Expedition Field Techniques

EDUCATION PROJECTS

edited by Jen Hurst

Geography Outdoors:

the centre supporting field research, exploration and outdoor learning

Front Cover: Logo of Kyabobo Conservation Project, a British charity supporting the Kyabobo Range National Park, a community-based initiative in Ghana, West Africa. Artist: Jen Hurst.

Expedition Field Techniques
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CONTENTS

Section Six: Case Studies

Section Seven: Collaborating with Non-Government Organisations (NGO's)

Section Eight: Guidelines for specific projects

Conclusion

Section Nine: Useful contacts

Section Ten: References and further reading

Section Eleven: Contributors

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The theory and practice behind education projects is evolving at a rapid rate. If you have any specific comments on the ideas introduced here, please send them to:

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> *"Almost anything you do will seem insignificant,*
> *but it is very important that you do it."*
> Mahatma Gandhi

Section One
INTRODUCTION

1.1 Who is this booklet for?

This booklet is intended for university and school expeditions, and any individuals carrying out short-term research, or practical projects, in other countries. Expeditions are an educational experience for both the expedition members and the people they work with. This booklet suggests ways in which this educational element can be enhanced and incorporated into an expedition's aims from the start. The authors of this booklet draw on their experiences from conservation education projects. However, the ideas and guidelines introduced here can be used by readers from any discipline.

Expeditions often use "host country" to mean the country in which they are carrying out their work and "home country" to describe where the expedition team originates. Education projects are unique in that they can be carried out in both the home and host countries. Therefore, the majority of this booklet is written so that ideas and principles can be applied to any country, unless specified. Groups which have a balance of host and home country members ensure equitable participation between both countries (Kapila and Lyon, 1994).

1.2 What is meant by education projects?

For the purposes of this booklet, the term "education" does not represent the traditional teacher/pupil relationship. Teaching implies the transfer of knowledge from someone who knows to someone who doesn't know (Pimbert and Pretty, 1995). Without understanding the social and cultural context of a situation, an expedition seeking to "teach" people can be an inappropriate approach since the expedition may assume that their own knowledge and ideas are the right ones. Rather than being a one-way process of giving information, education activities should promote two-way learning and discussions (Linney, 1995).

Education projects are not just for children, but all members of communities. Projects can be carried out at different scales, from the smallest awareness-raising talk in a village to setting up an education centre. Expedition groups can also be valuable in contributing to existing long-term education programmes or carrying out their own short term project.

Whatever the scale, education projects need to be carefully thought out and planned with the full collaboration of the host country.

1.3 Why carry out education projects?

Education projects can contribute to the goals of sustainable development as outlined in Agenda 21. Agenda 21 is the action plan arising out of the UN Conference on Environment and Development held in Rio in June 1992. It states that "*Education, including formal education, public awareness and training should be recognised as a process by which human beings and societies can reach their fullest potential. Education is critical for promoting sustainable development and improving the capacity of the people to address environment and development issues*" (UNCED Agenda 21 - Chapter 36-36.6). By carrying out education projects, expeditions can contribute to and participate in discussions about local and global environmental concerns. The ability of expeditions to carry out work in remote areas, on low budgets, and with flexibility means that they can have a valuable insight into the relationship between people and their environment.

Another benefit of education projects is that they are a way for expeditions to achieve wide ranging dissemination of results to collaborating organisations, governments, sponsors, the academic world and to the communities with which they work. Reports and academic papers are one method of dissemination but they do have a limited audience.

1.4 Responding to a need

One of the most important goals of an expedition is recognising that the proposed project, whether education or pure scientific research, is responding to a need expressed by the host country. In some cases, this has not been achieved and expeditions carrying out inappropriate projects cause resentment. By reading this booklet an expedition can (hopefully!) avoid this pitfall. Carrying out an expedition which fulfils the needs of only the expedition members could be considered a wasted opportunity to contribute to the environmental and developmental goals of the host country.

How do expeditions identify a project which will be mutually beneficial to both expedition members and a range of people and organisations in the host country? There are numerous sources to consult. Past expedition reports are available at the Royal Geographical Society in London. These reports often contain recommendations for further project work. Another approach is contacting non-government organisations (NGO's), government departments

and talking to people in the environment and development world (see Section 9). It is important to take the attitude of "what can we do that contributes to a need?" rather than "we think this will be a good thing to do".

1.5 What is the structure of the booklet?

It is very easy to say 'education' needs to be done, but why, with whom and how exactly? This booklet differs from other titles in the Field Research Techniques Series in that it does not offer specific methods or 'recipes for success'. Instead it tries to give expeditions a 'tool kit' of ideas that can be applied in any situation. Working in communities involves skills from the social sciences, and successful education projects require certain attitudes and approaches of the expedition team in addition to technical and scientific skills. Education projects follow the principles behind People-Oriented Research (see Kapila and Lyon, 1994). It is important to recognise an expedition's potential influence on policies and perceptions concerning the environment, and therefore indirectly people's lives. This booklet has been structured to help readers answer the key questions outlined in figure 1:

Figure 1. Key questions to ask when planning an education project

- **Is the project realistic to carry out?**

To assess whether a proposed education activity is realistic, expedition goals and problems need to be clarified, as well as the goals and problems of the people and organisations working with the expedition.

- **What social and political aspects does an expedition need to be aware of?**

To decide whether a project is realistic to do, it is necessary to understand the cultural and social context in which an expedition is working. Also, it is important to understand how decisions are made by the expedition group, as well as other people and organisations.

- **Is the project socially responsible?**

Based on the information an expedition gains, a group has to decide whether the education project is justifiable and if it is appropriate to carry out.

- **How does an expedition carry out their project?**

This booklet uses case studies to illustrate the diversity of education projects and how they can be practically carried out.

Questions based on: 'Critical Thinking and Problem Solving in Evaluation Policy Process' (Clark, 1995)

The first stage of planning an education project is identifying the goals of the project and the problems which an expedition is trying to address (Sections 2, 3 and 4). Section 5 outlines a process that takes expeditions from the initial stages of having ideas to actually carrying out a project. Case studies are provided to give ideas, inspiration and guidance to expedition planners in Section 6. In addition, authors recommend that readers seek further advice and information from the useful contacts in Section 9 and the references listed in Section 10 at the back of the booklet.

Section Two
CLARIFYING GOALS AND PROBLEMS

Before planning an expedition, the specific goals and problems of the education project need to be clarified. Goals can be defined as the ideal endpoint, or outcome, that a group would prefer to see. For example, one goal of a biological expedition could be to contribute to protecting an endangered species. However, to achieve this goal there are two different types of problems to be addressed by the expedition. The first type of problem is the capabilities of the expedition (such as training, logistics and preparation) which can be addressed pre-departure. The second type of problems are associated with the real life situation in the host country that may prevent the expedition's goal being reached. For example, the goal of protecting an endangered species may face problems such as lack of awareness about the species amongst communities, or destruction of a habitat. This section not only helps expeditions clarify their goals, but it also helps them ask whether the problems they perceive are the right ones.

In the following exercise, try and clarify your goals and then concentrate on the problems related to the real life situation you are going to, rather than the logistical problems of the expedition. Also, try and distinguish between problems that you can do something about rather than ones you are unable to influence. For example, political problems are beyond the scope of an expedition.

Figure 2. Clarifying your goals

Get everyone in your expedition to write down the following:

1. What do you think are the goals of the expedition?
2. What are your perceived problems in the situation you are going to? How will an education project contribute to solving these problems?

Come together and compare your goals and problems;

- Do they differ between the team members?
- Why do you think they differ?

2.1 Overcoming lack of information

If the group identified different goals and problems, it can be seen that in any given situation individuals have different perspectives - even within the same expedition! This is an important point to consider and one that can be easily overlooked. Will the goals of collaborating organisations and communities differ from the expedition members? How can a group find out what the goals and perceived problems of everyone really are? These can be hard questions to answer since expeditions have limited information on the situation they are going into. However, expeditions always gain more information once they are in the country where they are working and so can answer the questions more easily. Expeditions can recognise that lack of information is a limitation to their activities. By being aware of this limitation, they can still carry out useful and appropriate projects.

Many expeditions become confused as to how to go about planning a project with little information, i.e. they are "planning for the unknown". The methodology or "process" described in this booklet ensures expeditions keep a flexible but structured approach so that they can keep reviewing the information they gain, and then act appropriately on it. Often it is tempting to want to rush in and solve the perceived problem straight away, but another alternative is to understand how and why the problem has come about, and what will happen in the future as a result of an expedition's work. Figure 3 summarises the questions that expeditions can ask themselves when clarifying the goals and problems of carrying out an education project:

Figure 3. Problem orientation for education projects

- What are the agreed goals of your expedition?
- What are the problems that you are trying to address as an expedition?
- What education projects have or haven't worked in the past and why?
- What is influencing the current real-life situation?
- What are the implications of your project in the future?
- Is the project practical, reasonable and socially responsible to do?
- What project should be chosen based on the above?

Questions based on 'problem orientation' as defined by Brewer and deLeon (1983)

These questions should help expeditions decide whether an education project will address the right problems in a given situation.

Section Three

THE GOALS OF EDUCATION

Understanding the broad aims of education is a good starting point for an expedition to identify why it is motivated to carry out education work. To help expeditions understand the diversity of education projects and the background of organisations that carry out this work, some different types of education are briefly outlined.

3.1 Environmental Education (EE)

There are a variety of definitions for EE, but many organisations refer to the Tbilisi Declaration as the underlying principle. This declaration defines EE as a process which *"should constitute a comprehensive lifelong education...adopting a holistic approach, rooted in a broad inter-disciplinary base...which acknowledges the fact that the natural environment and man-made environment are profoundly interdependent"* (UNESCO-UNEP, 1977). Environmental education encourages a holistic approach which includes elements of raising awareness, gaining knowledge and understanding, developing skills, clarifying attitudes, values and decision making to take action on environmental issues (A Report of Workshops held in Hungary 1991, edited by A. Deri and G. Cooper).

3.2 Conservation Education (CE)

CE is essentially one facet of EE and is less holistic in approach. The goals of conservation education can be summarised as increasing public knowledge of conservation policies, fostering a conservation ethic that will enable people to be responsible stewards of natural resources, altering patterns of natural resource use consumption, enhancing technical capabilities of natural resource managers and incorporating resource management concerns into private sector and government policy-making processes (Jacobson, 1995). The case studies in this booklet largely represent conservation education projects.

3.3 Development Education (DE)

The international nature of expeditions lends them to DE activities. DE is advocated by aid agencies, Non-Government Organisations (NGOs), and Development Education Centres. Contact the Development Education Association for details of the nearest centre to you (see Section 9). The

philosophy behind DE is raising awareness of the social and economic inequality in the world, and promoting ways in which some of this inequality can be decreased. It is defined by the Joint UN Information Council as a process which enables *"people to participate in the development of their community, their nation and the world as a whole....based on an understanding of the social, economic and political processes"* (UN, 1975).

The Development Education Association, UK, describes DE *"as a process which explores the relationship between North and South and more generally the links between our own lives and those of people throughout the world."* DE has evolved further into the concept of promoting "Global Citizenship" to young people in an effort to base education on principles of equity and social justice (Oxfam, 1997).

3.4 Education for Sustainability (EfS)

In chapter 36 of Agenda 21, EE and DE are brought together under the term "Education for Sustainability". EfS is not intended to be a new educational theory. It is described as a process rather than a fixed goal, whereby *"all people can be educators and learners in the pursuit of sustainability"* (UNEP-UK, 1992). Education for sustainability includes developing people's values of the world as well as integrating environmental and economic decision making.

Section Four

WHAT CAN EDUCATION PROJECTS ACHIEVE?

This section looks at some of the common problems which education projects can try to solve in order to achieve some of the "bigger picture" goals outlined in Section Three. This is not intended to be a definitive list; there are sure to be plenty more.

