unpubl.). Nearly 70% could be considered either "research" or "ecological management" activities. "Ex-situ management" and "legislation and policy" activities were fairly equally represented and accounted for approximately 20% of the recommendations, while "capacity-building" exercises made up only 1% of the conservation actions/projects. These findings were reflected somewhat in the distribution of those actions/projects that had not been started. This time, however, about 57% of fell into the "research" and "ecological management" categories, with the remaining percentage split almost evenly between "ex-situ management", "legislation and policy", and "use issues". "Education and communication" activities accounted for less than 2% of these recommendations.

Phase 3 of the Evaluation will involve selecting three (or more) of the 12 APs sampled in Phase 2 for in-depth review; those responsible for implementation of conservation actions/projects (e.g., government agencies, NGOs, donors) will be contacted and asked to respond to a set of questions aimed at determining AP effectiveness. It is hoped that those contacted during Phase 3 will be responsive and help to elucidate the above findings.

(**Other ideas for Phase 3: case study approach, looking at one Specialist Group (i.e., Otter SG) and its efforts at producing and implementing its Action Plan; policy analysis of SSC Action Planning process.)

7.3. Draft evaluation of three Galliformes Action Plans undertaken by the World Pheasant Association and the Megapode SG, the Partridge, Quail and Francolin SG, and the Pheasant SG

Species-based synthesis: its uses and limitations

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Introduction
Species Action Plans have been published by the Species Survival Commission of IUCN – The World Conservation Union since 1986. By early 2001, more than 60 plans had been published in this series, including several second editions. Each plan "assesses the conservation status of species and their habitats, and specifies conservation priorities". Furthermore, it is considered that "the series is one of the world's most authoritative sources of species conservation information available to nature conservation managers, conservationists, and government officials around the world."

Where do species-based action plans fit into the conservation process as a whole? Their practical value has been questioned (Collar 1994, McNeely 2000) and it is apparent that demonstrating the effectiveness of these plans in preventing species extinctions is not easy (Gimenez-Dixon and Stuart 1993). We have already discussed the findings and opinions of Collar (1994) and Gimenez-Dixon and Stuart (1993) in an informal review of Action Plans (McGowan *et al.*1998). McNeely's (2000) comments are similar in tone, in suggesting that whilst Action Plans contain a wealth of information relevant to the conservation of particular species, the priorities seem removed from the practical requirements of the species being reviewed. He exemplified this by stating that of the 105 actions proposed in the Wild Cats Action Plan (Nowell and Jackson 1996), 75 (71.3%) were for surveys and other research. This, he suggested, implied that the greatest problem facing the cats was a lack of information on their status and distribution.

McNeely's similar assessment of the Asian Rhino Action Plan (Foose and van Strien 1997) revealed a rather more even distribution of effort between various conservation actions, including intensive protection and anti-poaching, habitat management research and other activities. However, McNeely, still felt that the fundamental needs of these large mammals were not being addressed, suggesting that it was development and policy issues that had to be tackled to ensure the survival of these species and implied that Action Plans failed to stimulate these actions.

We compiled Action Plans for the period 1995 to 1999 for the megapodes (Dekker and McGowan 1995), the partridges, quails, francolins and guineafowl (McGowan *et al.*1995), and the pheasants (McGowan and Garson 1995). These plans were taken as the work programmes of the Specialist Groups for the five-years after publication, and have now been updated as scheduled with new editions (Dekker *et al.*2000, Fuller *et al.*2000, Fuller and Garson 2000). We have already stated that we believe the compilation of these Action Plans has had a positive impact on the conservation of these species (McGowan *et al.*1998), but here we present data on how the projects suggested in the plans were implemented on the ground. Such evaluation of how action plans are implemented is critical if we are to understand how they are effective, and whether they achieve the laudable objectives with which they are often associated. Our data highlight the need to ensure that we have a clear definition of the role of action plans. We perceive a danger of defining their role far too widely, and present a new model describing their niche in the wider process of conservation biology and policy. We suggest that many of the criticisms directed toward species action plans result from underestimation of the limitations of species-based synthesis.

Methods

The implementation of these three action plans was intimately bound up in the way that they were compiled and the way that the relevant Specialist Groups function. The plans were explicitly action-orientated and thus contained little or no biological information not directly relevant to the conservation of the species and the setting of priorities. The process, which involved the entire Specialist Groups, resulted in the identification of a total of 54 priority research projects to gather further information required to assess the conservation status and requirements of species more rigorously. There were 10 projects for the megapodes, 19 for the partridges, quails and francolins and 25 for the pheasants. To highlight the importance of these projects, they were laid out over one or two pages each (which were termed Action Plan Project Briefs), to allow them to be reproduced as an aid to fund-raising if necessary. These project briefs were produced as A4 cards that could be used by principal investigators to support funding applications.

The Specialist Groups considered that the implementation of these priority projects central to their work programmes for the period 1995-1999, although the groups had no staff to implement them themselves. Therefore, in addition to core activities such as producing newsletters, reviewing and assisting in the development of project proposals and other networking activities, a considerable amount of effort was devoted to stimulating the implementation of Action Plan priority projects by group members and then monitoring their progress. Once a project was considered well designed, the Specialist Group Chair issued an endorsement to the Principal Investigator.

