

FINAL REPORT
Darwin Initiative
**Caribbean Conservation Association/
Field Studies Council**

Coral Reef biodiversity in the Caribbean – the schools education project
Project No. 162/7/104

Submitted in March 2003 by:

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SUMMARY & APPENDICES 1-5

Summary

- 1.1 The main goal of this three year project (1998-2001) was to raise awareness of coral reef biodiversity through the production of two education packs and identification key for use in Caribbean and UK schools, associated with local schools-based conservation projects in the Caribbean.
- 1.2 The Caribbean project was based on partnerships at regional and local level in six countries in the region.
- 1.3 The project involved several distinct phases: training for developers; production and trailing of packs; local teacher training and schools based projects; publication and dissemination of the packs.
- 1.4 All outputs were achieved and there is strong evidence that the environmental education methodology incorporated in the packs will continue to be used in some countries. There were, however, weaknesses which could have been avoided.
- 1.5 The lasting legacy will be the 'good practice' established by the training and partnership process. The process was as important as the publications and it will be used as a template for the development of other environmental and community-based projects.
- 1.6 The UK education project was also successful because of its close link with A level curriculum developments.
- 1.7 A strong recommendation for the future is to use a similar training and partnership process in sectoral projects in the Caribbean.
- 1.8 Several revisions are suggested for similar projects in the future.

2. Achievements

2.1 Demonstrating that partnerships can work

There were real strengths to this project which were consistently referred to both during the project and in the end-project reviews (see section 5 below). These were often linked to the process of building and maintaining partnerships, both at regional level (between the development team for example) and within countries (between the NGOs and teachers in particular). Furthermore, the supportive relationship between the UK team and the Caribbean partners was also seen as very important. The 'flexible and trusting' relationship with the funding agency was highlighted as a strength of the project (see Section 5). The reviews with partners showed that all felt that local consultation had been very influential in modifying plans to suit local circumstances. However, the fact that there was some 'imposition of the things that needed to be done' was also seen as positive, although it was 'hard work at the time' (eg. Writing Workshop, see Section 5).

"Democracy is a slow and expensive process but it produced better people and better resources as a result". CCA, July 2001.

These features were identified also by an independent Department for International Development (DFID) report in 2001 (see Appendix XIII), which commented,

'The Darwin Initiative 'Coral Reef Biodiversity' project is an excellent example of capacity building through international collaboration.'
'Collaborative work between agencies on particular programmes may help to build capacity which impacts beyond those programmes. An example is the Darwin Initiative 'Coral Reef Biodiversity in the Caribbean: a schools education project.' Which has involved NGOs in six Caribbean countries, the Ministries of Education in those countries and external participants'. DFID February 2001

The choice of the participating partners was important. The Caribbean Conservation Association (CCA) is a network of non-governmental organizations, governments and individuals committed to conserving the region's natural resources. This project, therefore, built on an existing structure. CCA was able to contact many of its members to invite them to participate in the project. It secured the necessary five NGO institutions and a sixth one was added after their enthusiastic request to be included (see Appendix II for the list of participating institutions). One of the first responsibilities of the NGO participants was to engage the local agencies responsible for education in order to get these stakeholders involved at the outset of the project. Contacts with schools were then established (Appendix

III). Consequently, the Caribbean partnership gave the project its structure and yet maintained a local autonomy to direct the project method and outputs.

Summary of partnership outputs

1. 67 days spent by six different UK staff in delivering project training and development work
2. Formal agreements with CCA and six Caribbean NGOs
3. Partnerships maintained throughout duration of the project

2.2 Building a strong and sustainable training base

The workshop training, including the three international workshops for development team members, and the within country teacher training workshops, were identified as key events by all levels of participant (see Section 5).

The Development Team came together at some point during the project in every country except for Jamaica. Training Workshops for the Team were held in UK, BVI and Antigua. These workshops were critical for maintaining the regional dimension of the project. They also sustained and encouraged some mentoring between team members – something which will be important in sustaining regional projects in the future.

Teacher training workshops and projects were also carried out in all six of the Caribbean countries represented in this project. These were very important in building awareness and transferable skills in active learning methodologies and the opportunities associated with them. The practical 'hands on' training helped to build confidence. The team building which they developed and nurtured was viewed positively and enthusiastically 'though some teachers felt that the training could have been longer and more intensive. The need for events such as these is particularly acute in situations where communication may otherwise be difficult. Although active communication between FSC and CCA was maintained throughout the project, it remained more problematic between Development Team members, and within the countries between NGOs and teacher/community groups.

