

**REPORT ON THE MISSION TO SANGAY NATIONAL PARK
WORLD HERITAGE SITE, ECUADOR
FROM 20 FEBRUARY TO MARCH 2, 2005**

EXECUTIVE SUMMARY

A mission to evaluate the state of conservation of the Sangay World Heritage (WH) Site, Ecuador, was undertaken, 20.02 – 02.03.05. The Park was inscribed in the WH List in 1982 (criterion II, III, and IV), and no integrity issues were identified at the time. In 1992 the Site was added to the WH List in Danger because of concerns regarding heavy poaching of wildlife, illegal livestock grazing, encroachment along the Park's perimeter, and unplanned road construction. At the time of inscription, the Park had a total area of 271,925 has. In 1992 the Park boundaries, though not those of the WH Site, were extended to the south to encompass a total of 502,065 has. Thus, the WH Site now encompasses about 54% of the Park. The Park is administered by the Ministry of the Environment through two Park Superintendents, one each for the Andean and Amazonian Sections, and a total of 16 Technicians and Park Guards. The Park's administration is financed through the budget of the Ministry of the Environment (MoE) and the National Environment Fund (FAN), and assisted by Fundación Natura's *Sangay* Project and the IUCN/UNESCO *Enhancing Our Heritage* (EoH) Project.

Based on documentation, field visits, interviews, and an over-flight, it was determined that the state of conservation is excellent. The construction of the 117 km. Guamote-Macas Road, 8 kms. of which passes through the Park, is now being carried out by the Army Corps of Engineers following rigorous international environmental standards (ISO 9001 and 14001). While there are still low levels of hunting and livestock grazing around certain areas around the border of the Park, these are insignificant in terms of the whole, and by no means a threat to the values for which the Site was listed. While illegal timber harvest continues at low levels in a few sections of the Park buffer zone, none is taking place within the WH Site itself. Relations between the Park Administration and other stakeholders are relatively positive, and no threats were detected from new colonization, or oil/mineral exploration or extraction.

Current trends are mixed. Management effectiveness, as evaluated by the EoH Project, is considered moderately satisfactory. Current staff levels are inadequate for such a huge area, and yet further cuts are expected in budgetary support and staffing by the MoE. On the other hand, the degree of concern and potential for investment by the Provincial and Municipal Governments is high, the support of NGOs and community groups solid, and the work on financial sustainability through the EoH project promising.

Based on these findings, it is recommended that Sangay be removed from the WH in Danger List, the Government congratulated for its efforts to maintain the integrity of the Site, and stakeholders urged to maintain and increase their levels of support and investment. It is further recommended that a high profile meeting be organized to present the newly approved management plan to stakeholders, devise a coordinated implementation strategy, and forge formal agreements that would allow the Park Administration to move from an implementation model to a coordination model. In the process increased attention needs to be paid to the development of plans and investment in public use in general, most immediately along the Guamote-Macas Road, and to the capture of tourism revenues for Park management. Other opportunities for revenue generation from environmental services were also noted.

ACKNOWLEDGEMENTS

The Consultant would like to acknowledge the kind support provided for the success of the mission by a number of institutions and individuals. Particular thanks is due to Marina Cracco of IUCN/SUR, who did a tremendous job in making the complicated logistical arrangements for the mission, and who, together with Jorge Rivas of Natura, coordinated the mission. Their knowledge and insights informed many of the conclusions and recommendations. Special thanks is also due to Isidro Gutiérrez, Director of Biodiversity and Protected Areas of the Ministry of the Environment; Darwin Rivadaneira and Miguel Acuña, Directors of the Amazonian and Andean Sectors of the Park for the Ministry of the Environment; and Capt. Fausto Erazo of the Army Corps of Engineers, head of the construction unit for the Guamote-Macas Road. Each went out of their way to present the work they are doing and to share experiences. Thanks is also due to the many individuals in the Municipal and Provincial Administrations, and the community leaders, who received us warmly and patiently answered our many questions.

1 BACKGROUND TO THE MISSION

Inscription history:

- Bureau of the World Heritage Committee Seventh Session, Paris, (27 - 30 June 1983).
- World Heritage Committee Seventh Ordinary Session, Florence (Italy), 5-9 December 1983

Criteria and World Heritage Values:

- criteria II, III, and IV
- With its outstanding natural beauty and its two active volcanoes, the park illustrates the entire spectrum of ecosystems, ranging in altitude from tropical rainforests to glaciers, with striking contrasts between the snowcapped peaks and the forests of the plains. Its isolation provides protection to the indigenous species found there, such as the mountain tapir and the Andean condor.

Integrity issues raised in the IUCN evaluation report at time of inscription: None

Examination of the State of Conservation by the World Heritage Committee and its Bureau:

- Added to List of World Heritage in Danger, 1992
- State of Conservation evaluated by the World Heritage Committee each year between 1992 and 2001, 2003, and 2004

Justification of the mission:

Sangay National Park was inscribed in the World Heritage in Danger List because of heavy poaching of wildlife, illegal livestock grazing, encroachment along the Park's perimeter, and unplanned road construction. Recent reports indicate that the construction of the Guamote-Macas road continues to be the main threat and may have caused irreversible damage to the natural environment, both through direct impact (pollution, dynamite use, loss of biological corridors etc.) and indirect impact (new settlements, poaching, cattle ranching etc.).