This meant that the three Specialist Groups were aware of most work being undertaken that related to Action Plan priority projects, as well as the identity of principal investigators. A questionnaire was designed to collect information on all of these projects and this was sent to each Principal Investigator. The questionnaire had the following main sections:

1. Details of Principal Investigator
2. Project details
3. Funding details
4. Project objectives
5. Outputs
6. Conservation actions

Results

Of the 54 projects suggested in the three action plans, 33 had been initiated by the time of the evaluation exercise (Table 1). Of the projects not yet underway, the Specialist Groups felt that the problem was of suitable personnel expressing a desire to carry out projects.

Table 1. Status of priority projects suggested in the three 1995-1999 Galliformes Action Plans.

Action Plan	Fully/partially achieved	Not initiated
Megapode	7	3
Partridge, Quail and Francolin	7	12
Pheasant	19	6
Total	33	21

In the Pheasant Action Plan, the plan with the most complete evaluation information, the individuals objectives comprising the 25 projects were surveys (25), management recommendations (20), ecological study (17), taxonomic study (3), support for existing work (3), awareness programmes (3), monitoring (1), and captive management (1). Of these 73 individual project objectives, 37 were achieved, 10 were continuing at the time of evaluation, and 26 were outstanding.

Although projects were identified in the three Action Plans, it could not automatically be assumed that this was the sole reason that investigators had initiated them. There were 106 reasons cited for starting projects, more than one reason for some projects:

- because project was suggested in 1995 Action Plan (25%);
- because of national/regional research priorities (25%);
- because the Specialist Group suggested the work (16%);
- because the Principal Investigator was already active in the field (16%);
- because some funds were already available in advance (14%); and
- other (4%).

Even though the questionnaire was marketed as an AP evaluation exercise, respondents were probably genuine in their answers as several did not even mention the relevant AP.

Of 90 funding applications made by the Principal Investigators carrying out the 1995-99 priority projects, 10 failed, 5 were pending at the time of the evaluation and were 75 successful. There is almost certainly under-reporting of failed bids, although we did ask for details of all applications. Thirty-eight of the applications were made to funding sources that the Specialist Groups had suggested to the Principal Investigator. The endorsement letter issued by the Specialist Group (see Methods) was sent with the funding application in 41 cases. The appropriate AP was referred to explicitly in 41 of the funding applications, and the AP project brief was sent with the application in 36 instances.

Following through AP projects to concrete conservation action must be the key measure of their success, but is very difficult to do in a quantitative way (Gimenez-Dixon and Stuart 1993). Our evaluation identified 36 specific actions resulting from the projects identified in the 1995-1999 Galliformes Action Plans (Table 2)

Table 2. Specific conservation actions arising from the three 1995-1999 Galliformes Action Plans.

Category	**No. of actions**	**Types of actions**
Management	22	Adverse development stopped Control of introduced species Control of minor forest product collection (2) Disturbance stopped (2) Future designation of new/extended protected areas promised (3) Hunting stopped (2) Management recommendations made (5) New/extended protected areas designated New controls on poaching planned New habitat management planned Poaching stopped Re-introduction
Information	8	Information supplied for conservation projects (8)
Research	2	Improved effectiveness of other projects (2)
Education	2	Raising awareness of local people to conservation issues (2)
Financial	1	Funds provided at local level

For example, ecological research on the brown eared-pheasant *Crossoptilon mantchuricum* in northern China revealed that mushroom collecting was a likely explanation for low breeding success at Pangquangou National Nature Reserve (Zhang Zheng-wang 1998), and measures have now been put in place to control such activities within the reserve. In addition, illegal hunting and poaching has been restricted in the reserve. New distributional data collected on the maleo *Macrocephalon maleo* in Sulawesi as a result of an action plan project have enabled a large-scale site selection exercise to be performed (Butchart & Baker 2000), and local government funds are becoming available for further conservation work at these sites.

In addition to action on the ground, 133 outputs during the implementation period of the Galliformes

Action Plans were identified (papers, talks etc.). Of these, 45 were papers in journals (of varying quality, but all peer-reviewed), and 88 were non peer-reviewed reports, talks, newsletter items etc.

Discussion

These results clearly show a substantial amount of conservation-relevant output from action plan-based projects. That six pheasant projects were not initiated was due largely to lack of personnel coming forward, as the PSG was not involved directly in soliciting funds and personnel for projects. One project has been dropped (4.6.8), but the remaining projects have been included again in the 2000-04 action plan (one in altered form), indicating that they are still viewed as priorities for action (Fuller & Garson 2000). The results also show close involvement by the relevant specialist group in funding applications (bearing in mind that the SGs themselves have no funding directives) and that PIs were making the link between the profile of an AP project and the chances of securing funding. Perhaps, however, there is room for this link to be strengthened even more.