4.1 Raising global awareness

Environmental awareness is now becoming part of community life and is being brought into people's homes world-wide by the media. However, in trying to raise awareness of issues on a global scale, misinformation and false generalisations can sometimes be made about complex issues. For example, children in a British primary school might assume that people who live in the rainforest are chopping all the trees down, but an expedition group can illustrate to the children that through their research they have learnt that local farmers may actually be replanting trees and foreign timber merchants are exerting the pressure to cut down the forests. The exciting opportunity presented to expeditions is that they have the ability to convey the truth behind some of the assumptions made about environmental degradation. Therefore, expeditions can not only contribute to raising awareness but can also have a positive impact on the way people perceive their relationship with the environment.

By trying to raise global awareness, information and images can make people feel overwhelmed and powerless to do anything about problems on a world scale. People only feel motivated to participate in addressing environmental concerns if they feel involved (Hart, 1997), not simply by responding to scare stories in the media. By working on a local scale, expeditions can promote participation by local people in researching and addressing issues that have local and global relevance.

4.2 National Curricula

Part of raising global awareness as advocated by Agenda 21 is integrating Education for Sustainability into the National Curricula of all countries. In the UK, in both primary and secondary schools, one goal of the National Curriculum is to encourage learning about other countries in a range of

subjects. As an expedition you can become a valuable resource for teachers who often have to rely on teacher's packs and videos to bring a country and culture to life. Some teachers comment that a video and worksheet is no competition for an expedition team member giving a talk, showing slides and letting the pupils ask questions directly.

Expeditions can be "cross-curricular" which means environmental issues can be taught across all subjects, not just in Biology or Geography. The British National Curriculum sets out programmes of study which detail what pupils should be taught for each subject and for each age group ("key stage"). In addition, attainment targets set out the expected standards of pupils' performance (Department of Education, 1995). Expeditions can help teachers cover many programmes of study and attainment targets.

Figure 4. Examples of how expedition activities can complement the National Curriculum

Subject	Expedition activity	National Curriculum requirements
English	Letter writing to penpals, making tape recordings of talks, discussing issues with the team. Expedition acts as a stimulus for creative writing.	• Listening, talking and discussing; • Use of appropriate vocabulary; • Responding to stories; • Writing skills.
Music	Showing musical instruments from another country, letting children use them.	• Experimenting with different materials, colours and sounds.
Science	Showing slides and bringing in artefacts of plants and animals, describing habitats.	• Observing plants and animals; • Describing similarities and differences.
Geography	Discussing village life, describing weather conditions, the physical environment and lifestyles of people.	• Comparisons between localities; • Awareness of places beyond locality; • Cause and effect of decision making.

Maths, Design and Technology, History, Languages and Art all have programmes of study that expeditions can also complement.

In other countries, curricula vary but increasingly, environment and development issues are being introduced into all subject areas. It is recommended that expedition members discuss requirements of the curriculum with Ministries of Education, teachers and consult the National Curriculum guides to gain an understanding of what is required in a particular country.

4.3 Involvement of young people

Some education projects emphasise awareness raising amongst young people since they are the decision-makers of the future. In discussions about community participation (refer to publications by IIED, contact in Section 9), the issues surrounding children's participation in projects is sometimes overlooked. Adults are very obvious participants in any project, but the young people in the communities where an expedition works or lives may never be given opportunities to participate. There is a need to bring children's environmental education into line with principles of participation (Hart, 1997). This may be a significant motivation for an expedition to promote education projects involving young people.

One problem encountered is that adults can fall into the trap of involving children in a tokenistic way so that it *appears* as if they are participating. Expeditions should recognise that organising a project that includes young people is not necessarily "genuine participation". An example of true participation entails young people carrying out their own research, identifying environmental problems themselves and planning activities with the expedition group. This style of project helps children generate a greater sense of responsibility (Hart, 1997); it helps them feel a sense of ownership over the activities and increases the project's sustainability.

4.4 Giving something back

The wider implications of expedition work have been discussed but in carrying out education projects, expeditions can also contribute to the dissemination of information and participation by "giving something back". The nature of research expeditions is to collect data/information which often requires both time and knowledge from host country participants. The research process should involve people (see Kapila and Lyon, 1994) so that the results are shared and disseminated before ending the expedition. Groups

may also feel that they are "taking" a great deal of support from their home country communities in terms of sponsors, advisors, parents, friends, etc. Introducing an education approach to expedition activities in the home country can therefore be a way of giving something back to people as well as raising awareness (such as talks, school visits, articles).

4.5 Social responsibility

An important goal of an expedition team is to be socially responsible or, in other words, to work and think in an ethical way. This goal can often be taken for granted or overlooked but can lead to problems when expeditions are socially irresponsible. As a group of strangers to an area, expeditions have an obligation to discuss their aims with local people and give them an opportunity to find out why the expedition is working in the area. Expeditions including an awareness-raising element in their work are not only creating positive publicity but also approaching their work in a "socially responsible" way.

Being socially responsible also means that expeditions should identify what motivates them to do an education project. Are you doing an education project because:

- children look good in our photos and sponsors like it?
- local schools might fundraise for us?
- everyone else is doing it? (i.e. jumping on the latest bandwagon);
- it's more fun than measuring trees (collecting data)?

If expeditions answer "yes" to any of these they may be being honest but they need to reflect on whether these motivations are socially responsible and reasonable. Take time to think about what really drives/inspires/motivates an expedition to be interested in education. From the start of the expedition, the group must be honest about their motives to carry out education projects. In this way they may decide that they are not the sort of people who want to involve education in their work or they are doing it for the wrong reasons.

Section Five

HOW TO PLAN YOUR EDUCATION PROJECT

Clarifying the broad problems that an education project can address has been outlined. In this section, the **who**, the **what** and the **how** of the education project is considered in practical terms by introducing an approach called the "project process" (Clark and Brunner, 1996; Clark and Wallace, 1998). This section aims to take expeditions from ideas to practical action. It will enable them to:

- understand the **principles** of critical thinking behind education projects;
- recognise opportunities to **collaborate** and make links with other organisations;
- recognise the **social context** of the situation, i.e. the importance of working with, and in, a particular country, culture, society, language and/or age group;
- recognise the process by which **decisions** are made and how an expedition could influence them;
- identify expedition limitations and therefore select an appropriate **scale** of activities.

5.1 Principles of good practice: the "who" and the "what"

By their very nature, education and awareness-raising projects actively seek to influence a diverse range of individuals, organisations, communities and decision makers. Expeditions need to recognise this influence and its possible effects. This section gives an overview of the principles that expeditions should apply when planning and carrying out an education project.

Figure 5. Principles of good practice

Participation/Equity Participation is not just taking part in a project. People you work with should have equitable involvement in decision making.	- Who is participating? - Who wants to participate? Identify both individuals and groups. - Do you understand the perspectives of those participating - what do they see as the goals and problems? - Who has the decision making power in what you do?

	• Do collaborating organisations and communities have the opportunities to participate in planning? • Be aware that developing a project entirely in one country will exclude your partners in another country and thus their interests will not be represented. How can you avoid this? • How can you empower them (e.g. what resources do they need)?
Collaboration Find out who the key organisations are in the home/host country and start corresponding with them.	• Who are the relevant organisations to contact and collaborate with in the home and the host country? Who wants to collaborate with you? • Do you understand their perceptions of the situation; what are their goals and problems? • Do you understand how organisations work together in the home and host country?
Options What are the options available?	• Who have you talked to, what have you read and researched in order to understand all the possible options? • Have participants been involved in coming up with all the options? • Have you found out what participants think is appropriate? • Can you justify choosing these options? • Can participants become involved in designing the research/projects?
Access Sharing information means communication and making sure resources are available.	• What information do you need access to? • What information do others need access to? • Do you have access to information/reports before going out to the host country? • Do all participants have access to your information before, during and after the expedition?
Scale Be realistic!	• Can you carry out the research/project in the time available? • Does the education project fit in with your other expedition objectives? • Do you have the resources to carry out the work? • Will it have positive or negative impacts?

	• Do you have the training and expertise to carry out the project?
Sustainability You have a responsibility to make the results of your work long-lasting.	• What happens once you finish the expedition? • Do collaborating organisations want to work with you to sustain research findings or pilot projects? • How are you going to achieve sustainability? • Who is going to evaluate the sustainability of your work?

These are examples of questions that expeditions can ask for each principle. It is not an exhaustive list of questions; there may be some that are more appropriate to your expedition than the ones listed here. Try and answer some of the questions above for your education project idea. You may be unable to answer many of the questions. If this seems overwhelming don't despair, it is better that you have recognised your limitations now rather than later.

5.2 The Project Process: a framework for planning

The complexity of "who" the expedition works with and the implications of "what" they do has been introduced. Now an expedition needs to know "how" to use these principles in practical planning and decision-making terms. The project process helps to show that there are different stages or "phases" of decision-making on an expedition, and at each phase the principles of good practice can be applied. This approach can be used for projects in both the home and host country.

Figure 6. The project process

Initiation	Considering starting an education project as part of an expedition. Recognising the goals and identifying the problem.
Estimation	Gathering, researching and making contacts to get the information needed to plan an education project.
Selection	Choosing which education project to do. Putting together clear aims, objectives and activities of the education project.
Implementation	Carrying out an education project as part of the expedition.

Evaluation	Comparing what actually happened to what was planned (understanding if the expedition achieved its aims).
Termination	Planning to end your involvement in a project but ensuring the sustainability of the project.

It should be noted that even though the phases from initiation to termination look like logical stages, one phase does not necessarily follow the other rigidly. All the phases involve a continuous feedback process. For example, whilst implementing a project, such as carrying out talks in schools, an evaluation of the first talk may be done with teachers and children afterwards. The expedition may conclude from this evaluation that they need more information and research (estimation) before choosing a more appropriate project (selection). Figure 7 is one way of visualising the Project Process as a feedback cycle, with the principles of good practice applying to each phase.
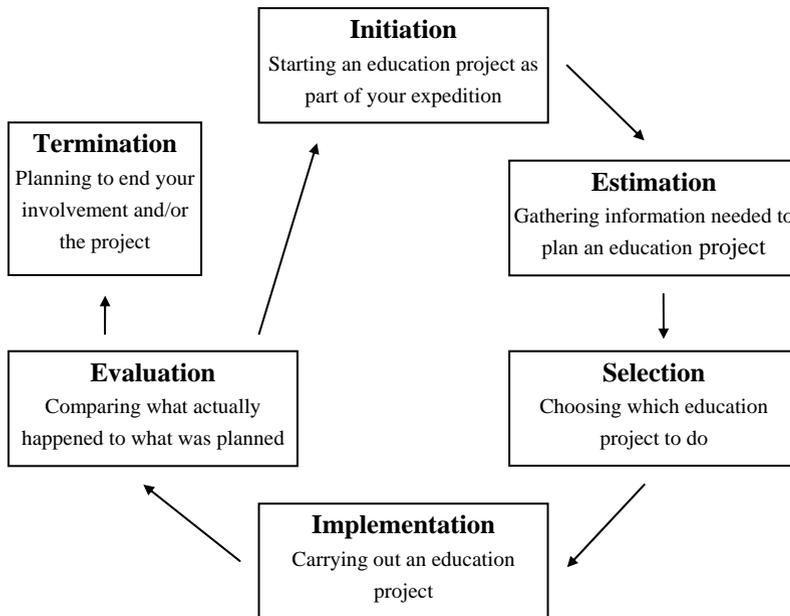
Figure 7. The project process as a feedback cycle. Apply the principles of good practice to each phase

An expedition may find that the goals and problems they identified in the initiation phase change as they get more information about the problems at each phase. Using a process approach can help expeditions remain adaptable throughout their work. It shows that changing education projects or research objectives because they are inappropriate is not a failure, but a necessity.

Try the following exercise within Figure 8 which will help you use the project process and principles of good practice to work through your own expedition plans:

Figure 8. Planning your expedition

- Copy and enlarge Figure 9 (overleaf) of the project process and see how much of it you can fill in about your expedition.
- The aim is not to fill every box, or to get it right or wrong. It should lead you through a process of thinking that will help you recognise what information you are missing, or if your goals and problems need further clarification.
- Don't be put off that it is hard to do - if you can continuously refer to the table at any phase of your expedition, you will see how you can evolve your project plans.