The state party reported at the 28th session of the committee that the construction of the Guamote – Macas road is expected to be completed by mid-2005 with the digging of a small tunnel section

of about 800m. Though the report states that an environmental impact study was undertaken prior to the construction of this section, there is no information on mitigation measures applied.

2 NATIONAL POLICY FOR THE PRESERVATION AND MANAGEMENT OF THE WORLD HERITAGE PROPERTY

Protected area legislation: Forest, Natural Areas and Wildlife Conservation Law (1981),

Institutional framework: Managed by the Ministry of the Environment

Management structure:

- The park is located within 4 provinces and 14 cantons, and forms part 2 of the 10 Ministry of the Environment's Regional Districts: District 6, which includes the provinces of Tungurahua, Chimborazo, Cotopaxi and Bolívar, District 7, which includes the provinces Morona Santiago, Azuay and Cañar.
- There are two superintendents for the park, one responsible for the Andean zone, headquartered in Riobamba and a second for the Amazon zone, with headquarters in Macas.
- The park has a staff of 16 technicians and park guards, posted in different administrative sectors of the park.
- The administration is supported by the National Environmental Fund (FAN) and has contracted an accountant/administrator to provide administrative support for the park.
- There are three administrative centers located in Riobamba, Macas and Azogues, along with five outposts in Andean zone and seven in the Amazon zone. Macas also has an interpretive center. The outposts in San Isidro, Sináí and Sexta Cooperativa, (Amazon Zone) are closed due to the lack of staff. Four others in this zone are open one day/week.

Response to the recognition of values under international treaties and programmes (World Heritage, Biosphere Reserve designation etc.)

- Officially recognized
- Limited ability to implement protection of these values on the ground

3 IDENTIFICATION AND ASSESSMENT OF ISSUES / THREATS

Management effectiveness: Sangay National Park is one of the pilot areas selected for the IUCN/UNESCO "Enhancing our Heritage" (EoH) Project. As part of this project, an initial evaluation was carried out (Bajaña et al, 2002). It determined that overall management efficiency is 51,6% (53,7% for the highlands, 50,1% for the lowlands). This places management within the category, *Moderately Satisfactory*, which means that the area does have the minimal management resources needed, but also demonstrates some critical deficiencies that prevent the establishment of a solid basis for management effectiveness. The *Legal, Planning, Threats* and *Permitted Uses* fields were graded as *moderately satisfactory* while *Administration, Policy, Knowledge, Management Programs* and *Participation* all were graded as only *Slightly Satisfactory*. This suggests that important changes and additional activities are required. Of special concern was the lack of coordination between stakeholders. Until now, stakeholder management committees have been organized, although there is every indication that relations between the Park Administration, NGOs, local governments, and communities are relatively positive. A second evaluation of the Park is being carried out, and a preliminary report has been completed (Enhancing our Heritage Project, February, 2005). It provides a more detailed look at the management of Sangay National

Park as a whole, but does not differentiate its ratings for the northern part of the Park that is the World Heritage Site, and the southern part outside of the World Heritage Site. The report concludes that the general state of conservation of the Park is good, and indicates that the few problematic areas tend to be in the southern part of the Park outside the World Heritage Site.

Factors affecting the property / conditions of integrity: The main factors directly affecting the integrity of the site today are the construction of the Guamote-Macas Road, illegal hunting, livestock grazing, and public use. MAP 3 in the annex provides an overall indication of the location of these individual threats. The limited funding available for management and the need for increased coordination among stakeholders are indirect factors contributing to the moderately satisfactory level of management effectiveness. At the time the property was inscribed in the list of World Heritage in Danger, it was indicated that illegal timber harvest and encroachment along the park's perimeter were additional factors affecting the property. Since then, most of the settlers along the Guamote-Macas Road have started the process of land titling, and they effectively serve as a barrier and deterrent to further in-migration. While a relatively low level of illegal timber harvest apparently still takes place along the Guamote-Macas Road, the affected areas are not within the Park. There are no reports of mining or oil exploration activities taking place, nor interest in exploration.

4 ASSESSMENT OF THE STATE OF CONSERVATION OF THE SITE

All information collected during the mission, including a habitat quality analysis carried out by Fundación Natura, indicates that the state of conservation of the site is excellent. This is due to a large extent to its splendid isolation, as well as the management programs of the Ministry of the Environment, supported by NGOs, other governmental entities, and communities.

Guamote-Macas Road:

Only 8 kms. of the 117 km. Guamote-Macas Road are within the Park (see MAP 1 in Annex), and this is the section of the road where earth movement took place many years ago. Thus, in relative terms, this is the portion of the route that is most stable, and large portions of the disturbed areas have regenerated naturally with native vegetation (see MAP 2). Still, even here, new landslides continue to occur and will probably continue for years to come. It is noteworthy that the Army Corps of Engineers, which is constructing the road, has adopted and been certified according to international environmental standards (ISO 9001, ISO 14001, and OHAS 18001). This has resulted in a truly astonishing change in attitude, procedures, assignment of responsibilities, and regular assessment that are at the forefront of environmentally responsible road construction. This does not mean, of course, that there are no impacts, especially in the steep areas outside the Park where earth movement is on-going. Still, mitigation measures are in place, implemented rigorously, and assessed regularly. Not only have the construction techniques improved markedly, the Corps of Engineers is now playing a leading role along the route of the Road in promoting environmental consciousness, working with local communities, and supporting park management in every way possible. While institutional adjustments have no doubt played an important role in the positive changes that have taken place, it is also clear in this case that outstanding leadership has played a key role. The change is so remarkable that it would be worthy of a case study.