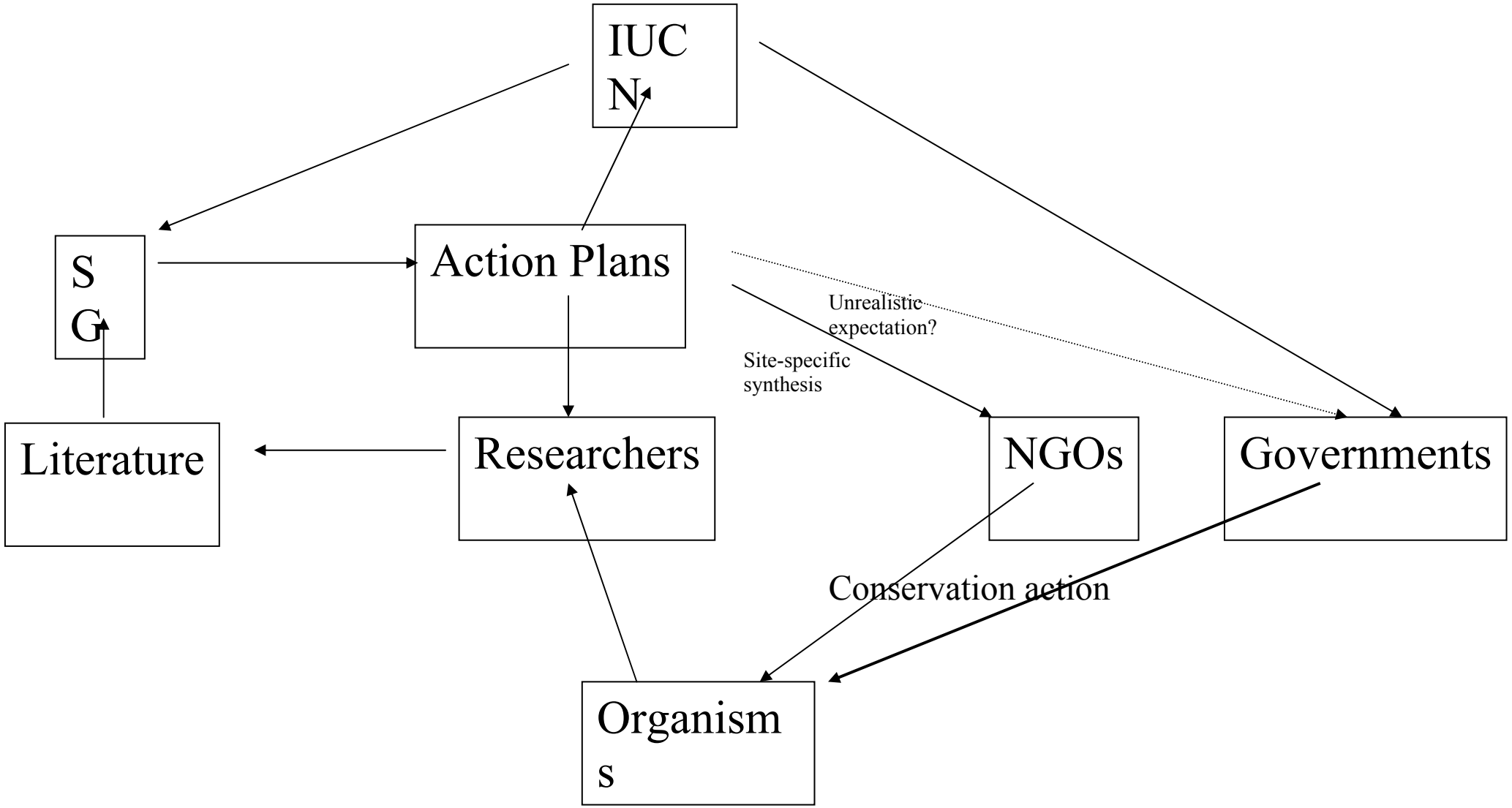
After breaking down the projects into individual objectives, the picture is slightly different, with fewer of the original objectives being achieved. This illustrates that projects necessarily evolved as they were carried out, and it would be unrealistic to expect every specific objective mentioned in the original AP project description to be carried out to the letter. This implies that species-specific project proposals should be written in a way that allows (and even encourages) this evolution, but within a specific framework of ensuring the information collected is useful in directing concrete conservation action.

The concrete conservation actions reported here represent actual change on the ground in the cause of Galliformes conservation, and demonstrate that work carried out in the name of the APs has led to significant conservation outputs. The number and variety of outputs from the research activity reveal a healthy level of communication of research findings, something the Galliformes SGs have always been keen to promote.

To say that these results are circular, that action plans are only produced on groups where much interest and research infrastructure already exists is to completely miss the point about the whole species-based action planning process. Species-based synthesis has to be seen in the light of the process that drives it from specialist group synthesis of information, recommendation of research effort, the performance of such research, reporting of findings and so on. The whole process is an iterative one and should engender a positive feedback loop leading to greater and greater conservation research volume and understanding. As many conservation issues facing species can be extremely cryptic, vast amounts of research are required on threatened species, despite that fact they typically occur in places where infrastrusture is poor and access is difficult or dangerous. The function of species-based synthesis has to be seen in this light – it cannot be expected to lead to major policy changes at governmental levels, but only to provide and referee good quality conservation-relevant information and recommendations.