'Planning for evaluation and the development of transferable evaluation skills can be key processes in any environmental education programme and can lead to significant capacity building. The Darwin Initiative 'Coral Reef Biodiversity in the Caribbean' programme which has involved NGOs in six countries, is notable for providing training in evaluation for the development team. The evaluation skills are transferable to other educational work.' DFID February 2001

Summary of training outputs

1. 189 training days provided for 6 Caribbean development team members and 1 project manager through three workshops (1 in the UK and two in Caribbean countries)
2. A total of 18 UK staff involved in project training, including 6 working in the Caribbean
3. 138 training days provided for 53 teachers through workshops in six Caribbean countries

2.3 Providing flexible and targeted resources

In addition to the training described above, the main outputs of the project were two education packs and an identification guide. In producing these, the project has made a real impact. Each of the three main resources is described below:

2.3.1 In the Caribbean. *People and Corals: An education pack for Caribbean primary schools.* The Cover and Contents list of this pack are reproduced in Appendix XX, and the full pack is attached to this report. 500 copies were produced, with copies being distributed throughout the Caribbean. The pack was evaluated by 23 schools in the six countries and was revised following this feedback. It's strength lies in its flexibility, cross curricular nature, curriculum links and the use of training to support its implementation. This remains the only regional pack of its kind in the Caribbean and is to become the template for educational development of other projects by CCA. Two years after its publication its use is still being promoted by some of the NGOs involved in the project (see Review section 5) and will shortly be reprinted. The identification key *A guide to Caribbean food fishes* has already been reprinted, following from the 500 copies printed as part of the Darwin Initiative project.

2.3.2 In the UK. 1000 copies of the A level book *Coral Reefs: an ecosystem in crisis?* were published as a commercial project and sales income will support a second print run. Interest in the book was stimulated by associated work in curriculum development (see below) and articles in widely read educational resources and magazines such *GeoFacts* (1,100 school subscribers) and *Geography Review* (23,000 subscribers) (see Appendices XXIII and XXIV). The increased prominence of coral reefs in the A level curriculum (see Education section 2.4 below) will help to secure this interest in the future.

Summary of resource outputs

1. 'Education sustainable development' training manual and materials produced and distributed to development team members in six Caribbean countries
2. 'Writing and Evaluating Education Resources' training materials produced and distributed to development team members in six Caribbean countries
3. 'Training Teachers' training materials produced and distributed to development team members in six Caribbean countries
4. 500 copies of *People and Corals: An education pack for Caribbean primary schools* published and distributed in six Caribbean countries; publication of second print of 1000 imminent, to be sold commercially thus generating income for CCA

5. 1000 copies of *A guide to Caribbean food fishes* published and distributed; further 2000 copies published, to be sold commercially thus generating income for CCA
6. 1000 copies of *Coral Reefs: an ecosystem in crisis?* published and distributed to UK schools

2.4 Supporting innovative education

This project had educational impacts in schools in the Caribbean and the UK.

2.4.1. In the Caribbean. The 'active learning' methodology adopted in the training and resources is new to most Caribbean teachers, and NGO staff working with schools and communities. The first development team training workshop was, therefore, seen as highly beneficial to the team, and the excitement generated during the out-of-classroom training helped to generate the enthusiasm and impetus that flowed through the remainder of the project (see Personal reviews- Section 5). In many ways it was the 'glue' that held the team together. These skills will provide a sustainable base for future projects. The teachers in schools were also engaged by these approaches (see Teachers reviews- Section 5), and there was some evidence of sharing the skills and approaches within schools, and enthusiasm being seeded for similar projects in the future. One science teacher noted that *her social science teacher had borrowed the pack after students had talked enthusiastically about it... she incorporated some activities into her pollution and tourism lesson!* There was evidence that the packs were still being used after the project had ended. The project has produced a unique education resource which is now being held up as an example which should be followed in other projects (see Reviews – Section 5).

However, there were also signs that the novelty of the active learning approach also weakened the uptake in schools where teaching and curricula are still based on didactic pedagogy. The teachers and development team members felt that this would only be counteracted by more extensive and continuous training for local teachers, with support at higher levels by curriculum developers and government agencies. Although the running of this project was supported by Ministries of Education in all six participating countries, there was no sustained effort to integrate the approaches at policy or curriculum level – this was never intended as part of this project. A future project could give more attention to engaging at the higher levels, but this activity should not deflect the energy at schools and community level which was sustained by the very 'bottom up' approach of this project. The 'top down' links should be relatively unintrusive. For example, the formal launch of the schools pack at the CCA AGM in October 2001 helped to raise the profile of the pack and its methodology with at least one Minister expressing the intention to adopt the packs. The event was commemorated on the front cover of the Barbados Ministry of Physical Development and Environment's 2003 calendar. In retrospect, similar events at the outset of the project may

have increased the exposure, and policy-level integration, of the project to a greater extent than was achieved.