The Ministry of the Environment and the landowners along the Guamote-Macas Road have come to agreement on management criteria and zoning for land-use activities for this area that is a buffer zone of the Park. Biological connectivity between the northern and southern sections of the Park is a particular concern and is being addressed through the zoning agreements. Habitat

fragmentation is not a concern as yet (see MAP 2), and will not be a concern as long as the landuse zoning plan is enforced. However, a coordinated plan for public use in this area has not yet been addressed. This is particularly critical at this point in the construction of the road when about 1.5 years remain until completion of the project. There is still time, and willingness on the part of the Ministry of Public Works and the Army Corps of Engineers, to modify the road design to facilitate the development of viewpoints, trailheads, pull-offs, and simple visitor facilities.

Illegal Hunting:

While illegal hunting remains a concern, it should be understood in the context of an area that is extremely difficult to access. Thus, the little hunting that takes place is carried out on the park boundaries. During patrols, Park Guards in the Amazonian sections of the Park have only come across two hunting parties inside the Park in the last two years. It should also be remembered that indigenous peoples have hunted in these areas for thousands of years. Thus, the vast majority of the park remains totally unaffected, and what little hunting takes place around its borders is probably no greater than has taken place historically. Environmental education and the captive breeding projects of Fundación Natura in the eastern Park buffer zone are playing a role in further reducing hunting pressure on specially prized species. These projects are linked to Natura's Social and Environmental Monitoring Program for Sangay, which tracks threats, and identifies areas of particular concern.

Livestock Grazing:

Livestock grazing continues to exist in the páramo formations along the western boundary of the site, especially in the Plazapampa and Culebrillas areas. Natura is working with communities in these areas to implement a plan for sustainable management. Again, because of the distances of these páramos from human settlements, the Natura Monitoring Program indicates that the amount of grazing seems to be declining of its own accord. A major activity of the management plan is the reintroduction of the soft-hoofed alpacas as alternatives to hard-hoofed, and more destructive cattle and sheep. The program has achieved some success in two communities near the western boundary.

Deforestation:

Because of its isolation and lack of roads, deforestation within the WH Site itself is not a problem or threat. Some land clearing is taking place along the Guamote-Macas Road by landowners outside the WH Site, and some landowners along this corridor complain about illegal harvesting on their land. Both the Park Administration and the Provincial Government are considering the installation of check points at either end of the Guamote-Macas Road to deter illegal hunting and logging using "Vigilancia Verde" brigades. However, for the moment it would seem that the cost of a 24/7 control system paid for by the Park Administration would far outweigh the tangible benefits to Park management.

Public Use:

Public use of the World Heritage Site itself is restricted to groups climbing the Altar and Sangay Volcanoes, visitors to the Atillo area at the beginning of the Guamote Macas Road into the Park, and the Social Tourism Program developed by the Ministry of the Environment and Chimborazo Province. Groups also used to climb the Tunguragua Volcano, but since its recent eruptive phase, this has ceased. The impacts of these climbing groups are not documented. The

community-based guides that were interviewed during the mission indicated that the number of groups is small and that they take precautions to reduce impacts. The total number of visitors reported for the Park, including the southern section outside the World Heritage Site, is about 500/year.

5 CONCLUSIONS

5.1 The state of conservation of the Sangay World Heritage Site is truly excellent, clearly surpassing that of many of the World Heritage Sites in South America (i.e. Galápagos, Huascarán, Machu Picchu, Iguazú).

5.2 The Guamote-Macas Road now poses only a very minor threat to the integrity of the World Heritage Site. The area affected is less than 0.01% of the Park.

5.3 The low levels of hunting and grazing that take place along the borders of the site are not a threat to the integrity of the whole.

5.4 While the continuing decrease in the budget of the Park Administration remains a real concern, the prospects for increased counterpart funding and in-kind services by NGOs, the Provinces and Municipalities, and nearby communities seem to be good.

5.5 The sustainable finance elements of the EoH Project provide a means for addressing funding issues in a more consistent and strategic manner.

6 RECOMMENDATIONS

To the World Heritage Committee:

- 6.1 Remove Sangay from the list of World Heritage in Danger.
- 6.2 Congratulate the Government of Ecuador on the progress that has been made in addressing and minimizing threats, and encourage them to improve the management effectiveness of the Park so that even greater progress can be made in the future.
- 6.3 Take special note of the extraordinary progress that has been made by the Army Corps of Engineers in mitigating the environmental damage of the Guamote-Macas Road, and in their cooperation with and promotion of environmental projects along the route.
- 6.3 Urge the government to continue to support the work of the IUCN/UNESCO EoH Project, and the Sangay Project carried out by Fundación Natura.
- 6.4 Urge the national Government; the Provinces and Municipalities with jurisdiction over Sangay; the National Environment Fund; the EoH Project; international, national and local NGOs; and local communities to work together to effectively and efficiently to manage Sangay National Park, and especially to collaborate in creative ways to develop and implement a viable strategy for sustainable finance.
- 6.5 Suggest the utility of bringing the major stakeholders together in a meeting to present the new management plan for the Park, and to coordinate specific actions for implementation, monitoring, and evaluation.