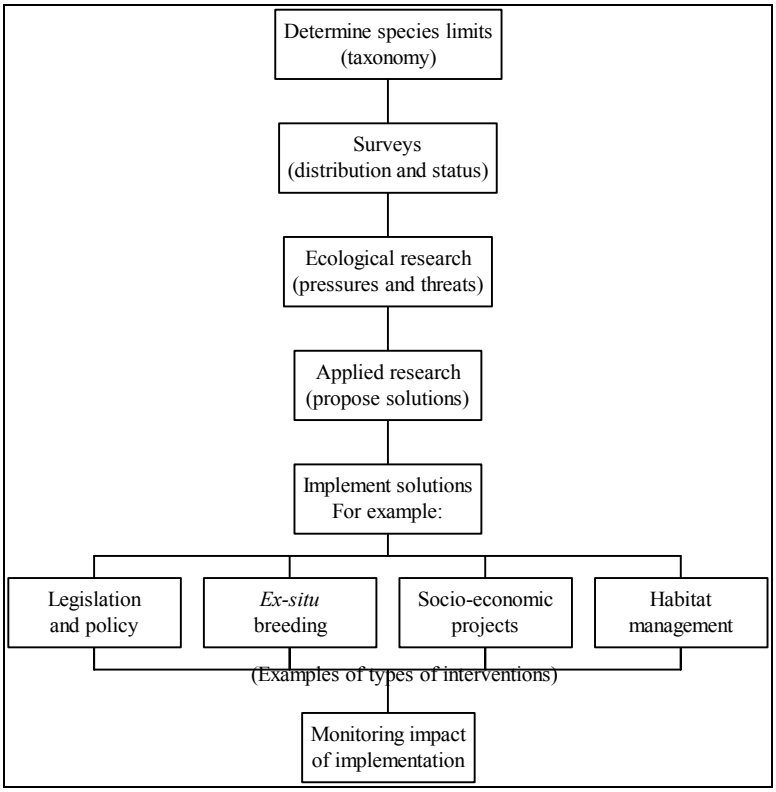
Here we present a model of how species-based synthesis fits into the overall conservation process (Fig. 1). Any understanding of the threats facing species requires a flow of information from organisms to researchers able to interpret and communicate it. This is done ideally through published peer-reviewed literature, although urgent communication of important threats and findings will often be made through the "grey literature" and other un-moderated media. The relevant IUCN specialist group is responsible for synthesising all relevant information and understanding how it translates into specific conservation recommendations (target-setting) and/or further research questions. This process need not be limited to IUCN specialist groups. The recent publication of Threatened Birds of the World by BirdLife International was a prime example of synthesising available species-based information and turning this into a red list of threatened species, set of targets for each, and research requirements necessary to iterate the process once again.

Figure 1. The place for species-based synthesis in the conservation process.



This process is well illustrated by our own situation. It is possible to visualise a gradual progression up a hierarchy of information required to assess adequately the conservation status of a species (Fig. 2). Firstly, taxonomic units must be clarified. Only after populations or groups of populations have been identified as evolutionarily significant units (Vogler & Desalle 1994) or species, can they be placed meaningfully into threat categories. The taxonomic status of several Galliformes taxa is still controversial, for example the imperial pheasant *Lophura imperialis* is either a Critically Endangered species or a hybrid between silver pheasant *L. nycthemera* and Edwards' pheasant *L. edwardsi* or Vietnamese pheasant *L. hatinhensis* (Fuller and Garson 2000). The outcome of taxonomic research has huge implications on the priorities for conservation action. Such uncertainties underline the urgency of good quality taxonomic research, such as that being conducted on these taxa by Rasmussen (1998). Once taxonomic units have been clarified, surveys on the ground are required to collect information on the presence or absence of a species at a series of sites, together with the distribution of the major habitat types and the nature and extent of any human impacts, as has been done recently for Hainan's endemic Galliformes species (Gao Yu-ren 1998). Conservation action cannot be properly planned without such basic knowledge. If possible, some data on relative abundance and population sizes should also be obtained. Basic ecological research should provide new information that relates directly to such things as habitat requirements, tolerance of disturbance, and use of secondary or degraded habitats by a species.

Figure 2. From information to action in species conservation



After collecting baseline information, strategic conservation recommendations can be made. These may involve site-selection exercises to identify priority areas for conservation (Williams 1999) and then Population Viability Analyses (Boyce 1992) to establish whether populations suitable for conservation attention exist within important areas. Research on only a few Galliformes species, notably pheasants, has reached this level of sophistication (see for example McGowan *et al.*1999, Butchart and Baker 2000). Once such information has been collected, appropriate global level conservation recommendations can be made, and these translated into physical reality by co-operation between NGOs and governments. Comparison of the 1995 pheasant action plan with the 2000 edition reveals a distinct evolution of recommendations for research and action up this hierarchy. In

particular, we are reaching a situation where we have enough distribution and status information on many pheasant species to go on and conduct deeper ecological research and analytical population modelling exercises. The iterative design of the action planning process is well suited to situations where the state of knowledge is in continuous flux. (Possibly build in Snyder's comments on the lack of information leading to badly designed Californian condor programme from the Parrot AP as an indication that some of implied criticisms of APs are the result of fundamentally different priorities).