Working through the project process and applying the principles of good practice to planning helps expeditions answer the key questions:

- is the education project reasonable to carry out?
- is the expedition aware of the social and political situation?
- is the project socially responsible?

If an expedition can answer these questions, they will be more confident in justifying their particular education project.

Figure 9: The Project Process Framework

	Problem orientation — Go through the questions in Figure 2.	Participation — Who is involved; is there equitable involvement?	Collaboration — Who are the key organisations in host and home country?	Options — What are all the options available to you?	Access — What information do you and others have access to?	Scale — How realistic is the size of your project?	Sustainability — Are the results of your work long-lasting?
Initiation Considering starting an education project							
Estimation Gathering information, making contacts							
Selection Deciding what education project to do							
Implementation Carrying out the project							
Evaluation Comparing what happened to what was planned							
Termination Ending your involvement and the project							

5.3 Standpoint

Using the project process framework gives an expedition useful tools for planning its education project. What is also required is awareness of your personal "standpoint". It is important for expeditions to recognise that they are not neutral participants in any situation since their view of the world is influenced by their training, their background and experiences, their religion and culture, and their friends and family (Brewer and deLeon, 1983). Thus they will have a biased view in any given situation. Recognising everyone's standpoint and how they interact is vital to carrying out an appropriate project. Expeditions made up of host and home country participants and working with local communities benefit greatly from understanding the perspectives of other people. By examining the variety of goals in a given situation, it can be seen that no amount of education or exchange of ideas can completely eradicate the differences of standpoint among people (Brewer and deLeon, 1983). But by being aware of your standpoint, and those of others, it is possible to reconcile different perspectives and find some common ground.

Failing to recognise the standpoint of others is particularly common in scientists. They may not realise that people have different values of greater priority other than scientific ones. Education projects can play a vital role in linking pure science and social science approaches. For instance, have a team of biologists got the social science skills to carry out research into people's perceptions of the environment? In this case an interdisciplinary team of social science and pure science researchers may be appropriate.

5.4 Expedition capabilities

Recognising standpoint is one way of realising an expedition's capabilities. As with any expedition, logistical limitations also need to be clarified at the initiation, estimation and selection phases of planning. The points below are some of the aspects of expedition work that should be considered. Since they apply to all expeditions, only a brief mention is made of them here. Further details and guidance can be found in the Expedition Advisory Centre's *Expedition Planners' Handbook & Directory* and *People-Oriented Research* (see References in Section 10).

Figure 10. Expedition capabilities

Reconnaissance	It is preferable to go to the host country before the expedition to meet collaborating organisations and carry out initiation, estimation and selection of projects for your expedition. There are numerous benefits to doing a reconnaissance trip.
Permission	Check that the expedition is working through the right channels to gain permission to work in the host and home country. This includes Government Ministries, NGOs, Headteachers, Community Heads.
Time in the field	A two month expedition might realistically entail only six weeks fieldwork. Can all research be completed and evaluation, termination activities carried out (report writing, presentations)? Allow adequate time for team members to prepare education work before, during and after the field period.
Location	What is the geographical reality of where the expedition is working? What are the constraints and possibilities of doing an education project in this environment?
Timings of national holidays, school terms, harvest, etc.	Is the expedition carrying out research with communities when they are busy harvesting? Is it the rainy season? Expeditions need to check these details by talking to organisations and individuals who have worked in the country they are going to. Similarly, in planning to work in schools, teachers are under pressure to keep to their curriculum: be sensitive to this and avoid disrupting exams and classes.
Language	Education projects are based on communication and information exchange. The language of the country an expedition works in is obviously very important to know at an early stage. Are there translators? Can local schools/colleges/universities help with translation and interpretation?
Who will co-ordinate the education component of your expedition?	Giving one person overall responsibility for the education project can be a way of ensuring responsibilities are split in your group. It is important to co-ordinate who will write the materials, take photographs, make tape recordings and who in the host country will participate in this.

5.5 Scale: "biting off more than you can chew"

Issues of scale were introduced in the principles of good practice and the project process table (Figure 9). The scale of your education project is worth mentioning here again. There is no doubt that simple projects to raise awareness of the expedition's work amongst participants should be part of every expedition's work. However, if an expedition is conveying certain messages and trying to influence people's opinions about an issue, it is strongly recommended that expeditions implement small-scale pilot projects and use that as a basis for evaluation and further recommendations. For example, instead of linking ten schools, what about trying one link? Or rather than rush between twenty villages to carry out awareness-raising, be realistic about time and scale down to a few. For expeditions, small-scale, one-off, locally-based events are often most appropriate and logistically viable. Be aware of being over ambitious; successful small events are better than a failed large one.

5.6 Researching education projects

It may be that by working through the project process and considering their capabilities, an expedition team realises that it is better placed to carry out research into education projects rather than implementing a project themselves. Therefore the value of an expedition can be in providing recommendations to organisations which are already set up to implement projects. Alternatively, whilst making contacts with other organisations, an expedition team may find that education projects are already set up in the area they are going to. In this situation it may be useful for the expedition to carry out an evaluation of the existing projects and make recommendations from this research (therefore the expedition carries out work in the evaluation phase rather than implementation).

How to go about social research and evaluation is not discussed here, but readers are advised to refer to Kapila and Lyon (1994) and other texts on social research methods in addition to seeking training and advice.

5.7 Implementing education projects

Expeditions are encouraged to find out about education projects already being run in the host country and contribute to their activities rather than trying to "reinvent the wheel". Organisations that an expedition collaborates with may be interested in implementing a project with the expedition's

support. There are a vast range of activities which an expedition can carry out, become involved in, or research. Here are a few ideas:

- word of mouth - talks, lectures, presentations, workshops, community meetings;
- environmental games (see Cornell, 1979 and 1989)
- literature - pamphlets, posters, education packs, newsletters, reports, stickers (see Linney, 1995);
- letters;
- audio-visual material - video and audio cassettes;
- liaison with the press and news releases;
- articles for magazines and journals;
- creating sign boards;
- creating trails;
- lobbying;
- merchandising;
- a world wide web site;
- schools' national curricula;
- linking schemes - schools, community groups (see Batty, 1993 and Bond, 1996);
- competitions and events;
- developing environmental theatre;
- working with, supporting and training a local environmental awareness officer;
- working with, supporting and training local teachers in environmental issues;
- collaborating with and capacity building of host country non-government organisations, e.g. Wildlife Clubs (see Boulton and Eddershaw, 1996);
- constructing and equipping an environmental awareness centre.

One of the pitfalls expeditions should be aware of is committing themselves to preparing booklets or materials or organising visits and lectures that they cannot guarantee delivering. Decide how much of the expedition's budget can be allocated to these resource needs.

5.8 Reports and Recommendations

Resolving a problem like lack of awareness or community involvement in a situation requires more than just provision of information and recommendations. If expeditions do not understand the needs and perspectives of the people they work with, expedition recommendations can

be vulnerable to discredit as irrelevant and idealistic (Brewer and deLeon, 1983). In order to make changes to affect policy and practice, recommendations must be relevant and realistic. When writing a report, or making a presentation to organisations who will use the results, it is useful to use the framework of the project process to help decide if the recommendations are practical and reasonable. By taking a project process approach, expeditions can promote their findings in a way that will fit in with the social and political context.

Reports which are long and detailed are not always appropriate for busy decision-makers and local communities, who do not have time to read pages of results and academic analysis. Education reports should be clear, concise and readable. If necessary translate reports into several languages so that everyone has access to the information. It is good practice to leave a draft report behind before leaving the expedition location. This gives people something tangible to keep and is an opportunity to thank everyone involved with the expedition. Alternatively, some expeditions produce newsletters summarising their work and results, and then produce longer reports for sponsors. Another approach is for expedition teams to give short presentations of their results and recommendations to the people they have worked with. Through these presentations further discussion and sharing of information can take place and a presentation is instantly more accessible to a wider audience than a report.

Section Six
CASE STUDIES

The five case studies that follow illustrate how education projects can be integrated as part of an expedition's aims and objectives in both the home and host countries. They provide an overview of the required planning and commitment necessary for the project to be successful. When reading through the case studies it is useful to reflect on what worked, what didn't work and why in each case. You can use the project process table in Section Five as a framework for making notes on each case study.

Contact case study authors (see Section 11) or the Expedition Advisory Centre for further information on reports and resources produced for schools. The current professions of the authors show that carrying out education on an expedition can provide contacts and possibly lead onto a career in this field. Education projects entail much personal satisfaction and are a way of forming strong working partnerships and friendships.

6.1 University of Bristol & Universidad Central de Venezuela "Henri Pittier" Expedition, Venezuela, 1989-90

Figure 11. Logo of the 'Henri Pittier' expedition to Venezuela

Introduction

This case study illustrates how expedition teams can carry out useful educational projects in their home country. This did not start out as a project with any educational mission, we initially planned it as a biological collecting and field studies project. However, team leader Simon Garrett's old primary school took an excited interest when they discovered that one of their former pupils was to be a 'rainforest explorer'. He was asked to come to the school and give a talk about what he would be doing.

From this point on it occurred to the expedition team that other schools might be interested in what we were about to do (as well as extending possible funding and publicity opportunities for us). Team members contacted their old schools but we also wanted to extend the possibility of participation to local schools in Bristol. Not being sure how to go about this, we simply got hold of a mailing list of some local schools, selected a few at random and sent out a few letters explaining what we would like to do. This resulted in eleven Bristol primary schools and five other educational

establishments including a sixth form college being associated with the Expedition. Thus the educational side of our expedition was born.

Before the field period

We visited each of the participating schools and gave them a slide show on rainforests, concentrating on how fragile they are, and on the animals and plants that we might encounter. To do this we borrowed slides from Bristol Zoo Gardens and Bristol Friends of the Earth. To bring it alive, some of our equipment was also taken along. It is important to remember at this stage that equipment that might be commonplace to you, may be very new to children. An example is dressing a child up in a full climbing harness, or snuggling them down in a sleeping bag and bivvy bag. It is an experience that they will not forget in a hurry and neither will the children watching.

We also put together, at this stage, a set of information sheets on the projects that we were to do, as well as on general forest biology. Added to this were sets of question sheets and answers with teachers' notes (more on this aspect below). In return for our input, many of the schools raised additional funds for us by a variety of means including cake stalls and a fashion show. The schools also attracted local media attention, usually organised by themselves, rather than by us.

In the field

Since our field period was to be six months, we wanted to make sure that the children did not forget us whilst we were away. Rather than simply writing to them, we decided to send them audio tapes of what we were doing (see Figure 12). Each tape was posted back to England where the appropriate bits were recorded onto separate cassettes (donated by TDK) and sent out to each school by one of our hard-working home contacts. They were accompanied by a letter requesting the return of the tape for the addition of further instalments. Each tape was also accompanied by a letter from us in the field, with diagrams of any field equipment referred to in the tapes and other information. In all we sent three tapes and brought one back with us on our return but owing to the vagaries of the Venezuelan postal system, the ones we had sent took a very long time to arrive. However, it achieved the aim of periodically reminding the schools of our existence and assuring them that we were still alive and hadn't forgotten them.
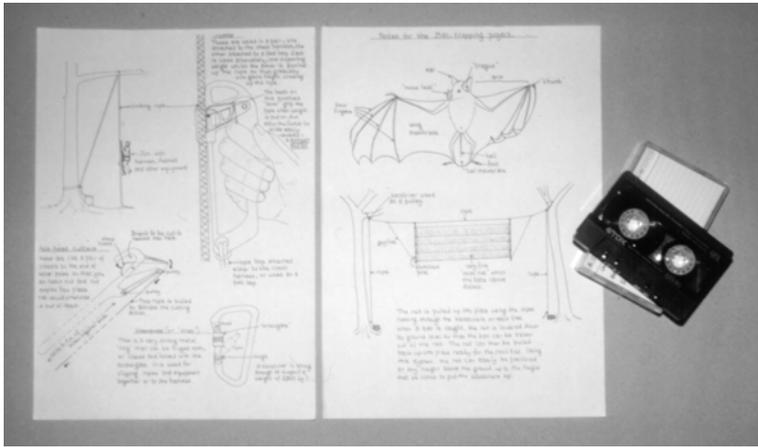
Figure 12. Cassettes for schools in the UK and accompanying notes (Simon Garrett)

The tapes which worked best were not the scripted ones but real-time recording whilst carrying out our field work or sitting around the fire in the evening. The sounds of exertion when climbing a tree and describing what could be seen, measuring a bat in the middle of the night or just listening to the forest at night may capture a child's imagination more than a carefully scripted 'lesson' in forest biology.