Specific Technical Recommendations:

- 6.6 The latest version of the Sangay National Park Management Plan was officially approved on February 18, 2005. During the last few years the national government in general, and the administration of Sangay National Park in particular, have experienced severe budget cuts and layoffs of personnel. At the same time, there is increasing recognition among the concerned Provinces and Municipalities, the Army Corps of Engineers, the Ministry of Public Works, NGOs, and communities of the importance of the Park and buffer zone to their well-being. As a consequence, there is a manifest willingness among all to collaborate in the management of the park and its buffer zone. Thus it would seem that a critical turning point is being reached where it would be extremely useful to hold a meeting among the major stakeholders to present the new management plan, and to determine specific activities and mechanisms to harness the inputs of each stakeholder. The final output of the meeting might well be an action strategy for a truly collaborative approach to management plan implementation. In preparation for the meeting, the Park Administration, including both the Andean and Amazonian Sections, might find it useful to consider plans for gradually moving their administration model from that of an implementing agency to that of a coordinating agency.
- 6.7 Plans call for the opening of the Guamate-Macas Road to traffic by May of this year, and the completion of construction by the end of 2006. Most stakeholders believe the new Road will attract both national and international visitors, though no plan for public visitation has been prepared, and no provisions have been made in the design of the road for scenic overlooks, trailheads, pull-offs, or visitor facilities. Thus, it would seem urgent for the Park Administration to take the leadership in working with other stakeholders to define a public use plan, both for the short Road section within the Park, and for the Road corridor in the buffer zone. This plan could then be integrated with the Road design so that the contractor can build a Road that will be visitor friendly, facilitating a safe and enjoyable experience.
- 6.8 It would appear from the summary of the new Management Plan, and the strategy for sustainable finance developed by the EoH Project that relatively little attention has been given to the Park's potential for public use. The Park possesses an enormous number of attractions that could be developed for use by a wide range of user groups. If properly developed, these attractions could provide the basis for a variety of outstanding visitor experiences, contribute to the economies of the surrounding communities and cities, and assist in financing Park management. Obviously, any plan for public use should be carefully crafted and implemented, should clearly establish roles and responsibilities, and should be continually monitored and evaluated to detect impacts and implement corrective measures. While funds for investment in infrastructure and personnel may be scarce at the national government level, discussions during the mission seemed to indicate that the Municipalities and Provinces may be willing to invest, as would the private sector.
- 6.9 The lack of mechanisms that would allow a reasonable portion of the funds raised within the Park to be retained for park management is an obstacle to sustainable finance. Thus, before investments are made in public use programs, a specific effort is needed to identify practical mechanisms for retaining tourism revenues for Park management, or for the letting of concessions in return for in-kind services, equipment, or infrastructure.
- 6.10 Note should be taken of the innovative Social Tourism Program developed by the Park Administration, Chimborazo Province, and local universities. For a minimal charge, people from the urban areas are able to visit the Park for a day outing and environmental

education. During the trip to the Park, Park Guards or University Students provide these visitors with information on the Park, its values, and its problems. The program enables ordinary Ecuadorean citizens, who normally do not have the resources to enjoy recreational activities outside the cities, to know and enjoy their National Parks. Perhaps just as important, it also provides a stimulus to support and defend them. While the impetus for the program is political, other Provinces may wish to consider something similar and to add their own creative touches. At the same time, the program should be designed so that it is sustainable, both in terms of costs, and the provision of adequate infrastructure, that will minimize impacts.

- 6.11 The Park currently contributes significant environmental services to surrounding communities and the nation as a whole. Sangay's water is of particular value to surrounding communities and cities for human consumption and irrigation. Water is also important to the country as a whole for the generation of hydropower. Indeed, Sangay supplies the water for the 2 hydropower plants on the Pastaza River and the Paute hydropower plant, which together generate a significant percentage of the country's power. While surrounding communities, cities, and the country as a whole benefit enormously from the water produced in Sangay, there are currently no mechanisms in place to charge for this environmental service. An action strategy is needed to develop these mechanisms to fund the management of critical Sangay NP watersheds that are used for potable water, irrigation, and hydropower. Caution is needed, however, because attempts to charge poor communities for irrigation or potable water may create more conflict than raise revenues.
- 6.12 During the mission, it was indicated that a new hydropower project, El Abanico, is being developed near Macas. The water that will be used by the Project is produced in the Park. The InterAmerican Development Bank is providing funding for the project, and since the Bank has strict environmental requirements, it may be useful to determine the provisions that have been made for management of the watershed feeding El Abanico. This may provide an immediate potential for working out a fee system that will finance the Park's management activities in the watershed feeding the powerplant. If this were instituted, it would be a valuable precedent for negotiations with the other hydropower plants that enjoy the use of water resources coming from the Park.

7 ANNEXES

7.1 TERMS OF REFERENCE

Background:

The site of Sangay National Park was inscribed on the List of the World Heritage in Danger because of heavy poaching of wildlife, illegal livestock grazing, encroachment along the Park's perimeter, and unplanned road construction. Recent reports indicate that the construction of the Guamote-Macas road continues to be the main threat and may have caused irreversible damage to the natural environment, both through direct impact (pollution, dynamite use, loss of biological corridors etc.) and indirect impact (new settlements, poaching, cattle ranching etc.).