2.4.2. In the UK. The impact in the UK has been a real success and shows how 'top down' and 'bottom up' approaches can be integrated. The project was able to work with a very senior and influential chief examiner for the largest A level geography examining board. This has meant that the A level book has been well received and is selling well – it will be sustained because it is now a commercial project, integrated into 'mainstream' education. The project has influenced curriculum content, and coral reefs now sit alongside tropical rainforests as habitats to be studied. This, in turn, has led to the production of other supporting resources such as Geo Factsheets (1100 schools' subscribers) and an article in the widest read A level geography magazine, *Geography Review* (21,000 subscribers). Coral Reef case studies are also likely to appear in future examinations. The use of the Soufriere Marine Management Area also enabled this project to build on the work carried out during a previous Darwin Initiative project.

2.5 *Building foundations for future projects*

The likelihood of the project's impact being sustained can be reviewed at a number of levels:

2.5.1. Institutional.

2.5.1.1. Regional. The end-project and post-project reviews (Section 5) show that the project did have immediate benefits, some of which will be sustained. The project was critical for the CCA, and helped it to survive through a very difficult period (see Chief Executive's letter, March 2001 – Appendix XXVIII). Furthermore, the development process and publication of the education packs has provided an impetus and focus which could help to maintain the CCA's status as the only umbrella body of its kind in the Caribbean (see Section 5). This is of regional importance.

'This project has arrived at a time when CCA was going through a real identity crisis. At one time this was the only project that CCA was doing and the fact that this was a real project (not a putative exercise) gave confidence to staff and members.'

The project has created something that is marketable for CCA'

'This book is real'

'The project has helped to strengthen partnerships with members. At the AGM in 2000, EE came back as a central role for CCA to its members': CCA Chief Executive, July 2001.

The "People and Corals" resource pack was distributed to the participating countries in the first instance and the impending publication of the second edition (secured with additional funds by CCA) promises wider distribution within the English speaking Caribbean. The sustainability and success of this project is further shown with the call from French Antilles CCA members to

produce a French edition for use in primary schools in Guadeloupe and Martinique.

Furthermore, the project's design may be used as a template for other regional projects, including the second phase of a regional global warming project. This *Public Outreach and Education* phase is in preparation at present.

The Darwin Initiative sees itself as a leverage mechanism. In this project there was a requirement to raise an additional [REDACTED] to support various activities. This target was exceeded, with a total of [REDACTED] being raised; details are shown in Appendix XXX.

Summary of financial outputs

[REDACTED] raised in addition to Darwin Initiative funding to support project activities

2.5.1.2. Within country. The institutional reviews (see Section 5) show that the project's process which built on co-operation and partnership, at regional and local level, is an important legacy which will be used as a template for future work in some of the countries involved. The fact that six NGOs were able to engage 23 schools in local education and conservation projects was indicative of the project's success. Examples of this work are shown in Appendix XXXI. At least some of the local partnerships between NGOs and teachers/schools have been sustained and there is evidence that this will continue to grow in some areas, for example with Environmental Awareness Group's work in Antigua.

2.5.2 Personal. The long term impact of the training on the personal development of the majority of the team members and teachers involved in the local schools projects is unknown but the end-project reviews of three team members and teachers in two countries shows that the impact will have been significant. The introduction to cross-curricular 'active learning methodology' and fieldwork opportunities was particularly important. The career choice of at least two of the Development Team members has been influenced by involvement with the project:

'As a result of this project I feel my role as an educator is set more firmly (and formally). I intend to get a teaching qualification in order to bring EE (environmental education) into everyday classrooms.' Development Team member, July 2001

3. Project Details

The full application submitted to the Darwin Initiative is appended – see Appendix I

3.1. Title

Coral reef biodiversity in the Caribbean – the schools education project

3.2 Project background/rationale

The Year of the Reef was celebrated in 1997. However, primary school teachers in the English speaking Caribbean had very few educational materials available to help students to learn more about the vital biodiversity 'hot spots' in their own islands and regionally across the Caribbean. The need for resources and supporting training was recognized following discussions between the Field Studies Council and Caribbean organizations. A similar need in UK curricula was also identified; whereas considerable emphasis was given to rainforests as examples of tropical biodiversity-rich habitats the educational coverage of coral reefs was sparse. Therefore, this project also set out to provide educational materials for upper secondary students in UK schools.