After the field period
This was the most exciting bit and the most enjoyable for both us and the children. When we had met them before, all we could show them was what we might see and guess what it might be like. Now we could tell them what it had been like, show them our photographs rather than borrowed ones and tell them tales of life in the forest. Also we could show them things that we had brought back. We could sling our hammocks between trees in the schools' grounds, let them have a go at putting them up and lying in them and point out the holes in the mosquito net where the creepy crawlies got in. We could show them our machetes, slightly bent and rusty in places.

We also brought back some specimens of our work. The Natural History Museum allowed us to borrow some of the dried and preserved bat specimens that had been brought back for them, so that the children could see and feel what a bat is really like. We also took in some of our larger

arthropod

Figure 13. Snail and millipede specimens used for teaching purposes (Drawings courtesy of Sharenet/ICCE)

specimens, preserved in alcohol, selected from the samples that were brought back to the Natural History Museum for analysis so that the children (and teachers!) could see an arachnid spanning the size of a dinner plate. Soon after our return, Simon was also in the fortunate position by then to be employed as Education Officer at Bristol Zoo Gardens and was able to borrow some of the live forest animals that are used for teaching purposes there: giant snails, hissing cockroaches, giant millipedes - which everyone could look at and handle (under supervision of course). The amount of children's work that was generated from these visits was enormous; posters, pictures, poetry, etc. Some formed the basis for an education display in the travelling exhibition that was put together about the expedition.
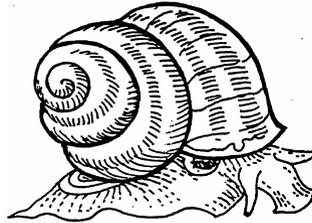
The children really took the ideas on board. One teacher even told Simon later that the school had held an end of term fancy dress party to which one boy came in lots of explorer's gear. When questioned as to his identity, he replied that he had come as Simon Garrett, the jungle explorer. Maybe, in a few years time, he will have been inspired to become a real one!

Evaluation
The educational side of this project was somewhat bolted on as we went along, and was driven largely by the enthusiasm of the teachers and children involved and by our quickly discovered enjoyment of sharing our experiences with them. It turned out to be one of the most rewarding parts of the whole project. Many Bristol expeditions now include something similar in their projects and we are sure many others do too. It is something very valuable and immediate that can be a part of every project. If we're very honest about it, very few (undergraduate) small expeditions ever achieve anything of huge scientific importance in their short field periods, and if they

do and it is published, it still only usually reaches a very small set of interested people. Many conservation efforts are of small value unless they involve large numbers of concerned people. How can this concern be generated in people? By getting them excited about what excites and is important to you. Spending six months in a rainforest, finding out what it is really like and then sharing this enthusiasm with as many people as possible was not only rewarding but useful.

If you are considering a school-based education project in your home country as part of your expedition along similar lines to our own, here are some guidelines in line with the principles of good practice:

Collaboration	• Start thinking about working with schools from the beginning and make it a stated aim of your expedition.
Options	• Try and be a resource. You have the knowledge, expertise, equipment, excitement, enthusiasm and experience. Just be available to share these in which ever way you and the teachers/children involved think appropriate. • Don't try to write the definitive Education Pack. Ours was going along these lines and (probably) was not used very much, or certainly not as we thought it might be. Worksheets are not used much these days and are often boring. Instead, simply give information, enthusiasm and perhaps a few ideas for activities that you have thought of.
Participation	• Listen to the teachers about what they would like to get out of it. Do not try to do the teacher's job, or tell them what to do. They know their class, the curriculum, the timetable and how their children learn best. • Genuinely allow schools to participate in part of the project - perhaps if they are fund-raising, let them 'buy' a particular piece of your equipment for example.
Scale	• How many schools are you going to involve? Remember how much time and effort it is going to take; the more schools you involve, the more days that you will need to put aside to visit them.
Sustainability	• Keep schools in touch with notes, letters, tapes and reports. • Make sure you keep your promise to return after the

	expedition.

Expedition Team*:* Jon Davies, Katie Edwards, Simon Garrett, Tania Roe and Rob Thompson.

6.2 Savannah Wildlife Project, Zimbabwe, 1991 & 1992
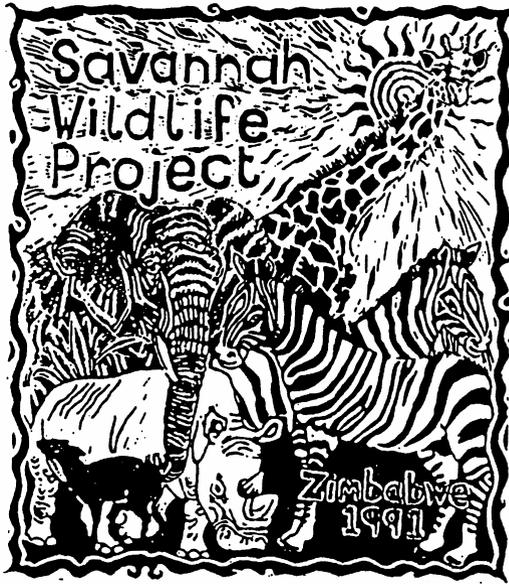
Figure 14. Logo for the Savannah Wildlife Project

This case study illustrates how well an environmental education component of an expedition can work when the project is supported well both in home and host countries; there are collaborating organisations trained to continue the work; and there are sufficient financial resources for the education project.

   In 1991 a team of four educators and three vets conducted a project based at Chipangali Wildlife Trust, Bulawayo, Zimbabwe. The Project's mission was to *"promote the sustainable development of the African savannah ecosystem through research and education".* Chipangali Wildlife Trust holds a collection of native African wildlife, specialising in the study and breeding of duiker antelope, acting as a wildlife orphanage and providing a place where people can get close to and learn about African wildlife. Every year approximately forty thousand people visit Chipangali, many of whom are local Zimbabwean school children, as well as people of all ages, backgrounds and nationalities. Therefore it is a place of enormous educational value. A

great majority of the rural and poor city population have little experience of local wildlife and yet children from these areas are likely to have a great environmental impact in the future. The education work of the Savannah Wildlife Project (SWP) comprises several projects and an evaluation of the work a year after the main project.

Interpretation and sign production

The SWP education team helped to increase the educational potential of the animal collection at Chipangali by labelling all the enclosures. The signs identified the animals in English, Ndebele and Shona (the local languages) and also with the scientific name. These simple, durable, plastic signs were prepared in advance in the UK with the help of British Airways Assisting Nature Conservation. The team worked on further enhancement of the collection by preparation of a trail for visitors. Each animal that featured on the trail was identified by a plaque. The trail was accompanied by a booklet written and illustrated by the team (with help from Trust staff) and produced on site using a desk-top-publishing system donated to the Trust by the Project.

The team were also involved in preparation of worksheets/trails for school groups and improving the overall appearance of some of the public areas of the orphanage by artistic projects including painting a wildlife mural at the entrance. Some of the paint for these projects was purchased in the UK but a local supplier was also found in the nearby town of Bulawayo.

Equipping an education centre

The SWP team raised sufficient funds and received direct donations of equipment to provide the education centre with a slide projector, screen, over-head projector, television, video recorder, wildlife library and a desk-top publishing computer system with laser printer and scanner. (It had already been confirmed that a reliable electricity supply was available and that, if necessary, these pieces of equipment could be serviced on site without excessive expense). With this equipment the Chipangali Education Centre (see Figure 15) has become one of the best equipped centres for environmental education in southern Africa (outside South Africa). A press launch of the Education Centre was held in August 1991, attended by the national press and hundreds of local school children.
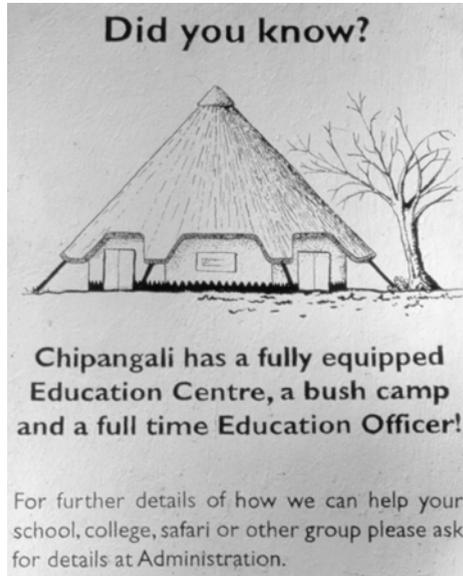
Figure 15. Sign painted at the entrance of Chipangali Wildlife Trust, Zimbabwe (Simon Garrett)

Training an education officer

The fulfilment and on-going success of the SWP's work at Chipangali was only made possible through the Trust's employment of a local teacher and long-time supporter of Chipangali Wildlife Trust, Dee Higgs, as their Education Officer. Dee worked very closely with the team during our stay, sharing with us her knowledge of the Zimbabwean education system and skills as a teacher. We shared our expertise on environmental education and computer operation. Dee received extensive training on the computer system so that she could produce good quality educational material and use the system to its full potential. Input from a local Zimbabwean Environmental Education Officer was essential as he knew from first-hand experience the importance and problems of environmental awareness projects in his own country. In 1996/7 the education work of the Trust was further enhanced by follow-up work conducted by Anita Middleton of Marwell Zoo.

Creating an information video

In order that sponsors in the UK were acknowledged for their donations to the project, they were sent an amateur video (made more professional by being narrated by our patron, Julian Pettifer), which was filmed to highlight the project's achievements. As the video also focused on the work of the Chipangali Wildlife Trust and African animals, the video was distributed to English schools and other interested individuals.

Linking project

One of the major objectives of the Savannah Wildlife Project's education team was to facilitate the linking or twinning of schools between Bristol and Bulawayo, using an environmental theme. This project was very carefully thought out and necessitated substantial planning and co-operation with teachers and pupils before, during and after the field period. However, it was also a very rewarding and enjoyable exercise for everyone involved. The school linking project aimed to: *"help raise pupil's awareness and understanding of the interdependence of local and global environments and to challenge prejudices and misconceptions about other people and their environment"*.

Choosing the schools and age group

The SWP selected six primary schools in each country for the link. We decided to sustain the link for two academic years involving the same children and two teachers in each school. In the UK the schools were chosen as representative of the range of schools in and around Bristol (i.e. inner city, suburban, out-of-town and private schools). The Zimbabwean schools were

chosen in consultation with Dee Higgs and were equally representative of schools in the Bulawayo area. None of the links would have been successful without the hard work of the staff.

Preparing for the link

During Easter 1991 an information pack and book of ideas for link work was written and given to the teachers involved (in both countries). This pack included background information on the country, environment and suggested activities for children to do, so they could prepare things to send to their link school. For example, making their own 'passports' with information such as date of birth, height, a photograph, etc. Each of the UK schools was visited by members of the education team during the summer term. They were shown slides of Chipangali and the area (taken during Theri Bailey's brief trip in April) and told about the other aims of the project. The schools handed over their 'friendship box' of work for their link Zimbabwean school at the official press launch of the Savannah Wildlife Project. This attracted substantial media attention, including local television news coverage and raised the public profile of African savannah conservation and environmental education.

In Zimbabwe

Soon after arrival in Zimbabwe, team members visited the six schools to deliver their friendship boxes from the UK (see Figure 16). Logistically this was more difficult than had been imagined due to the necessity of having to arrange transport to the schools and because the children were about to have a short holiday. The team were able to meet the schools again at the press launch of the project at Chipangali in August. We were able to visit the schools again before collecting their replies to the friendship boxes from their link school and, by recording all this work photographically and by producing field reports on cassette tape, we were able to give people back in the UK a very good picture of life in Zimbabwe. We were also able to raise environmental issues with all the children and work with their teachers to complement their curriculum. Some of the children in the link also helped us by trying out the trails and worksheets we had prepared.