The state party reported at the 28th session of the committee that the construction of the Guamote – Macas road is expected to be completed by mid-2005 with the digging of a small tunnel section

of about 800m. Though the report states that an environmental impact study was undertaken prior to the construction of this section, there is no information on mitigation measures applied.

The IUCN consultant will travel to Quito for a 5 day mission, with the following objectives:

- Undertake on behalf of IUCN the IUCN-UNESCO World Heritage monitoring mission to Sangay National Park World Heritage Site, Ecuador, to monitor the state of conservation of the site;
- Liaise with the relevant authorities in Ecuador (as advised by IUCN) in relation to the organisation of the mission;
- While on mission, make contact with relevant stakeholders to discuss the state of conservation of the site, and provide IUCN with the contact details of the most relevant and reliable sources of information for future reactive monitoring of the site;
- While on mission, take photographs which reflect the key threats to the conservation of the site using 35mm slide film and/or digital camera and deliver a selection of slides/JPEG files with a short text describing the contents of each slide/file to IUCN;
- Collaborate as relevant with representatives of UNESCO to prepare the section of the joint IUCN /UNESCO draft Monitoring Mission Report relating to the SOC and management of the natural features of the site.
- Ensure that the Monitoring Mission Report includes:
 - i) An evaluation of the nature and extent of threats to the site, specific issues outlined by the World Heritage Committee at its 28th session (June - July 2004);
 - ii) An account of measures which the State Party plans to take to protect the outstanding World Heritage values of the site,
 - iii) Recommendations for any additional action to be taken by the State Party, including draft recommendations to the World Heritage Committee;
- Prior to the visit, the consultant should review the following documents:
 - World Heritage Committee State of Conservation Reports, the original nomination dossier (1982), and the IUCN evaluation of nomination dossier (1983) available at <http://whc.unesco.org>
 - Enhancing our Heritage Project: Summary of initial assessment report for Sangay National Park (2003) (www.enhancingheritage.net/docs/Sangay_Review_final_v1.doc)

Specific Issues to be assessed:

- Impact of the Guamote-Macas road, specifically in terms of:
 - i) establishment of illegal settlements within the park, or along the park's perimeter, or increasing the access of park lands to poachers.

- ii) actual ecological and physical damage to the park (reducing ecological connectivity, creation of sources of erosion/sedimentation, fragmentation of ecosystems)
 - iii) the census of properties in the vicinity of the road, as carried out by the Min. of the Env't, in collaboration with Fundacion Natura (please obtain a copy of this census).
- Existence / extent of illegal activities in the site, in particular:
 - i) Measures of the efforts carried out by the state party to control illegal logging, location and extent of the activity (with particular focus on the Andean zone of the park)
 - ii) Presence/absence of mining, oil exploration.
 - iii) An effectiveness assessment of the “Vigilancia Verde” forest monitoring system.
 - iv) Determination of the extent of illegal hunting taking place within the Shuar communities, and documentation of efforts taking place by the State Party to control these activities.
- Management Effectiveness
 - i) Measures of the management authority’s application of its management plan, of the quality of its relation with communities located along the park’s perimeter.
 - ii) A reading on the existence and effectiveness of multi-stakeholder management committees

Deliverables:

The consultant shall provide a detailed report on all his observations and conclusions, including detailed recommendations for action where justified. The report will include a list of all people interviewed, professional or community affiliations, and if possible, email and telephone contact information. The report should also include a CD with a reasonable number of pictures documenting the various aspects of the mission. Such pictures will be considered property of IUCN.

The consultant will also provide a list of clear recommendations for priority action required to redress any outstanding threats to Sangay NP that may warrant its maintenance on the List of WH in Danger. For each recommendation, the consultant shall identify the most likely agent responsible, a reasonable time frame to carry out the recommendation, and suggested indicators of that achievement.

In addition to the recommendations requested above, the consultant will provide recommendations for general management improvements.

Any supporting documentation should be included with the report, in particular:

- a good map showing the Guamate-Macas road and park boundaries.
- the census of properties in the vicinity of the road
- a copy of the park’s latest management plan
- latest reports from the “Sangay Project” run by Fundacion Natura

NOTE: The final decision on IUCN's recommendation to the World Heritage Committee will be made by the World Heritage Panel.

- Prepare a brief 'trip report', for internal use within IUCN, outlining the programme, and positive and negative aspects of the mission which IUCN should be aware of as well as suggestions for follow-up action by IUCN;
- Deliver to IUCN no later than 4th April, 2005, an electronic version of the joint Monitoring Mission Report, the trip report, relevant slides/JPEG files and the contact details of individuals or organisations for future monitoring purposes.

Notes for Filling out Expense Claims

Please divide expenses into three sub-totals as follows:

- 1) Travel costs (airline ticket, airport tax)
- 2) Subsistence (accommodation, meals)
- 3) Other expenses (equipment rental, photographs, post costs).

Please convert sub-totals to US dollars.