3.3 Project purpose

To increase the awareness and understanding of the importance of the biodiversity of coral reefs through the production of school curriculum materials, teacher training and school- and community-based conservation projects in the Caribbean and the UK.

3.4. Project objectives

The overall project objectives were as follows:

- To increase student awareness of bio-diversity and coral reefs through the development of 2 active-learning resource packs for use in schools in the Caribbean and the UK;
- To increase the capacity of teachers to introduce active learning and first hand investigation into the school curriculum;
- To have a positive impact on the preservation of coral reefs through the development of local school based conservation projects in Caribbean islands;
- To provide resources to help local communities understand their local biodiversity and explore ways of maintaining and using those natural resources;
- To bring knowledge and understanding of Caribbean coral reef biodiversity and the issues involved into the UK school environment.

To achieve these objectives, the project was structured to include four distinct phases, each of which had its own purposes, activities and outputs. These are described in detail in the original proposal (see Appendix I), but following agreement with the DI secretariat the sequence of events was changed, to enable training of Caribbean teachers, trialing of the junior schools packs and schools' projects to be carried out in a more coherent way. This involved a slight revision of the chronology of events, but did not affect the overall outputs. The revised phases are summarized here:

1. Research, Development and Team Training
Agreement by Caribbean Conservation Association (CCA) to manage and co-ordinate the project in the Caribbean; appointment of local project officer by CCA; confirmation of project structure and priorities through scoping visit and needs analysis with Caribbean partners; agreeing partnerships with local bodies in Caribbean and establishing local development team from six island states (see Appendix II); UK based training workshop for Caribbean development team (Workshop 1 - see Appendix IV); production of preliminary materials, resources and draft identification key.
2. Development of Resource packs
Development Team 'Writing Workshop' in British Virgin Islands (Workshop 2 - see Appendix V), and subsequent editing by team, to produce trial draft of the Caribbean junior schools coral reef education pack (see Appendix V) and identification key; production of trial UK A level resource pack (see Appendix VII).
3. Teacher Training, Trailing of Resource Packs and Local Schools' Projects
Development Team 'Teacher Training Workshop' in Antigua (Workshop 3 - see Appendix VIII); local teacher training workshops in six Caribbean Island States following agreed model developed and trailed with teachers in Antigua; trailing of draft materials in Caribbean and UK schools; evaluation of packs using approaches agreed at the Antigua workshop (see Appendices IX-XI); 'education for sustainable development' projects based in primary schools in six Caribbean Islands; publication and dissemination of final resources (see Attachments: I - the Caribbean primary schools pack; 2 - Caribbean food fishes identification key; 3 - the UK schools A level pack).
4. Review
UK and Caribbean based evaluation of project.

4. Reporting

Progress of the project was reported formally through the six monthly (interim) and annual reports in 1998/99, 1999/2000 and September 2000. These reports are included in Appendix XII. This final project report replaces the annual report 2000/2001 and was postponed after the project's review was extended with the agreement of the DI secretariat.

5. Reviews/evaluations

Many of the outputs of the project were reviewed/evaluated separately, and the evaluations have been included in this report, either in their entirety, or as examples of the responses received. The project's whole approach to evaluation - including its incorporation into the development team's training to ensure transferability to local teachers as a generic skill - was cited as an example of 'good practice' which could be adopted worldwide by projects sponsored by the UK government's Department for International Development (DFID) (see Appendix XIII). Details of reviews carried out are reported below.

5.1 During project

5.1.1 Development team training workshops: reviews are incorporated in Appendices V and VIII.

5.1.2 Teacher training workshops: All workshops were evaluated by the participating teachers. Examples of evaluations from the St Lucia workshop are included in Appendix IX.

5.1.3 Materials: forms which were used to evaluate the two education resources are included in Appendices X (Caribbean primary schools pack) and XI (UK schools A level pack). The former was completed in the presence of the local Development Team member so that anecdotal responses could also be elicited. An example of the responses from some St Lucia teachers are also appended – see Appendix XIV.