Figure 16. Zimbabwean children opening their box from the English link school (Simon Garrett)

Back in the UK

Once the team were back in the UK we delivered the reply box along with a slide presentation on Zimbabwe and their link school. We maintained contact with all the schools for a year, returned to Zimbabwe for a short period in 1992 and delivered a few more items before declaring the links over, unless individual teachers wished to continue by themselves. (It is very important for everyone to have an agreed cut-off point so that the project can be declared complete).

Evaluation

The main problem is the distance involved and the consequent difficulty for schools in communicating without the help of the expedition to focus the work and liaise between them. It is also difficult for young children to understand that they won't get an instant reply and therefore teachers may have to work hard to maintain interest and enthusiasm until a reply is received. However, a simple two-way, one-off exchange of information via the expedition is still very useful educationally and likely to inspire a lot of

further work related to the environment. An important factor likely to affect the success of the linking project is the level of liaison between team members and the teachers concerned; do not underestimate the amount of time needed to ensure that linking is a success.

Education programmes for schools (post-expedition)

The SWP team were particularly keen to share the knowledge and experience gained whilst working in Zimbabwe. We wanted to do more than a project report and a presentation to sponsors and friends. We did produce a small final report but accompanied this with a colourful poster and a short video film of the team at work. We also made some formal public presentations upon our return.

The Savannah Wildlife Project Team: Tom Bailey, Theri Bailey, Charlotte Baker, Louise Brown, Simon Garrett, Phil Nicholls and Stephen Woollard.

6.3 Kyabobo '94: A Joint Oxford University and Ghanaian Expedition
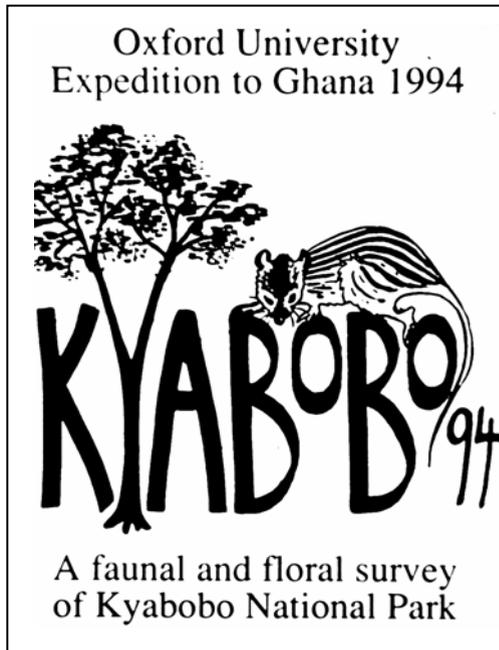
Figure 17. Logo of Kyabobo '94

Introduction

Three UK biologists teamed up with two Ghanaian biologists, a Wildlife Officer and a Forestry student, to form the Kyabobo '94 expedition to the proposed Kyabobo Range National Park (KRNP) in Ghana. Our team conducted a preliminary mammal survey and mapped the vegetation of the park, in addition to carrying out people-oriented research into local use of natural resources.

The social context

On arrival, the Wildlife Department of Ghana (WD) made us aware of the social tensions concerning the establishment of the national park. We were told that the nine communities adjacent to KRNP were opposed to the idea of the park. We decided to initiate a small-scale education project in these communities. The aims of this were:

- to introduce ourselves to communities and create open discussions about our expedition work in relation to conservation;
- to take a people-oriented approach to our scientific research.

Village meetings

Before carrying out any fieldwork, we did things "the Ghanaian way" by going through formal introductions with the Village Chief and Elders of each community. This involved lengthy discussions of our "mission" and plenty of questions about the nature of our work. We communicated through a translator from the village, but also drew simple pictures to assist our explanation of our scientific aims and clarify where our results would go (see Figure 18). These meetings were vital for our team since we began to learn about the peoples' concerns over their farmland falling inside the park. We realised that involving the local people in the expedition research was crucial for understanding the social, economic and spiritual value of the land.
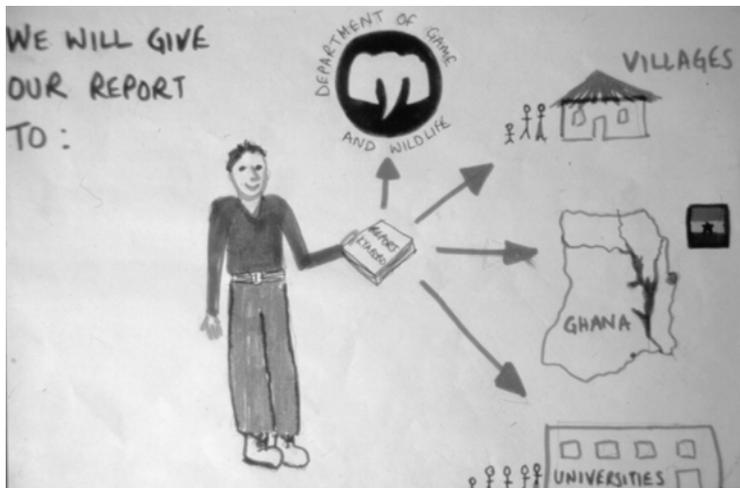

Figure 18. A picture used in village meetings to explain how the results of the Kyabobo '94 expedition would be used (Edward O'Keefe)

Talks in schools

As decision makers of the future, young people are important participants to empower in awareness-raising activities, yet they were excluded from the village meetings. With this in mind, we spoke to the Head Teachers of each village school and they suggested that we visited their schools for informal talks and activities. We spent one day in each of the nine schools (see Figure 20), and we structured the discussions as follows:

Figure 19. Structure of discussions carried out in Ghanaian schools

Question	Activity/Equipment
Who are we?	Age, name, what we are interested in.
Where are we from?	Map of the world.
Why had we come to this area and not another part of Ghana or Africa?	Poster of wildlife reserves in Ghana.
Can you help us learn about your plants and animals? We don't have the same plants and animals as you in our country.	Wildlife alphabet game - for each letter of the alphabet the children think of an animal or plant in local name and English name (taught us local names and helped them practice English!)
How are we looking at these plants and animals in the forest?	Show equipment, identification books, pictures.
Why are plants and animals important to you? Can you give examples?	Children explained the uses of trees and animals.
What is special about this environment?	What animals and trees are sacred, what animals are useful to us - food chain game (see Figure 20).
What is conservation and the national park?	Looking at the long-term potential benefits of increased bushmeat, useful trees and awareness of links between all living things.

What questions do you have for us?	Open discussion.

Figure 20. Kyabobo '94 carry out a food chain game with schools (Edward O'Keefe)

Games and activities

We did not intend to preach to the school children. Instead games and interactive activities were extremely successful in acting as an "ice breaker". They also provided an interesting and fun way for both ourselves and the children to learn from each other. There are plenty of Environmental Education publications which give ideas and advice for activities with young people, such as Cornell (1979, 1989).

Report

Before leaving Ghana we put together a preliminary report on what the expedition had done, why it had done it and also included drafts of plant and animal species lists with both local and scientific names. In addition we included results of informal interviews on natural resource use. Presentation of the reports were made to all the schools and Village Chiefs that we had worked with as promised when we first introduced ourselves.

Evaluation

This expedition example is a common situation that teams may find themselves in. In hindsight, we have evaluated the Kyabobo '94 expedition in line with the principles introduced in this booklet. Were we able to answer the key questions outlined in Section 1?

- was the project reasonable to carry out?

- what social and political aspects did we need to be aware of?
- was the project socially responsible?

Problem identification

The goals of the Kyabobo '94 awareness-raising sessions were to increase the participation of local communities in the expedition research and the national park. The problem we identified was a lack of awareness amongst the local communities caused by a lack of communication with the Wildlife Department. The project was planned on the basis of "how can the lack of awareness be solved?" rather than "why is there a lack of awareness in the first place?". Therefore, our education project was reasonable to an extent but provision of information was not necessarily a solution to the real problem. If we had worked through the project process framework before and during the expedition, we would have realised that awareness-raising needed to be focused on the participants and their perspectives.

We also did not realise the politics of the situation we were entering. Our goal was to address conservation problems, but in real life the problems were to do with land availability and management of the park by the Wildlife Department (WD), both of which were beyond the means of our expedition to solve.

Participant's perspectives

In the estimation phase, the perspectives of the local people were overlooked. It was at this point that we should have considered the trends behind the problem of communication between WD and local people. Local people view the forests and mountains inside the national park in culturally different ways to WD, scientists and foreigners. In social research carried out with communities around the park in 1996, the importance of people's perspectives is obvious as the researchers concluded *"for KRNP to be successful and accepted, 'conservation' must have local relevance and importance....the park then may be perceived as belonging to the local people, as much as their traditional areas. The forest is traditionally very important. It is believed to be the dwelling place of the spirits of the ancestors, strong powers that are both feared and respected"* (Ledward and Bowes Lyon, 1996).

The political sensitivity of the park was also not considered in the estimation phase. Without recognising that *"the land is ancestral land, if part is taken into the reserve, it is lost", (*pers comm. Paramount Chief, Nkwanta, 1997), the awareness-raising was addressing problems that were not a

priority to local people. Therefore, some of our talks concerning conservation may have used inappropriate concepts.

Figure 21. Children who do not attend school couldn't participate in Kyabobo '94 education projects (Andrea Ledward)

Selecting an education project

In initiating the talks in the schools we did not explore all the options of how we could be effective. We overlooked crucial issues like who was participating in the awareness-raising sessions. For example, children at school were an obvious and accessible audience but in reality, approximately 40% of children do not go to school (see Figure 21) and they are most likely to be the ones who become the next farmers and hunters in the area (educated children are more likely to move away). Therefore we failed to ask the important questions surrounding the principles of participation.

How we could have improved the project

A more appropriate project may have been for us to carry out research with teachers, children and the wider community to understand people's perceptions of the park and conservation. This research would have given us a better idea of the social context of the area and we could have made appropriate recommendations to WD, the Ghanaian NGO and the Ghana Wildlife Society (which runs education and awareness-raising projects). It could be concluded that Kyabobo '94 as an expedition may have been more

effective in assisting with "estimation" of the education and awareness potential in the park, rather than going straight into "implementation" of a project as they did.

Positive aspects

It can be concluded that we did our best to take a socially responsible approach by carrying out awareness-raising through traditional Ghanaian greeting systems and conducting interactive sessions with children rather than lectures. In this respect we were taking into account the social context that we were going into. It was also low impact, small scale and appropriate for our expedition's capacity. The simple, two-way discussions had improved the relationship between ourselves and the local communities, friendships were made and as children told their parents about our work, we became more familiar and less of an unknown threat. Teachers were actively involved in the awareness programme. The time spent with schools and community meetings gave us a valuable insight into people's perceptions of the expedition, the park and its wildlife, and how local people valued their environment. On this basis we were able to make valuable recommendations for the involvement of communities in managing the park.

Kyabobo Conservation Project 1995-97

The discussions in 1994 acted as an educational needs assessment. Both the pupils and their teachers were keen to have British penpals and it was clear that they had few educational resources, especially on the topics of wildlife and conservation. As a result we put together a proposal for follow-up work on the basis of needs identified with our Ghanaian counterparts. The proposal won the BP, Birdlife International and Fauna and Flora International Conservation Award of 1995. This enabled us to establish The Kyabobo Conservation Project (KCP), a British registered charity. "*The Kyabobo Conservation Project is an organisation helping the Wildlife Department set up the new Kyabobo Range National Park in Ghana. It develops people-oriented conservation projects with existing institutions. Its dynamic approach works from international to grassroots levels.*" (KCP Action Plan, 1997).