When completing your expense claim please include an estimate of the time involved in the preparation and follow-up for the mission. Estimates to the nearest half day please, if possible. This is to allow IUCN to estimate the amount of voluntary contribution it receives from World Heritage experts.

7.2 INTINERARY AND PROGRAM

19 Feb.

- Review of written materials

20-21 Feb.

- Travel from Reno, Nevada, USA to Quito Ecuador
- Because of bad weather, a connection was missed and the Consultant was rerouted via Mexico City. On arrival in Mexico City, flight to Quito was cancelled to pilot illness.
- Round of appoints for 21 Feb. were cancelled and rescheduled for the end of the mission.

22 Feb.

- Consultant finally arrived in Quito at 7:30 am
- Travel by land to Riobamba
- Meeting with staff of Natura, Riobamba Office, and with community leaders from village of Guarguallá who participate in Natura's Projects for sustainable management of the páramo grassland (alpaca reintroduction, weaving of products from alpaca wool) and for community-based tourism (tourism and climbing guides).
- Visit to the Sangay Visitor Center in the Riobamba Municipal Museum.
- Meeting with Mayor of Riobamba and other Municipal dignitaries.

23 Feb.

- Travel by vehicle, and on foot, between Riobamba and Macas.
- Meeting with Army Corps of Engineers Unit that is carrying out the construction of the Guamote-Macas Road at their camp at Atillo. Formal presentation of project.
- Inspection of Guamote-Macas Road accompanied by the head of the construction unit.
- Hike around the tunnel section still to be completed.
- Meeting with community leaders at the village of San Vicente.

24 Feb.

- Flight over the southern and central sections of the World Heritage Site. Good viewing of Guamote-Macas Road, Sangay Volcano, and the Palora Valley.
- Meetings with the Mayor of Macas, and the Sub-Prefect of the Province of Morona-Santiago.
- Visit to the Sangay Visitor Center and offices of the National Park, Macas.
- Meeting with personnel of the Amazonian Section of the Park, and Nature staff based in Macas.
- Travel by vehicle to Baños
- Meeting with the Baños City Council

25 Feb.

- Travel by vehicle from Baños to Quito.

26 Feb.

- Meeting with the Executive Director and Protected Areas Consultant of IUCN/SUR.
- Meeting with the Prefect of Morona-Santiago Province and his Principal Advisor.

27 Feb.

- Report write-up

28 Feb.

- Meeting with Sub-Secretary for Natural Capital of the Ministry of the Environment.
- Meeting with Environmental Officers of the Ministry of Public Works, together with the Head of the Construction Unit of the Guamote-Macas Road, and the Director of Biodiversity and Protected Areas of the Ministry of the Environment.
- Meeting with the Director of Ecociencias, together with the Project Officer in charge of developing the strategy for the sustainable finance of the Sangay NP.
- Meeting with the Fundación Natura Director for Biodiversity together with the staff of Natura's Sangay Project.
- Meeting with the Director and Program Officer of the National Environment Fund.

1 March

- Working session with staff of Natura's Sangay Project to discuss conclusions and recommendations, and to obtain copies of reports and maps.
- Report write-up

2-3 March

- Return air travel from Quito to Reno, theoretically a 1 day trip. However, because of a delayed departure from Quito on 2 March, it was not possible to make connections in the U.S. and the return to Reno was delayed until the next day, 3 March.

12-13 March

- Finalize mission, trip, and financial reports.
- Select and prepare digital images for sending

14 March

- Assemble report packet and send to IUCN via courier (1/2 day).

7.3 COMPOSITION OF MISSION TEAM

- Allen Putney, IUCN Consultant
- Marina Cracco, Focal Point for Protected Areas, IUCN/SUR
- Jorge Rivas, Coordinator of Sangay Project, Fundación Natura
- Isidro Gutiérrez, Director of Biodiversity and Protected Areas, Ministry of the Environment

7.4 LIST AND CONTACT DETAILS OF PEOPLE MET

- **Quito.**
 - Ruth Elena Ruiz
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- Nelson Chimbolema, Teniente Político San Vicente de Playas.
- Danilo Chacha, Presidente Junta Parroquial
- Enrique Chacha, Director Escuela

(Community leaders in San Vicente de Playas can be contacted via the Park radio in Macas).

- **Ciudad de Baños.**

- José Vieira
Concejal Cantón Baños
- Fernando Balseca
Concejal del Cantón Baños
- Edwin Vieira
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- Ing. Wilger Vega,
Director
Dirección de Saneamiento Ambiental, Municipio de Baños