5.2. Final project reviews

5.2.1 Institutional/partners. The long-term sustainability of DI projects depends on the skills, knowledge and activity generated during the projects' lifetimes being sufficiently embedded at personal, community and institutional level to be continued or developed when funding ceases. The final project evaluations tested this thesis, using personal interviews in the Caribbean in July 2001 with senior and project staff representing the CCA, DCA and EAG. These were chosen because travel and budget constraints only allowed for a sample of team members to be personally interviewed in depth. The evaluation questions and results are presented in Appendices XV-XVI. Overall, there was strong evidence that the DI project has left a good foundation for institutional development in the future. The particular strengths of the project have been discussed in an earlier section (see Section 2). However, Henry Shillingford, Executive Director, Dominica Conservation Association, 29th July 2001 provides an example of the anecdotal comment received during interviews:

'Overall, this project has dovetailed neatly into the overall DCA programme/development and has been a "very positive experience for DCA." Coral reef conservation is a key area and this project has helped DCA to focus on education in its coral reef work. DCA changed its summer camp – it is now more active, "hipper" ... more outward bound oriented. IFAW funds were used for floating classrooms to whale watch and use glass bottom boats for observing live coral reefs. The project was a platform for these developments and teaching the teachers was a prime need. Also the different approaches to teaching showed definitely that "this was the way to go". The project dealt with social issues which made real links with schools, not just environmental issues. DCA was looking towards developing its human resource capacity and DI has given Tammy (Tammy Williams was the DCA Development Team member) good training - an essential recompense since DCA cannot pay her a good salary. DCA was able to work with Peace Corps in developing an outreach programme that will be sustained because of Tammy's training. It is critical for Dominica to develop its human resources. When DCA joined the DI project it was reviewing its Environmental

Education provision so the project came at a good time. In the future, maybe the teachers training programme could have been more intense. Tammy would also like to develop her training in marine and terrestrial ecology and do an open water diving certificate.'

5.2.2 Personal reviews – Development Team members. These were carried out as personal interviews with CCA, EAG and DCA staff during the same period (July 2001) as the institutional reviews described above. The personal reviews focused on five key areas:

- Overall impact of the project on the individual;
- The impact of the DI workshop training (three workshops covering education for sustainable development (UK), writing and trailing education resources (BVT), and teacher training and evaluation methods;
- Four main positive aspects / features of project;
- Things that could have been done differently?
- Will the project have changed the way you work (in relation to biodiversity conservation)?
- Any other comments.

Summaries of the interview transcripts are provided in Appendix XVIII. These provide strong indications that the team members have benefited from personal development as a result of the project, and that some of these personal gains will ensure that the ethos and approaches used in the project work will continue to be used in the future, 'though not necessarily in coral reef conservation or in the Caribbean region. Also, the personal skills will be transferred to other institutions.

5.2.3 Teachers. Two groups of teachers were interviewed in Antigua and Dominica in July 2001. These teachers had been involved in the training workshops, resource evaluations and local conservation projects and were chosen as being representative of teachers in other Caribbean Island States. The interviews were structured around six key questions, but teachers were also given an opportunity to offer further comments/suggestions. The questions are shown in Appendix XVIII, and summarized transcripts of their responses in Appendix XIX. Again, there was strong evidence that the active learning approaches would be used in the future, but further training and more extensive post-workshop support would have improved their application within schools considerably.

5.3. Post project

In addition to the reviews carried out with teachers and partners immediately after the project ended (see above), a final de-brief was carried out in February 2003 through i) personal interviews with the past and present CCA Executive Directors in Barbados, and ii) telephone conversations with staff at the Environmental Awareness Group and Barbados Museum.

5.3.1. The CCA. This was an informal repeat of the CCA institutional review carried out previously, but focusing on the legacy of the project and the likelihood of it being sustained.

A previous DFID review of this, and other, environmental projects in the region had expressed concern that projects such as this could introduce tensions into the operating priorities of bodies such as the CCA (see Appendix XXIII):

'To the extent that innovative environmental education is initiated by environmental organisations there is a problem that, as benefits become absorbed into the educational mainstream, the sponsoring organisation has difficulty in matching the intervention to its mission. For example, the CCA is led to support teacher training by the logic of its educational interventions, but then has difficulty in justifying this in terms of its mission when the perceived benefits may reach beyond conservation and are difficult to measure.' DFID February 2001