Communication of these targets and research recommendations is accomplished via the publication of species-based action plans. It is at this point where the translation of the species-based information into site-based synthesis and policy recommendations occurs. There is a clear mismatch between the composition of SGs and the people able to implement the kind of work suggested by Collar/McNeely etc. SGs typically comprise scientists, zoo-based captive breeding expertise etc, rather than people involved in the advocacy and decision-making needed for policy changes and development planning. This arrangement is appropriate because the species-based research should independently assess the status of organisms and drive further research in the correct direction outside the confines of what is realistically likely to happen on the ground. Authors of APs can only synthesise species information from researchers and recommend what should be done to address threats and further our knowledge about what threatens species. How this is turned into physical action is the responsibility of governments through NGOs and international organisations such as IUCN, and resides in the spheres of sociology, psychology, economics and politics rather than biology (Vane-Wright 1996). Such bodies should assimilate species-based information and produce syntheses based on geography, government department etc. as appropriate in a given situation. With that arrangement, we can be sure that the best, independent scientific information is taken, tested for feasibility and political reality, and then implemented.

This discussion implies a more limited but focused role for species-based synthesis, and suggests that perhaps the problem is not necessarily with the SGs/APs, but with the readers and those in a position to turn science into advocacy. The process of species-based synthesis cannot aim to influence this process – appropriate people need to asses information from various sources (species-based information, site-based information, political reality) and turn these into conservation action through close liaison with, and lobbying of, government departments. Expectations of species-based synthesis should reflect the narrower role we define for it here.

Acknowledgements

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7.4. Questions used to evaluate Action Plan effectiveness in telephone interviews

Questions for SG planning and process

1) Why did you compile an Action Plan?

2) What was (were) the objective(s) of the Action Plan?
   i) Bring all information on the group together
   ii) Bring all conservation information together
   iii) Review the information available on species and assess status
   iv) Set priorities
   v) State action most needed for the group
   vi) Other ...

3) At what stage did you first contact the SSC Secretariat?
   i) Straight away, before compilation began
   ii) In the early stages of compilation
   iii) In the later stages of compilation
   iv) Just before the draft was completed
   v) When we sent the draft to the Secretariat for editing and printing

4) How effective were links with the Secretariat?
   i) Very good – all correspondence dealt with quickly and efficiently
   ii) Acceptable – some prompting required
   iii) Not very good – required chasing to get responses
   iv) Poor – difficult to get satisfactory comments/answers

5) Did you consult the Action Plan guidelines?
   i) Yes, purpose of plan
   ii) Yes, content of plan
   iii) Yes, manuscript style and formatting
   iv) No

6) Did you find the Action Plan guidelines useful?
   i) Very
   ii) Moderately
   iii) Not
   iv) Did not consult

7) Did you contact other parts of SSC or IUCN in compiling the plan?
   i) Disciplinary SGs
   ii) Other taxon SGs
   iii) Other IUCN Commissions
   iv) Regional Offices of IUCN
   v) Other

8) How long did it take to compile the plan?
   i) <6 months
   ii) 6-12 months
   iii) 12-18 months
   iv) 18-24 months
   v) >24 months

9) Was this too long?
   i) Yes
   ii) No

10) How many SG members played a significant role in compilation (including identifying priorities)?
    i) <5
    ii) 5-10
    iii) 11-20
    iv) 21-50

11) How many SG members played a lesser role in compilation (including identifying priorities)?
    i) <5
    ii) 5-10
    iii) 11-20
    iv) 21-50

12) Are there key people that did not contribute to the plan?
    i) Yes, within SG
    ii) Yes, outside SG
    iii) No, everyone relevant contributed

13) What was the intended shelf-life of the plan?
    i) <5 years
    ii) 5-10 years
    iii) >10 years

14) Did you feel that there were limitations to the scope of the priorities that you felt able to propose?
    i) Yes
    ii) No

15) Who did you intend to act on the priorities in the plan?
    i) The SG
    ii) The SSC Secretariat
    iii) IUCN
    iv) The global conservation community

16) Did you have a strategy to implement the Action Plan once it was published?
    i) Yes, it became the SG workplan
    ii) Opportunistic, we pushed project if the opportunity arose
    iii) No

17) Do you have any thoughts on ensuring that Action Plans have greater conservation impact)? (e.g. rapid assessment of priorities every couple of years, broader range of areas covered for action [legislation, policy etc], greater assistance in advocacy)

Questions for product quality and content

1) Overall, is the plan a high quality document? (Do you have confidence in it?)
    i) Yes
    ii) Moderate
    iii) No