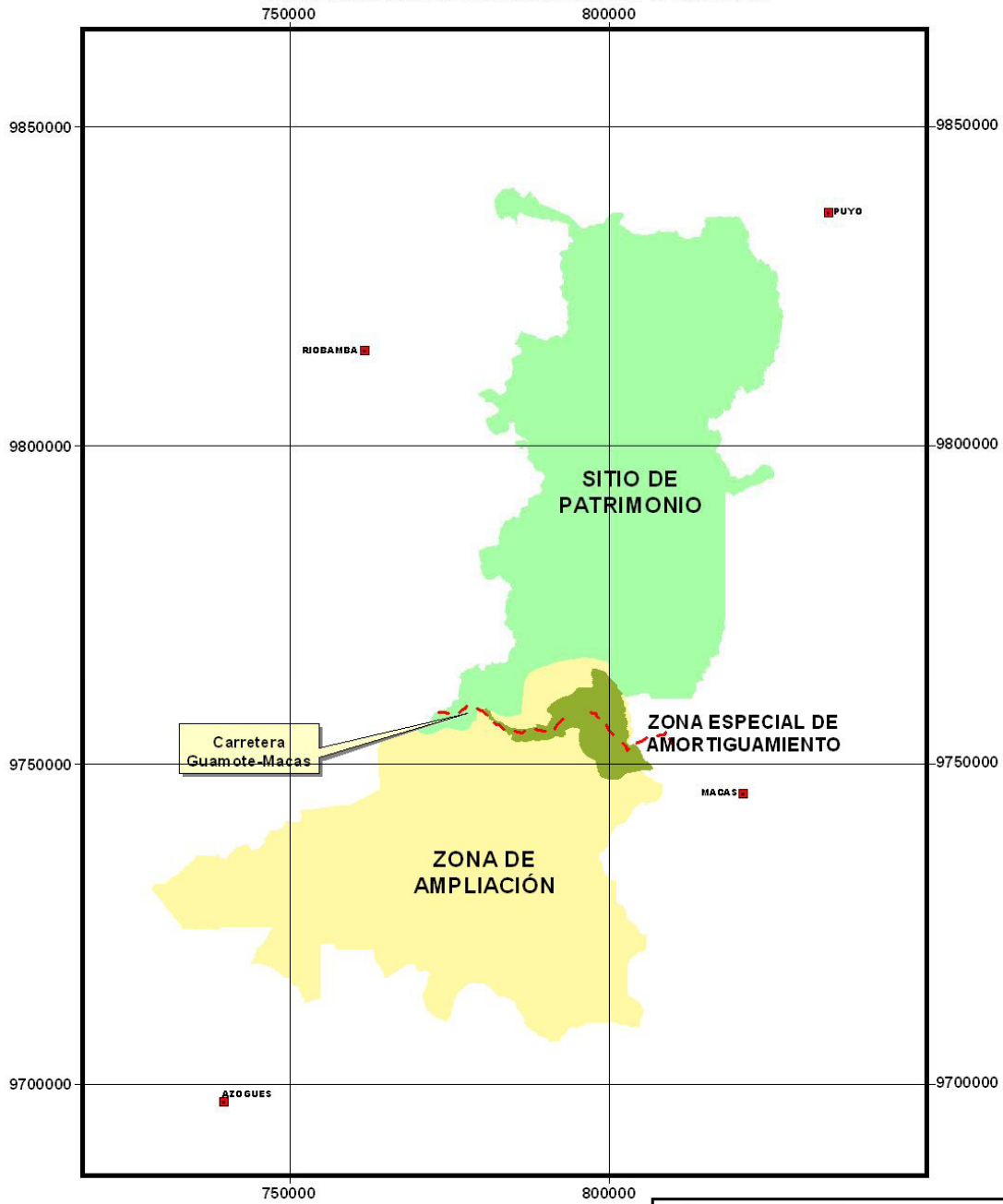
7.5 MAPS

MAP 1 – PARK BOUNDARIES

The map below shows all of Sangay National Park with the portion along the Guamote-Macas Road that has been excluded from the Park and is now a special buffer area shown in dark green, the original area of Sangay National Park which is the extent of the World Heritage Site shown in light green, and the southern portion of the Park, which was added in 1992 but is not part of the World Heritage Sites, shown in yellow.