The educational programme of the KCP follow-up work carried out two education projects. The first was a linking project called "Boxswap" for schools in the UK and Ghana, and the second was working in partnership with the Ghana Wildlife Society and WD, setting up Wildlife Clubs around KRNP and training Wildlife Club leaders. Details of these activities and an evaluation of the projects can be requested from KCP (see Section 11).

Kyabobo '94 team: Kanton Luri Bahian, David Bowes Lyon, Jen Hurst, George Bamford and Edward O'Keefe. *KCP team*: same plus Andrew Tordoff, Andrea Ledward, Paul Chambers and members of WD Staff.

6.4 Action Comores, Fruit Bat Conservation in the Comoro Islands, 1992-98

Figure 22. Logo of 'Action Comores'

This case study shows the vital importance of extensive education in the field for the conservation of a particular species, habitat or geographical area. The conservation programme in the Comoro Islands (by Action Comores and Jersey Wildlife Preservation Trust) encompasses scientific research and direct conservation measures, but in the short and long term, the only hope for the conservation of these islands and their fauna and flora, as well as the survival of the human population, is effective conservation education and local participation.

Action Comores was founded in 1992 to work primarily on the ecology and conservation management of Livingstone's fruit bat (*P. livingstonii*) which is endemic to the Comoros and is listed as critically endangered, according to the IUCN Red List of Threatened Animals (IUCN, 1996). It is found only on Anjouan and Moheli, where habitat loss through deforestation represents the major threat to its continued existence. The population of Livingstone's fruit bat was estimated to be in the order of 400 individuals in 1995. The Expedition worked with the approval of the Comoran Government, liaising with the national research institute CNDRS (Centre National de Documentation et de Recherche Scientifique des Comores) and branches of the village environmental organisation Ulanga (which means "Environment"). Foreign aid agencies provided essential local assistance, as

did many Comorans. The project is very wide-ranging in its activities but discussion here is limited purely to its educational aspects.

The Action Comores education programme

Environmental awareness is a small but growing phenomenon in the Comoros. The IUCN Action Plan for Old World Fruit Bats recommends a specific environmental education programme covering the role of fruit bats in forest ecology and the effects of habitat destruction and roost disturbance. The components of the Action Comores education programme were chosen after consultation with teachers and aid workers in the Comoros, and were designed to involve people at all levels, both within and outside of the formal education system (see Figure 23). Educational materials were structured to stress the link between the conservation of the fruit bats and the forests, and the consequent benefits to ordinary people. It was clear that support from local people is paramount for the long-term conservation of *P. livingstonii*.

Figure 23. Team members meeting in Lingoni village before ascending to a Livingstone's bat roost (Simon Garrett)

The final objectives of the education programme were as follows:

- to instigate an environmental education programme on the importance of forests and fruit bats, which is available to all sectors of the population and which complements existing information;
- to provide the equipment necessary for aid agencies and environmental groups to hold informal education sessions for school and non-school participants;
- to generate interest and enthusiasm in conservation groups and the general public for their endemic fruit bat and other wildlife;
- to set up an *in-situ* monitoring programme for *P. livingstonii*.

Environmental videos

Research has shown that, given the apparent low level of literacy (15%) and the frequent disruptions to the school year, the medium of video is very suitable for carrying an environmental message. The prospect of an environmental video was also greeted with great enthusiasm and anticipation by environmental workers of the Comoros, both foreign and national, as a very useful tool. Many parts of Anjouan were visited and captured on film using a camcorder. A film script was written and translated into French and Chindzouani, the language of Anjouan.

The video describes how the fruit bats are important agents of forest regeneration. Thus the link is made between people, forests and fruit bats. This theme of interdependence is reinforced in all the educational media produced. The video has since been distributed to over 50 villages and was played on television every day during 1994.

Exhibitions

Exhibitions, four in French and one in English, were produced as a series of laminated boards. Each exhibition described the fruit bats of the Comoros and their role in forest regeneration in text and photographs. One exhibition was given to the National Museum in Moroni, Grande Comore, where it will form a permanent display. A further exhibition was presented to Ulanga. This presentation, on World Environment Day, was filmed for local television and an interview was conducted with the Action Comores Island Coordinator. The remaining sets were distributed to Peace Corps Environmental Educators.

Environmental workshop

An environmental workshop organised by an international aid organisation, for six branches of Ulanga, was held at the teacher-training college. The

workshop concentrated on training local groups to disseminate their environmental messages through different media. Action Comores contributed a slide presentation and lecture and there were enthusiastic converts to the cause of fruit bat conservation. "Training the trainers" is a valuable way of expanding the audience reached by any expedition and is a positive step towards sustainability.

Posters

Action Comores collaborated with Jersey Wildlife Preservation Trust to produce an environmental poster on fruit bats and the natural forest (see Figure 24). This poster was designed to carry text in two languages. French, as one of the official languages, was an obvious choice. The choice of second language was more complex as each island speaks a different dialect of Comoran (Chingazidja, Chindzouani, Chimwali). Initially, it was hoped that the use of Arabic (the language of the Koran, taught to almost everyone in Koranic schools across the three islands) would circumvent this problem. However, further research indicated not to use Arabic script. The poster was eventually produced in French and Chindzouani.

Figure 24. The Livingstone's Fruit Bat

educational poster (Action Comores)

The artwork was commissioned by Action Comores from the artist Tom McOwat. As well as forming the basis of the poster, a raffle of the original raised both funds and awareness in the UK. The artwork shows both *P. livingstonii* and its congener *P. seychellensis comorensis* so that the differences between the two species can be clearly appreciated. The boldest message states "Protect our forests, protect our fruit bats" and pictograms show the link between the fruit bats and forest regeneration. The uniqueness of *P. livingstonii* is also stressed in order to generate national pride, an important factor in many conservation projects. Posters were often treasured and placed out of sight as collector's items. Stickers were more successful in being on view to everyone.

Stickers

The message of the video has been reinforced by the distribution of 2,400 stickers bearing the message "Protégeons nos forêts, protégeons nos roussettes, protégeons notre avenir" (Protect our forests, protect our fruit bats, protect our future; see Figure 25). These were extremely popular and can be seen on government buildings and vehicles, private houses, shops, schools and taxis everywhere. It is also worth stressing here that the wording on the stickers and other material produced is "Protect **our** environment..." etc., rather than "Protect your environment...". Education should not involve preaching or dictating to the audience.

Figure 25. Two of the stickers produced (Action Comores)

Lesson plans

Lesson plans concerning the fruit bats and their conservation were designed for implementation through the Peace Corps Environmental Educators' lessons. Forty copies of 'Lesson Plans for children, "Soignons notre environment" (Caring for our Environment), a series of eight practical exercises for the classroom or environmental workshops', were distributed. Simple English exercises were also devised for the occasional adult English classes run on all three islands.

Slide presentations

Two slide packs were produced both with French and English translations and activities. The success of the two slide packs stands somewhat in contrast to that of the videos. Outside of the Comoros, these have been both a successful and popular means of educating groups interested about the plight of Comoran wildlife. Many copies of slide packs have been made available to a range of groups worldwide, including bat conservation groups, universities and general conservation groups.

Inside the Comoros, however, the response has been different. The primary problem seems to be one of technology; very few slide projectors exist in the Comoros. Where they do exist, portable power sources within sufficiently dark rooms, replacement bulbs and suitable projection surfaces are difficult to find. Furthermore, slide packs are expensive and time-consuming to make, and shows require an informed, literate presenter. Personal experience and reports from other environmental educators indicated that it is much more difficult to focus a group's attention on a slide show than a video. In addition to these problems, presenters were reluctant to relinquish the limelight. Presentations were used as an opportunity to hold forth on their own views at length. It has been suggested that the static slides are transferred with their script to a video format. This would alleviate technological problems specific to slide projectors and would remove the need for a trained presenter. This form of video production is easier and cheaper to produce than conventional video film.

Bat identification sheets

It is hoped that Ulanga members, as well as aid workers, will continue to formally record all sightings of *P. livingstonii*. To this end, Bat identification sheets for *P. livingstonii* and *P. seychellensis comorensis*, laminated and in colour, were produced in both English and French. These contained field identification notes and were distributed to Ulanga branches. These sheets

have been directly responsible for the discovery of additional roosts of *P. livingstonii.*

These sheets could easily be adapted and used by expeditions who need to conduct informal interviews with local people in order to locate particular elusive species in remote areas. In such situations it is worth including photos/illustrations of both the desired species and an appropriate number of "red herrings" in order to differentiate between potentially genuine sightings and a "willingness to please". This is particularly important where there is a [significant] language barrier.

Media
Action Comores explored many forms of media for environmental education, including radio stations, local television networks, newspapers and newsletters. During the 1994 field season, the Action Comores video was broadcast on local television networks and the team also gave radio and television interviews to complement this.

Raising awareness in the UK and elsewhere
The Comoros Islands were almost unheard of in the United Kingdom prior to 1992, even amongst conservationists. Action Comores is continuing its programme of publicity and fund-raising through lectures, slide shows and the sale of merchandise (stickers, shirts and tea-towels). Also, dissemination of information has included scientific papers and final reports. In addition, Action Comores now maintains a site on the World Wide Web.

The Action Comores team has made every effort to produce their reports in the language of the host country (French). Although often overlooked, this is a vital factor in ensuring that the Expedition's reports are read and used in the host country. They also held a conference at CNDRS for all interested parties.

The Action Comores team members: Andrea Benson, Richard Bullock, Kate Clark, Guy Cowlishaw, Jon Davies, Simon Garrett, Rosie Heywood, Paola Reason, William Trewhella and Stephanie Wray, joined by Chris Clark (JWPT) and Chris Cole.

6.5 Action Sampiri: Sangihe and Talaud Conservation Project, Indonesia, 1995-99

Background

In 1995, an ornithological expedition from the University of York and Universitas Sam Ratulangi, Manado, visited the islands of Sangihe and Talaud in Indonesia's North Sulawesi province for three months. The expedition team carried out the first surveys of the islands' avifauna this century, finding all the threatened and endemic species still present. On Sangihe, only five species were found in the 500 hectares of remaining forest. On Talaud, rare parrots are seriously under threat from unsustainable trapping.

Recommendations from these surveys identified the need for education work within island communities. As interest and concern generated in Europe by our expedition reports would have no direct impact on Sangihe and Talaud, we realised we needed to share our research results with the local people. The follow-up project, named Action Sampiri, won a BP Conservation Award in 1996 and returned to spend seven further months in the field.

Education project aims

Action Sampiri's long term objective is to eliminate the threats to Sangihe and Talaud's endangered and endemic birds. The main threats identified by the 1995 project were forest loss and unsustainable bird trapping. Action Sampiri's education aims are:

- to communicate the project's research results to communities on the islands thus enabling them to make informed choices regarding island conservation issues;
- to raise awareness about the islands' endemic birds and their requirements.

Pre-project preparation

On arrival we began reporting to relevant government departments and seeking the necessary permission for the work to be undertaken. We began to learn the Indonesian language and spent time getting to know our Indonesian counterparts. A number of resources which we felt might be useful in the education work were produced before entering the field such as leaflets, posters and a bird guide. Villagers who were interested in looking at the bird

guide book, already knew much more than the book could tell them. However, the guide did prove useful for our counterparts.

Sangihe 1996, three months

On Sangihe, our main aim was to let people know that their island supports five endemic bird species and that these species all rely on remaining forest for their survival. We rented an old shop near the market complex in a major coastal town and used this as a base for outreach work in villages surrounding remaining forests. Upon arrival we converted the front of the old shop into a small walk-in education centre, which we opened for a few hours everyday. This is a good idea if you have a well-suited building at your disposal but can be difficult to manage. We were regularly swamped by school children and had the problem of people turning up at our house when the centre was closed. An information point in a prominent public place might be easier and more effective.

In addition we carried out the following activities in three communities:

- interested villagers joining the research team as guides and porters, and being actively involved in the team's work;
- village meetings held on Sundays, in the village church;
- talks in Primary, Middle and High Schools.

Relatively speaking, the education team's progress was slow on Sangihe. This was mostly due to our adopted approach of spending days in villages simply talking to people, practising our Indonesian and getting to know the communities. Our work on Sangihe allowed us to develop ideas. One of the communities we worked in passed a village law protecting their remaining forest, citing their new awareness of the global importance of their forests as a motivating factor in this decision.