2) What is the scientific standard of the plan?
    i) High
    ii) Acceptable
    iii) Poor

3) Does the plan cover all necessary areas that are relevant to the conservation of the species group?

    i) Status reviews
    ii) Key issues
    iii) Potential solutions

4) What are important omissions?
    i) Input from key people/organisations
    ii) Coverage of some issues
    iii) Dealing with priorities and actions adequately

5) Do the priorities reflect the real needs of the species? (does the plan go far enough)
    i) Yes
    ii) Partly
    iii) No

6) What are the areas that are not being addressed?
    i) Biological knowledge of species/species group
    ii) Information on threats/issues
    iii) Potential solutions – biological knowledge
    iv) Potential solutions – site-based issues
    v) Potential solutions - national level policy/management etc
    vi) Potential solutions - international policy/management etc

7) Do you consult the plan?
    i) Yes often
    ii) Yes occasionally
    iii) Yes previously, but it is now out-of-date
    iv) No, I have never really consulted the plan

8) What could be improved about the plan?
    i) Accuracy of information
    ii) Interpretation of information
    iii) Priorities
    iv) Layout

9) Do you think that the plan has played a role in the conservation of the species group?
   i) Significant
   ii) Large
   iii) Minor
   iv) None

10) Why?

Questions for process management and distribution by IUCN Secretariat

1) How well does the AP fit the AP guidelines?
   i) Very
   ii) Partially
   iii) Not

2) Does it contribute to SSC targets?
   i) Yes
   ii) Partly
   iii) No

3) What is the scientific standard of the plan?
   i) High
   ii) Acceptable
   iii) Poor

4) To what extent was the technical content of the plan reviewed?
   i) Not at all
   ii) By Program Officer at HQ
   iii) By other SSC staff
   iv) By other specialists

5) Did the draft require much editorial work to make it suitable for publication by IUCN?
   i) No
   ii) Yes - on content
   iii) Yes - on style

6) Did the plan contain a clear expression of priorities as envisaged by the Secretariat?
   i) Yes
   ii) Partly
   iii) No

7) As far as you know were any relevant people not involved in its compilation?
   i) I am sure everyone relevant was
   ii) As far as I know everyone relevant was
   iii) I believe that one or more key person/organisation was not
   iv) I am sure that one or more key person/organisation was not

8) How much work was required to make the content suitable for publication by IUCN?
   i) A considerable amount
   ii) Moderate amount
   iii) Little
   iv) None

9) Did SSC 'promote' the plans within IUCN?
   i) Yes to every part of IUCN
   ii) To some parts of IUCN
   iii) No

10) Did SSC 'promote' the plans outside IUCN?
    i) Yes widely
    ii) In some areas
    iii) Opportunistically
    iv) No

11) Which SSC staff use the plan?
    i) HQ
    ii) Wildlife Trade
    iii) SIS
    iv) Red List

12) Did the Secretariat have a clear idea of the target audience?
    i) Yes
    ii) Partly
    iii) No

13) Did the plan reach this target audience?
    i) Yes
    ii) Partly
    iii) No

14) Did the Secretariat seek feedback from its standard list of recipients?
    i) Yes, all of them
    ii) Yes, some of them
    iii) No

Questions for implementation of AP recommendations

1) When did the project start?

2) When is it due to finish?

3) Are you carrying out/funding the project because it is in the Action Plan?
   i) Yes
   ii) Partly
   iii) No

4) If not because of the Action Plan, why did you carry out this project?
   i) For scientific reasons
   ii) The funding was available
   iii) It is a national research priority
   iv) The Specialist Group suggested the work
   v) I am interested in the species group

5) Was the project's inclusion in the Action Plan a key factor in attracting funds?
   i) Yes
   ii) No
   iii) (evidence)

6) Have you sought to carry out the project exactly as identified in the Action Plan?
   i) Yes
   ii) Partial overlap with our own project priorities
   iii) No, Action Plan is not important for my research

7) How successful has the project been in achieving its objectives?
   i) All achieved
   ii) Partly achieved (project ongoing)
   iii) Partly achieved (project completed)
   iv) None achieved

8) Has the project led to any unpublished conservation reports?
   i) Yes
   ii) Being drafted
   iii) No
   iv) Intended

9) Have any completed reports been disseminated to conservation managers able to act on results?
   i) Yes
   ii) No
   iii) Intended

10) Do you know if any conservation action has taken place because of the project?
   i) Yes it has
   ii) It is too early for results to be applicable
   iii) No

11) Do you think that it is your responsibility to promote conservation action arising from your work?
    i) Yes
    ii) Partly
    iii) No

12) If not (or partly), whose responsibility is it?
    i) Specialist Group
    ii) SSC
    iii) IUCN
    iv) Others (please specify)
    v) Don't know

13) Has the project led to any peer-reviewed papers?
    i) Yes
    ii) In press
    iii) Being drafted
    iv) No

14) Have you given any talks to conservation audiences on this work?
    i) Yes
    ii) No
    iii) Planned

15) Have you given any talks to scientific audiences on this work?
    i) Yes
    ii) No
    iii) Planned

16) Are you in regular touch with the Specialist Group on the progress of the project?
    i) Yes
    ii) No

17) Do you see the project as a conservation project?
    i) Yes
    ii) Partly
    iii) No

Questions on utility of AP for non-SSC people

1) Is the Action Plan/(Are the Action Plans) useful in your work?
   i) Yes, significantly
   ii) Yes, a little bit
   iii) No

2) If question 1 is yes, which parts of the plan are of most value?
   i) Review of information on species
   ii) Assessment of key issues
   iii) Assessment of potential solutions
   iv) Setting of priorities

3) If question 2, is no, why not?