PARQUE NACIONAL SANGAY

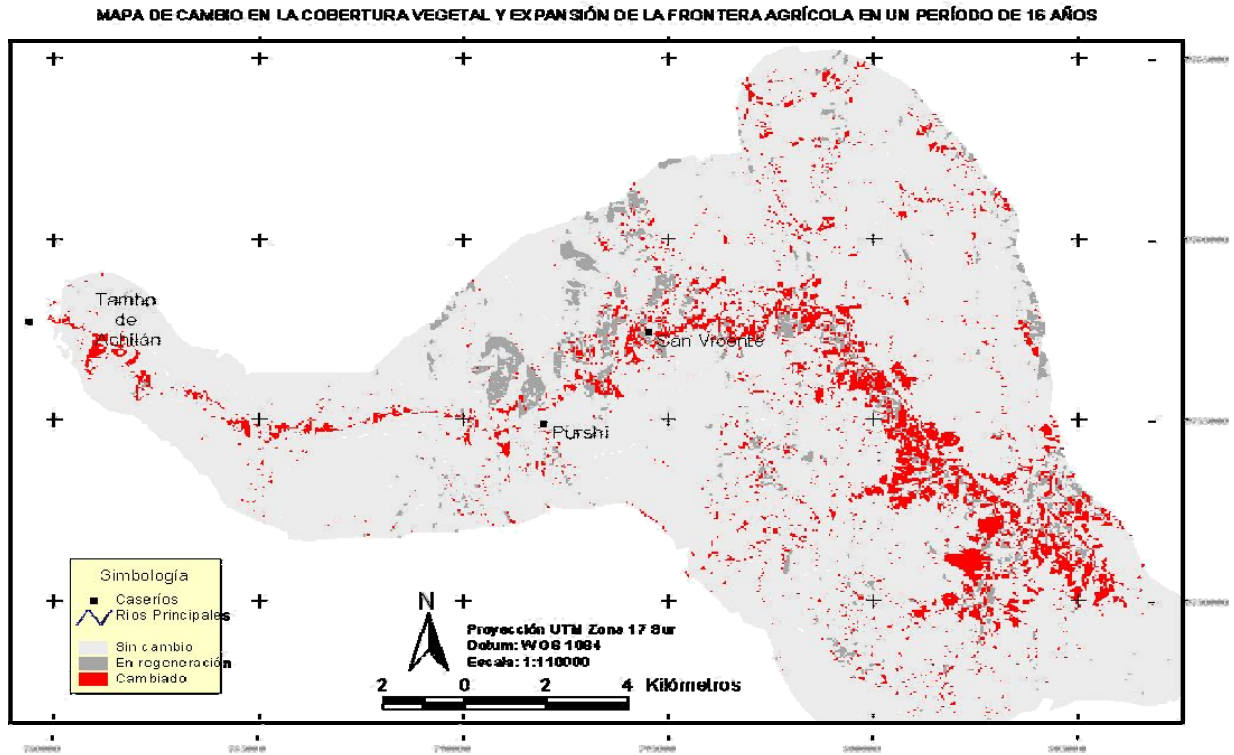
UBICACIÓN CARRETERA GUAMOTE-MACAS



PARQUE NACIONAL SANGAY UBICACIÓN CARRETERA GUAMOTE-MACAS	
Proyecto "Conservación de la Biodiversidad y Manejo Participativo del Parque Nacional Sangay" Con el apoyo financiero del Gobierno de los Países Bajos	
Elaborado por: Fernando Bajaña Fundación Natura	Escala: 1:1'500.000 Fecha: Febrero, 2005

MAP 3 – VEGETATION ALONG THE GUAMOTE-MACA ROAD

This is the area that has been excluded from the Park. The red indicates land that has been cleared, and the dark grey is where the forest is regenerating.



MAP 4 – THREATS

This map shows the threats to Sangay Nacional Park from grazing, deforestation, hunting, and fishing. No threat is shown in grey, low threat in green, medium threat in yellow, high threat in orange, and extreme threat in red. It should be remembered that the World Heritage Site is from the Guamote-Macas area to the north.

AMENAZAS GENERAL



PROYECTO ELABORADO POR FUNDACION NATURA EN COLABORACION CON EL MINISTERIO DEL AMBIENTE FINANCIADO POR EL GOBIERNO DE LOS PAISES BAJOS A TRAVES DE WWF-INTERNACIONAL

CONSERVACION DE LA BIODIVERSIDAD Y MANEJO PARTICIPATIVO DEL PARQUE NACIONAL SANGAY	
AMENAZAS GENERAL	
Elaborado por:	SIG-Natura
Escala:	1 : 1'000.000
Fecha:	Abril 2002

AMENAZAS	
■	Muy Alto
■	Alto
■	Medio
■	Bajo
■	Nulo

LEYENDA	
	Parque Nacional Sangay
—	Rios Principales
—	Laguna
■	Capitales Provinciales
	Unidades de Paisaje
■	Sin Información

7.6 PHOTOGRAPHS

- 1481 Sign at entrance to Guamote-Macas Road construction project
- 1482/84/88 Atillo Lakes at entrance to WH Site
- 1492 Capt. Fausto Erazo presents road construction project, with emphasis on mitigation measures
- 1493 Atillo Lakes
- 1497/98 Landslides on portion of Road within WH Site.
- 1499 Cloud forest and páramo vegetation within WH Site near Atillo.
- 1503 Jorge Rivas of Natura (left) conferring with Isidro Gutierrez, Director of Biodiversity and Protected Areas, Ministry of the Environment.
- 1504 Portion of Guamote-Macas Road within the WH Site.
- 1511/12 Tunnel construction, western entrance, final phase of Guamote-Macas Road opening.
- 1515 Tunnel waste, western entrance, causing sedimentation.
- 1517 Sangay NP patch worn by Park personnel.
- 1522 Tunnel face being drilled for placement of explosives.
- 1526/28/40 Upano River next to the tunnel which will connect the east and west ends of the Guamote-Macas Road
- 1540/41/43 Large-scale landslide at the eastern tunnel approach.
- 1547 East tunnel entrance.
- 1548 Capt. Fausto Eraso, Head of the Guamote-Macas Consturction Project with Isidro Gutierrez, Director of Biodiversity and Protected Areas, Ministry of the Environment.
- 1555 Cracks in landslide area indicate further slides to come.
- 1561/62 Massive cuts are required because of the steepness of the slopes along the Guamote-Macas Road, in the buffer zone of the WH Site.
- 1565/66 San Vicente Village on the Guamote-Macas Road, outside the WH Site.
- 1572 Deforested areas near San Vicente in the Park buffer zone.
- 1975 Temporary buildings at a construction camp.
- 1578/81 Sardinayacu Lake and Sangay Volcano in the central area of the WH Site.
- 1584/88 Aerial view of Guamote-Macas Road in buffer zone.
- 1601 South side of Sangay Volcano.
- 1610 Palora River Valley
- 1615 Core area of WH site northeast of Sangay Volcano.
- 1629 Town of Macas east of WH Site.
- 1632/34/37/40/41 Park Visitor Center, Macas