Talaud 1997, four months

The communities we visited on Talaud were the five villages which are home to the island's parrot trappers. Our main aim was to communicate our research findings to trappers - that the trade in the Red-and-blue Lory (*Eos histrio*) is unsustainable and to gauge their perceptions.

Seminar

Prior to visiting communities, we hosted a seminar in the island's capital in collaboration with the island's Council and Forestry Department. Preparation for this activity was time-consuming but the seminar was an ideal way to introduce ourselves and our work to local government staff and village chiefs

that we would work with later. We found that local government seminars take a long time to put together. It is almost impossible to convene such a meeting without the support and help of a local government official who supports your work. You may also need some coaching in the etiquette that surrounds such occasions in your host country. We had to pay for delegate's transport costs from surrounding villages and we provided a lunch. Depending on the size of such a seminar, it can work out to be expensive. The best way to learn is by hosting one!

Village meetings
We spent a few weeks in each village, entering the forest as a whole team with interested villagers for a few days, before returning to set up talks and meetings. All our meetings were arranged by the village's chief. The meetings were held in the village hall or church on Sundays (the day when people aren't working) and were normally announced in the Sunday morning church service. We spent about half an hour presenting our results and information, followed by a feedback session. Some meetings lasted more than two hours.

Meetings with parrot trappers
These meetings were a little tense at times but they remained good natured as both parties listened to the other's views. These meetings were very valuable to Action Sampiri and we consider it important to work directly with the people who are having the biggest impact on a target species or habitat, be it an occasional trapper or a logging company.

Teacher training
In addition to talks in schools, teacher training sessions were run to provide information and resources regarding the island's birds. We needed permission at regional level to organise such workshops, which took about 10 days to organise. This activity is actually a great time saver, as the multiplier effect will allow your information to reach many more individuals through the few teachers that you train.

Positive results included three villages officially requesting local government intervention to control the parrot trade, many villages requesting an Action Sampiri visit and a chief parrot trapper joining our team to reinforce our message. Upon finally completing our field work we reported to the Regent of Sangihe and Talaud, the head of the islands' local government, on our findings and recommendations. At this stage we realised the need to return to continue our work and to both develop activities and

transfer stewardship of the project to our Indonesian counterparts. Action Sampiri will spend a year on the islands in 1998-99.

Scale	• If you have only a little time to devote to education, try to take some local villagers with you into the field to assist with fieldwork and show local communities the importance of their wildlife on a global scale. You can contrast their species and habitats with those in your home country. Let your enthusiasm show through.
Participation	• Don't tell people what to do, tell them what you know. Spend time with the local people and listen to what they have to say.
Options	• Try to fit in as much as possible and remember showing up with a lot of expensive equipment can begin to alienate impoverished locals. If the village chief uses a typewriter, you can too. You could borrow it to type out factsheets rather than use a laptop computer. • Try not to be too doom-laden when communicating research results regarding threats to species and habitats. Highlight the results positive action could bring and add some humour into any talks you give.
Collaboration	• If you find groups or individuals who are willing to talk, you are in a good position to act as a go-between. Try to facilitate conservation rather than initiate it.

Figure 26. Evaluation and summary remarks

Team members: Damien Hicks, Iwan Hunowu, Cobar Hutajulu, Jon Riley, Michael Wangko and Jim Wardill.

Section 7

COLLABORATING WITH NON-GOVERNMENT ORGANISATIONS (NGO'S)

The majority of this booklet has been written by past expeditioners from the United Kingdom. To avoid bias it is vital to include perspectives from other participants involved in education projects. This section was kindly written by Sabesi Fordjour, the Programme Training Officer for the Ghana Wildlife Society (GWS), who worked with the Kyabobo Conservation Project to set up wildlife clubs and training projects as a follow up to the Kyabobo '94 expedition (case study 6.3). It contains general viewpoints and advice from a host country organisation that expeditions might typically collaborate with.

Introduction
The last two decades have seen the emergence of NGO's throughout Africa and the rest of the world. NGO's are set up to complement the efforts of government and other non-government organisations and are usually focused on specific topics. They need to be credible and confident to recipient communities, governments and donor agencies.

Some NGO's can be of local origin with or without existing links to any outside agency. Some may be formed with a stimulus from an existing foreign or external body who aim to spread their activities to other regions. Other NGO's address problems whose origin may be in another country or who want to collaborate with an agency at the point of origin of an environmental problem. The Ghana Wildlife Society (GWS) was established through the Royal Society for Protection of Birds (RSPB), UK (see Contacts, Section 9.2).

7.1 Making contact

Making contact with NGO's outside the UK may not appear that easy at first. You can also ask the British Council or the embassy of the country you plan to work in for information on national NGO's in environment or conservation. Agencies such as International Union for the Conservation of Nature (IUCN), WWF (Worldwide Fund for Nature), Green Earth and others may have affiliate country organisations. The World Wide Web is an up-to-date source of information. However, bear in mind that developing world countries may not have as much access to the web or email as NGO's in the developed world.

7.2 Guidelines for collaboration

The GWS has a policy to network and collaborate with organisations nationally and internationally which share similar goals. GWS consider the following guidelines are important when collaborating:

- decide on the level of networking - local, national or international;
- discuss whether you and collaborating organisations are working towards a common goal;
- establish and agree on the level of commitment of both partners;
- information exchange and collaboration should be beneficial to both partners;
- remember that collaboration is not a one-off meeting - ensure you set up clear channels of communication between organisations and that partners are given the opportunity to be actively involved;
- share resources and ideas with collaborating organisations.

GWS has collaborated successfully with Government departments and NGO's. Some of the benefits have included training of GWS staff in Ghana and the UK, running education programmes with the governmental Wildlife Department in National Parks and Reserves, and taking on consultancies with other organisations. However, there are also instances where collaboration can fail such as:

- the sustainability of collaboration can be affected by financial circumstances and limited funding;
- failure of foreign NGO's to be sensitive to cultural differences;
- misunderstandings between partners by failing to clarify expectations and goals;
- lack of communication between partners;
- overdependence of one NGO on their partner (e.g. money, planning, resources).

7.3 Cultural considerations in Ghana

Foreign NGO's and expeditions offer NGO's in the host country opportunities to further their programmes through funding, research, joint projects and sharing ideas. Local people have sometimes expressed that the involvement of foreigners in education projects captures their interest. However, foreign participation is not always sustainable.

It is very important to note that the success of any environmental education programme by a foreign group in an African country, or other

developing world country, will have to take into consideration the cultural background of the people in the project area. If this is overlooked the education project will fail and both human and financial resources could be wasted. In Ghana, West Africa, there are many cultural considerations to be aware of before carrying out a project.

Social hierarchy

Consider the social hierarchy of the community, i.e. who should you first consult to introduce yourselves and your project? For example, in Ghana this is usually the Chief and Elders of the community. To be accepted, a bottle of alcohol (mostly Schnapps) should be presented. When this is done, and the Chief sees how much you revered him, he then gives you full collaboration (this may not be the case in all locations). Throughout a project, it is very important to report frequently on the progress of activities to the Chief and local government. In some cases it is important to be aware of chieftancy disputes that may prevail because then it matters who you work with. Disputes divide a community and and it is important for you to stay neutral.

When visiting households remember that women are considered voiceless: be aware of consulting them in an appropriate manner. The head of the family (i.e. the man) should always be contacted first. When men and women meet for a discussion programme, women will seldom talk because their opinions will be carried forward by the men.

Meetings

An important consideration is when and how to arrange meetings with community members and opinion leaders. This should usually coincide with a 'taboo day', i.e. a day when it is tabooed to go to the farm or river or do any work. All residents stay at home resting. Public meetings for education projects are best organised on these days. Market days are also an opportunity for meetings (they should be held before trading early in the morning). Men have more time to talk on market days since women are busy trading.

Other media

Education through the printed material or by radio on a local level does very little as only a few can read, or possess radio sets. Open meetings and personal visits are best. Evenings are an opportunity to show videos and hold talks. Schools and teachers are the most trusted in some communities so working through them can be a positive start.

Committees

Local communities work well through committee systems and often have confidence in forming a working committee.

7.4 Environmental education in Ghana's national school curriculum

Environmental education has appeared in the Ghanaian curriculum in various forms. Initially it was introduced as 'Nature Study', then in 'Health Science'. It later came in as 'Environmental Studies'. It is now linked to 'Agricultural Science' subjects. In all these instances there were no trained teachers to handle the subjects. Presently, it is now part of 'Agricultural Science'. Unfortunately, environmental education is only one small part of teaching agricultural science. It appears that a curriculum audit may be required to include more environmental education topics. Another way is to produce resources on environmental issues to supplement curriculum content.

The Ghana Wildlife Society has numerous on-going education and biological research projects that lend themselves to collaboration with other NGO's and expedition teams.

Contact:

Dr Ntiamoa Baidu, The Director, or Mr Sabesi Fordjour, Programme Training Officer, The Ghana Wildlife Society, PO Box 13252, Accra, Ghana.

(See the introduction to this section for further information).

Section 8
GUIDELINES FOR SPECIFIC PROJECTS

8.1 Production of materials

As can be seen from the case studies, producing materials takes a considerable amount of time and funds, has to be relevant, useful and some degree of research is needed before doing so. If you do produce resources, keep them simple, interactive and make sure they fulfil a need expressed by whoever will be using them. Professional organisations such as BP Science Across Europe produce curriculum materials that act as a backbone to teachers' work. The information is kept brief, accessible and easy to use. If you look at the range of educational resources produced by different organisations you will see teachers are already overwhelmed by packs, videos, posters, etc. Why not consider contributing your research results to the organisations who already produce resources? This would be beneficial to both you and the organisation. You can get advice and support from professionals whilst they keep their resources up to date with the latest research from the field.

If you do decide to produce your own resources, here are some more detailed questions to ask yourselves before starting:

Figure 27. Questions concerning the production of own resources

Participants	• Who is the information aimed at? • Does it need translating? • Who will write it? • Will it be hand-written, typed or produced on computer? • Who is going to evaluate the materials?
Sustainability	• How will it be funded? Good quality material could attract direct sponsorship.
Access	• Does it need illustrations? Black and white or colour? This may be an important consideration if it is going to be photocopied abroad or if funds are limited. • How will you ensure that the information is accurate? Contact libraries, museums, embassies. • What quality of production do you need? If it is for sale, then the quality will affect sales and price.

Collaboration	• How will you ensure that it is relevant to the school curriculum? Are there any local teachers who would be interested in helping with preparing activities for schools?
Options	• Will the pack include slides? Enlarged photos are an alternative if people haven't got access to a projector or power but this can be quite costly (seek sponsorship). • Will any of the material be used outdoors? Laminating sheets will protect them against rain and also increase their longevity but will make them much heavier to transport.
Scale	• What is your time scale for producing and delivering materials?

8.2 World Wide Web projects

The internet has opened up numerous possibilities for expedition teams to contribute to educational activities with other organisations. For example, BP Science Across the World covers topics such as rainforests and biodiversity which link with expedition research projects.

There are many possibilities for the people you work with to benefit from web projects. For instance, young people could carry out research with your expedition and this information could be entered into web pages that young people from other parts of the world use. This would fulfil not only the research objectives of your expedition but the educational and participatory principles as well. Visit some of the websites listed in the contacts in Section 9 to explore the potential for fitting in with these exciting educational projects.

8.3 Linking

Expeditions which facilitate school linking projects can support the UNESCO Declaration on Cultural Policies: "*cultural, scientific and educational exchanges should strengthen peace, promote respect for human rights and help to eradicate colonialism, neo-colonialism, racism, apartheid and all forms of aggression, domination and interference*" (UNESCO, 1982).

The wider significance of linking far outweighs the problems and hard work involved. Through such a project you can involve the local community with your expedition in both host and home countries. Linking can also help you to broaden people's attitudes towards the environment, other people and

cultures. If you don't feel confident about linking primary or secondary schools why not try to establish a link with the local university or college? You may already have planned to involve local students with some of the work you intend to do so a more formal link is a natural progression.