4) Is your level of confidence in the technical standard of the Action Plan(s)?
   i) High
   ii) Moderate
   iii) Low

5) What are areas that are not being addressed that you would find useful?
   i) Biological knowledge of species/species group
   ii) Biological discussion of threats/issues
   iii) Biological discussion of potential solutions
   iv) Discussion of national level policy and management issues
   v) Discussion of international level policy and management issues
   vi) Discussion of community level socio-economic issues
   vii) Discussion of large-scale development issues
   viii) Other ....

6) The SGs are typically made of up biologists and this is reflected in the plans produced so far. What can you offer that will broaden their usefulness?

7) Can you assist in promoting them to people who will act on the plans? If so, who would you promote the plans to?

8) Do you have any other thoughts?

7.5. Example of UK Biodiversity Action Plan: black grouse *Tetrao tetrix*

From UK Biodiversity Group (1999)

Current status

1.1 Black grouse are largely dependent upon the suitable management of moorland/woodland edge in Scotland and Wales, and the moorland/farmland fringe in northern England. The black grouse also utilises young conifer plantations and clear-felled areas with well-developed field and shrub layers that include rushes, cotton-grass, heather and bilberry. Mature plantations with widely-spaced trees also support suitable ground vegetation and can be important for the species.
1.2 The black grouse declined in range by 28% between 1968-72 and 1988-91, and the most recent UK population estimate (1996) is 6510 lekking males compared with an estimate of 25,000 in 1990.
1.3 The black grouse isprotected under the Game Acts (close season: 11 December-19 August), Annex II/2 of EC Habitats Directive, and Appendix III of the Berne Convention.

2. Current factors causing loss or decline

2.1 Over-grazing and agricultural improvement have removed key food plants such as bilberry, heather and birch scrub in many areas. These plants also support invertebrate prey items important for chicks, and provide nest sites. Sheep grazing in woodland can reduce the shrub understorey which is utilised by the species.
2.2 The shading out of the understorey in maturing conifer plantations.
2.3 Drainage and overgrazing of mires destroy two important black grouse food sources - the flowers of cotton grass and invertebrates. Rushes, which provide nesting cover and sources of insect food, are also affected adversely. Loss of wet flushes and riparian vegetation in afforested areas also leads to loss of food plants and invertebrates.
2.4 The re-seeding of traditional hay meadows or enclosed rough grazings destroys plants such as sedges, rushes, sorrel, buttercups and clover, which are important food plants.
2.5 Over-frequent moorland burning can lead to the formation of impoverished acidic grasslands.
2.6 Fragmentation of black grouse habitat often leads to small populations which are unlikely to persist.
2.7 Considerable numbers of black grouse are killed by collisions with deer fences. Overhead power and telephone cables may also be a problem.
2.8 Predation may be a limiting factor in some regions. Studies have shown the main predators to be foxes and crows.
2.9 Disturbance of lekking birds has been identified as a severe problem at some isolated sites.

3. Current action

3.1 Management measures to regenerate woodland, reduce grazing and control predators, based on research by the Forestry Commission, Game Conservancy Trust (GCT) and RSPB, have been shown to increase black grouse populations.
3.2 Guidelines for conifer forest management were published by the FC in 1993 and are incorporated into FC Forest Design Plans and Native Woodland Management Plans. Guidelines are being given a broader policy context through the UK Forestry Standard. The Forestry Authority has issued a guidance note on deer, forest regeneration and fencing.
3.3 Research by GCT is intended to lead to the production of a management handbook detailing practical work to encourage black grouse through the improvement of its different habitats.
3.4 A variety of grant aid mechanisms, including the Woodland Grant Scheme (WGS), ESAs, Tir Gofal, the Countryside Premium Scheme, and the Moorland Scheme, have the potential to improve much black grouse habitat through funding habitat management and fence removal. Individual 'challenge funds' under WGS/Woodland Improvement Grant Scheme target: management of existing native woodland in the Cairngorms; expansion of native woodland in Deeside and the Forest of Spey; and enhancement of upland oak woods in Wales and Argyll. A challenge fund targets new native woodland in national parks in England and Wales.
3.5 Collaborative recovery projects for black grouse are being developed and implemented by a range of organisations in different parts of the UK, including: the North Pennines (RSPB/EN/GCT and

MoD); Tayside (RSPB/SNH/GCT); Dumfries & Galloway (FC/FWAG/RSPB/SNH); and Wales (RSPB/CCW).

4. Action plan objectives and targets

4.1 Stem or reverse the decline in numbers and range of the black grouse in the UK, in order to hold or restore the population to its 1996 size and range by 2005.
4.2 In the long term (20 years), increase the range and abundance of the black grouse in the UK.
4.3 Prevent further fragmentation of populations within the range of the black grouse.
4.4 Promote re-colonisation of formerly occupied areas between currently isolated populations by 2005.

5. Proposed action with lead agencies

5.1 Policy and legislation

5.1.1 Seek EU and UK livestock support policies which will help reduce sheep over-grazing in the uplands, especially the moorland fringe. (ACTION: MAFF, NAW, SE)
5.1.2 Where appropriate, include the requirements of the black grouse when preparing or revising prescriptions for agri-environment schemes. (ACTION: CCW, EN, MAFF, NAW, SE, SNH)
5.1.3 Seek policies which ensure protection of key black grouse habitats, and identify and target positive opportunities for expanding such habitats (eg through Indicative Forestry Strategies). (ACTION: CCW, EN, FC, LAs, MAFF, National Park Authorities, NAW, SE, SNH)
5.1.4 Encourage and support habitat management for black grouse in woodland and open land in public and private ownership, including relevant species and habitat action plans, native woodland management plans and forest design plans (the latter to be extended to the private sector as long-term forest plans). (ACTION: FC)
5.1.5 Develop the Woodland Grant Scheme to encourage the favourable management of black grouse habitat in key areas, notably the North Pennines. (ACTION: FC)
5.1.6 Seek to reduce over-grazing by red deer in Scotland by exercising powers under the Deer (Amendment)(Scotland) Act 1996 to conserve the natural heritage. (ACTION: Deer Commission for Scotland, FC, SE, SNH)
5.1.7 Encourage the use of Objective 1/5b and Leader funding, and subsequent European grant schemes, to support low-intensity mixed farming systems suitable for the black grouse. (ACTION: CCW, EN, MAFF, National Park Authorities, NAW, SE, SNH)

5.2 Site safeguard and management

5.2.1 Consider notifying areas with high densities of breeding black grouse and with important lek sites as SSSIs, and negotiate positive management agreements to secure favourable site management where necessary. (ACTION: CCW, EN, SNH)
5.2.2 Safeguard important black grouse habitat from inappropriate development, through the development control and planning process. (ACTION: CCW, EN, LAs, SNH)
5.2.3 Where possible, ensure favourable management of moorland and native woodland for the benefit of the black grouse. (ACTION: CCW, EN, FC, MAFF, MoD, NAW, SE, SNH)
5.3 Species management and protection
5.3.1 Promote and support the wise use of black grouse populations. (ACTION: CCW, EN, Home Office, SE, SNH)
5.3.2 Ensure the protection of important or isolated lek sites from human disturbance. (ACTION: CCW, EN, FE, MoD, SNH)

5.4 Advisory

5.4.1 Review guidance on management for the black grouse in Great Britain, and develop the UK Forestry Standard and associated guidelines, to take into account the FC (Scotland) Advice Note, *Deer, natural regeneration and fences.* (ACTION: FC)
5.4.2 Advise landowners and managers of the presence and importance of the black grouse, and specific management for its conservation, and update that advice in the light of new policies and research findings. (ACTION: CCW, EN, FC, MAFF, NAW, Regional Forestry Initiatives, SE, SNH)

5.4.3 As far as possible, ensure that all agri-environment and forestry advisers are advised of locations of this species, management requirements and potential threats. (ACTION: CCW, EN, FC, MAFF, NAW, SE, SNH)

5.5 Future research and monitoring

5.5.1 Ensure the continuation of a collaborative population monitoring programme. (ACTION: CCW, EN, SNH)

5.5.2 Continue to investigate black grouse demography to understand the factors limiting populations. (ACTION: CCW, EN, SNH)

5.5.3 Continue research into black grouse ecology, with particular reference to diet, habitat and spatial requirements. (ACTION: CCW, EN, SNH)

5.5.4 Monitor the effectiveness of measures introduced to increase or restore black grouse populations, including agri-environment prescriptions and forest management by FE. (ACTION: CCW, EN, FE, MAFF, NAW, SE, SNH)

5.5.5 Continue research to minimise or eliminate the problem of grouse colliding with forest fences and overhead lines, for example by developing new methods of marking, new materials, and new fence designs. (ACTION: EN, FC, SNH)

5.6 Communications and publicity

5.6.1 As appropriate, use the black grouse to illustrate the issue of sustainable agricultural management in the uplands. (ACTION: CCW, EN, MAFF, NAW, SE, SNH)

5.6.2 Promote literature and other information sources detailing management measures to enhance black grouse populations, as further information from research work becomes available. (ACTION: CCW, EN, FC, SNH)

5.7 Links with other action plans

5.7.1 This action plan should be considered in conjunction with those for blanket bogs, native pine woodland, purple moor-grass and rush pastures, upland oakwoods and upland heathland.