Below are brief guidelines on linking. These have been taken from the case studies in this booklet. There are many excellent publications containing advice on linking (see Section 10) and expeditions should approach the DE organisations listed in Section 9 to discuss the ethics of carrying out a link.

Problem orientation	• Why set up a link? What will it aim to achieve? • How does it support other aspects of the expedition's work?
Participants	• How can the work be two-way and highlight similarities between the two groups, rather than dwell on differences of race and wealth? • How are the groups/schools for the link to be chosen and what criteria will be used? • What age group(s) will be involved? • Will there be any language and communication difficulties? Who can help with translation? • Do participants understand the context of the link? • Have you recognised language barriers? • Who will evaluate the link and how?
Collaboration	• How can the project support delivery of the curriculum in both countries?
Options	• What resources will be required? What shared technology is available in both countries? • How will material be exchanged: by post, hand-delivered, via computer link, etc.?
Access	• How will the project affect and involve the local community around each school?
Scale	• For how long will the link be planned: just while the expedition takes place, one year, two years, longer? How will it be sustained?

Figure 28. Brief guidelines for expedition linking projects

Conclusion

It is hoped that readers now have the confidence to enter into any situation with a "tool box" of ideas, resources and approaches from which to select. Expeditions shouldn't be daunted by carrying out an education project; there is no doubt that expedition members and the people they work with gain a great deal from carefully thought out projects. By learning from the successes and mistakes of past and present education projects, expeditions can carry out innovative projects in the future. We hope the next edition of this booklet contains plenty of new case studies!

"If you think one year ahead, sow a seed.
If you think ten years ahead, plant a tree.
If you think one hundred years ahead, educate the people."
Kuan Tzu, 500BC

Section 9
USEFUL CONTACTS FOR EXPEDITIONS PLANNING EDUCATION PROJECTS

9.1 General

Geography Outdoors: *the centre supporting field research, exploration and outdoor learning*

RGS-IBG
1 Kensington Gore
London
SW7 2AR

Tel 0171 591 3030   Email: go@rgs.org
Fax 0171 591 3031   Website: www.rgs.org/go

Geography Outdoors offers information, training, publications, contacts and advice to anyone planning an expedition overseas.

BP Conservation Programme   Tel 01223 277318
Birdlife International   Fax 01223 277200
Wellbrook Court   Email: bp-conservation-programme@birdlife.org.uk
Girton Road   Website: http://www.bp.com/conservation/
Cambridge
CB3 ONA

The programme, through awards, advice and training, aims to promote a greater quantity and quality of conservation research projects.

International Institute for   Tel 0171 388 2117
Environment and Development   Fax 0171 388 2826
3 Endsleigh Street   Website: http://www.iied.org
London
WC1H ODD

Established in 1971, IIED is a policy research institute linking environmental concerns with the development needs of resource-poor people in the south

and other global and development priorities. It produces a regular series called PLA Notes which act as a voice from research currently going on in the field.

Practical Action Publishing (previously Intermediate Technology Bookshop)
Specialises in literature and information on appropriate technologies and development for all those with an interest. Excellent resources on education, training and how to carry out low cost appropriate practical projects.

Website: http://practicalactionpublishing.org

9.2 Environmental Education

Living Earth Foundation	Tel 0171 242 3816
4 Great James Street	Fax 0171 242 3817
London	Email: info@livingearth.org.uk
WC1N 3DA	Website: www.livingearth.org.uk

Living Earth encourages people to learn and work together to resolve the environmental issues which concern them. They do this through environmental education, working with people to develop action for sustainable development and by strengthening links between local groups, schools, business and local authorities. Living Earth works in the UK, Africa, Latin America and Eastern Europe.

International Centre for	Tel 01451 850777
Conservation Education	Fax 01451 850705
Greenfield House	Email: icceuk@aol.com
Guiting Powe	Website: www.icce.org.uk
Cheltenham GL54 5TZ	

ICCE's mission is to promote greater understanding of conservation, the environment and sustainable development through education and communication, placing particular emphasis on the needs of developing countries. For more than twenty years, ICCE has played an active role in promoting environmental education world-wide. ICCE is currently undergoing changes in its running but may still help with advice, resources and contacts.

World Wide Fund for Nature　　　　　　　Tel 01483 426444
Education and Awareness　　　　　　　　Fax 01483 426409
Panda House　　　　　　　　Website: http://www.wwf-uk.org
Catteshall Lane
Weyside Park,
Godalming
Surrey GU7 1XR

Founded in 1961, WWF is an international environmental organisation with affiliate offices in 28 countries. Over the past 15 years, WWF has built up an impressive range of over 200 environmental education resources designed to raise awareness, develop understanding of environmental issues and to disseminate good practise.

National Association for　　　　　　　Tel/Fax 01922 31200
Environmental Education　　　　　　Website: www.naee.org.uk
University of Wolverhampton
Walsall Campus
Gorway Road
Walsall WS1 3BD

The NAEE aims to promote environmental education in all phases of formal education in the UK and to encourage the promotion of environmental education in other sections of society in the UK and Overseas. They hold national conferences, courses and publish the quarterly NAEE Journal.

Council for Environmental Education　　　　　Tel 0118 950 2550
94 London Road　　　　　　　　　　　Fax 0118 959 1955
Reading　　　　　　　　　　Email: info@cee.i-way.co.uk
RG1 5AQ　　　　　　　　　　Website: www.cee.org.uk

CEE provides a national focus for environmental education, encouraging and promoting an environmental approach to education through creation partnerships. Formed in 1968, CEE works with over 80 national organisations which make up its membership. CEE offers support and advice, seminars/conferences and has a comprehensive library. Members and associates receive regular publications, briefings and other benefits.

Royal Society for the Protection of Birds (RSPB)   Tel 01767 680551
Fax 01767 681284
Website: http://www.rspb.org.uk

9.3 Development Education/Linking

Education Partners Overseas   Tel 0171 389 4031
Central Bureau for Educational Visits   Fax 0171 389 4426
and Exchanges   Email: kalbiston@centralbureau.uk
10 Spring Gardens   Website: http://www.britcoun.org/cbeve
London SW1 2BN

The Central Bureau is the UK National Office responsible for the provision
of information and advice on all forms of educational visits and exchanges. It
administers a free programme of school and class linking. A range of
publications is available to support teachers in developing international links
and for people of all ages seeking information on the opportunities available
for educational contacts, work, study and travel abroad. EPO forms part of
the British Council.

Development Education Project   Tel 0161 445 2495
c/o Manchester Metropolitan University   Fax 0161 445 2360
801 Wilmslow Road   Email: depman@gn.apc.org
Didsbury   Website: www.dep.org.uk
Manchester
M20 2QR

Manchester DEP is one of a network of educational centres providing
support and information, raising issues and doing research to expand global
perspectives. The centre offers a bookshop, teaching resources and in-service
training.

Development Education Association   Tel 0171 490 8108
Information Officer   Fax 0171 490 8123
3rd Floor   Email: devedassoc@gn.apc.org
29-31 Cowper Street   Website: www.dea.org.uk
London EC2A 4AP

A national umbrella organisation for all national and local organisations
interested and involved in development education in the UK. The DEA does
not provide any specific advice or information on linking but can help with
putting people in contact with others who might be able to help. They can

also advise on resources and global aspects of school curriculum. They have contacts of all the Development Education Centres in the country.

Local Government International Bureau   Tel 0171 664 3117
35 Great Smith Street   Fax 0171 664 3128
London   Email: karen.wiebrock@lgib.demon.co.uk
SW1P 3BJ   Website: www.lga.gov.uk

The LGIB is the international and European affairs arm of UK local government and acts as a central clearing house for twinning and international co-operation between local authorities in the UK. It is currently managing projects on decentralised co-operation in Africa and co-manages a development education project in the UK.

OXFAM   Tel 01865 313 600
274 Banbury Road   Fax 01865 313 770
Oxford   Email: oxfam@oxfam.org.uk
OX2 7DZ   Website: http://www.oxfam.org.uk

Oxfam has over 21 years experience of running a development education programme, which for the last 15 years has worked specifically with educators in the formal sector at a range of levels to bring about curriculum change. It produces a vast range of educational resources; call the supporters information line for more details.

Commonwealth Linking Trust   Tel 0171 498 1101
Commonwealth House
7 Lion Yard
Tremadoc Road
London
SW4 7NQ

An educational charity which arranges links between schools so they may exchange educational materials. During the past 25 years over 3000 schools have been linked in 40 commonwealth countries. Once a partnership is established, CLT remains in touch to advise and help in case of difficulty.

Website: /www.cyec.org.uk/

Commonwealth Youth   Tel 0171 498 6151
Exchange Council   Fax 0171 720 5403
Same address as above.

An educational charity which promotes two-way youth exchanges between locally-based groups of young people.

Council for Education World Citizenship   Tel 0171 929 5090
Information Officer   Fax 0171 929 5091
15 St Swithin's Lane   Email: cewc@campus.bt.com
London   Website:www.cewc.org
EC4N 8AL

CEWC is an independent educational charity founded in 1939 which helps young people understand and confront global issues and challenges. It works with a range of groups to provide activities for students and teachers, conference packs, resources for teaching and a speakers service. Call for an information pack.

Geographical Association   Tel 0114 296 0888
160 Solly Street   Fax 0114 296 7176
Sheffield   Website: http://www.geography.org.uk
S1 4BF

The GA is the national subject teaching organisation for all geographers. It works to provide curriculum support for teachers. The GA's international committee tries to put interested schools in touch with one another.

Development Education Department   Tel 0171 917 7000

for International Development   Fax 0171 917 0016
94 Victoria Street   Email: library@dfid.gtnet.gov.uk
London
SW1E 5JL

The Library Enquiry Point provides lists of NGO's, country factsheets and information. Do not produce educational resources but they sponsor Worldaware which does (see below).

Worldaware   Tel : 020 8763 2555
Echo House, Ullswater Crescent,   Fax: 020 8763 2888
Coulsdon, Surrey CR5 2HR   Email: info@worldaware.org.uk
                    Websites: www.worldaware.org.uk/education
Worldaware's aim is to help people in the UK to understand better what needs to be done to rid the world of absolute poverty and promote the kind of development from which all the world's people can be gainers in the long run. Its activities begin with young people in primary schools and extend to the makers of policies that bring about major economic and social changes. They assist schools, work with the business community and the media.

0131 557 60870131 557 1499Courtyard RoomsSimon Laurie HouseEH8 8.

9.4 These aid agencies produce resources, advise teachers and work on education projects both in the UK and other countries:

ActionAid   Tel 0171 281 4101
International Education Officer   Fax 0171 263 7599
Hamlyn House   Email: katem@actionaid.org.uk
Archway   Website: http://www.actionaid.org
London
N19 5PG

Catholic Fund for Overseas Development   Tel 0171 733 7900
Romero Close   Fax 0171 274 9630
Stockwell Road   Email: cafod@cafod.org.uk
London
SW9 9TY

Christian Aid   Tel 0171 620 4444
PO Box 100   Fax 0171 620 0719
London   Email: info@christian-aid.org
SE1 7RT

Save The Children   Tel 020 7012 6400
Education Centre
1 St John's Lane   Website: www.savethechildren.org.uk
London
EC1M 4AR

Voluntary Service Overseas (VSO)   Tel 020 8780 7200
317 Putney Bridge Road
SW15 2PN   Email: enquiry@vso.org
                                    Website: www.vso.org.uk

VSO produce guidelines on setting up school link

PracticalAction
Previously the Intermediate Technology Development Group

                                        Telephone: 01926
634510
                                              Fax: 01926
634401
                Email: practicalaction@practicalaction.org.uk
                                Website:
http://practicalaction.org

9.5 Journals

Development Education   Tel 0171 490 8108
Development Education Association   Fax 0171 490 8123
DEA,CAN Mezzanine   Email: dea@dea.org.uk
32-36 Loman Street
Website:www.dea.org.uk London SE1 0EH

Journal of Research in
Environmental Education   Website:http://jri.sagepub.com

Section 10
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