This suggestion was strongly denied and the present Executive Director suggested the opposite was the case. This project enabled CCA to re-establish and re-confirm its original mission and provided a tangible product that has facilitated future development. The present CCA confirmed that 'there is tremendous demand for the packs' which is being stimulated by the CCA web site, local launches and personal contacts between teachers and NGO staff. The continuing local impact of the packs is being promoted by the Environmental Awareness Group in Antigua (for example at the recent CCA AGM in Trinidad). The Barbados Minister of Physical Development and Environment has expressed the opinion that the packs should go to all Barbados schools following the launch of the pack in Barbados; the profile of the pack is illustrated by its prominence on the title page of the Ministry's 2003 calendar. This immediate demand will be satisfied by the publication of another 1000 packs and accompanying identification keys which are being funded by three donors who have contributed \$32,000US: the US National Fish and Wildlife Fund; the Australian High Commission; and Barclays Bank. The books are to be printed in Trinidad; the keys have already been printed in the UK. The life of the pack will be sustained by income from sales. The pack (and project) has served to re-vitalise the education focus of CCA:

"This was tremendously important for CCA"

"Launching CCA's environmental education into the future"

"Consistent with what CCA should have been doing"

"Still providing a real focus for our work in schools and communities"

"It is a template for the future"

"We need to involve youth more – our membership is an ageing one"

CCA Executive Director, February 2003

There is strong evidence that the project – its process and products – will be used as 'good practice' which will be emulated in the future. CCA will be carrying out an intensive (4-5 day) forward planning session in March 2003 and *People and Corals* will be a 'feature of that programme', and this demand is 'being driven by stakeholders'. CCA are hoping to focus on mangroves and sea grass habitats and has already submitted an application to an international funder. These projects will be part of a public awareness programme with strong community links.

One issue which concerned the present CCA Executive Director is the need to keep the training benefits of projects such as this within the region. Whilst there is a high turnover of staff within NGOs, this 'shouldn't be a problem if the transferable skills were still available locally'. The CCA project manager was an expatriate who has since left the Caribbean, 'taking with her a technical resource which would have benefited CCA tremendously'.

Another issue raised was the need for projects such as this to evaluate the impact of the packs. This has not been carried out by CCA and will always remain a challenge in short-term (up to 3 years) project cycles.

Copies of the pack were distributed to the six Caribbean countries before the end of the project, followed by bulk sets for schools in four of the six countries. A disappointment is that the schools packs are still to be distributed by CCA to British Virgin Islands and Dominica. Concerns were expressed that the books should not simply be sent to 'collect dust, as with other projects'. CCA intended that their distribution should be accompanied by local launches, as in the other four countries. Local infrastructure weakness with one NGO and a failure to communicate with another of the host NGOs were cited as problems. However, the delay will probably mean that the packs will be ineffective when they are sent, unless accompanied by 'refresher' training. This is disappointing but is symptomatic of network projects which involve 'voluntary' organizations and participants in very dynamic cultural, political and economic situation. In these two cases, the network partnership which was such a strong feature of the project process has been exposed as a weakness.

5.3.2. EAG. Carole McCauley, the acting Chief Executive, is the sole development team member still remaining with the original NGO. She confirmed that the development team's training – particularly in the active learning environmental education methodology – is still being used in EAG activities in Antigua and has been extended from primary schools to secondary level. As a result of the involvement in the Darwin Initiative project the EAG had shifted its focus from working with schools to 'human capacity' building through working directly with teachers; this teacher training was now a core activity and was being sponsored at secondary level by the British High Commission. A June 2002 evaluation of the packs by Antigua primary

schools teachers showed that they were still being used by a core of teachers who appreciated both i) the fact that they were available – free and comprehensive resources are unusual in the Caribbean – and ii) their flexible content and approach which enabled teachers to pick and choose activities. At EAG events, *People and Corals* ‘would be the first choice of many teachers’.

The project process was very important and was fundamental to its success. It was ‘genuinely participatory’ and its ‘bottom up approach provided real opportunities for participants to link with local needs’. This contrasts with other regional projects which have imposed rigid constraints and can cause disappointment at local level. Attendance at other regional events, and involvement in other projects, has shown that there is still a big need in the Caribbean for training similar to that provided for DI development team members, in environmental education methodology and running effective teacher training workshops for example.

The involvement in the DI project – in particular the introduction to environmental education – had also influenced Carole to enroll for a two-year M.Sc Environmental Education course in Florida, beginning in June 2003.

5.3.3. Barbados Museum. Peggy McGeery, the Museum’s Director of Education confirmed that the primary schools packs were still being used ‘by some schools’ – to August 2002 at least. There had been no follow up since then, but informal contacts with teachers visiting the museum suggested that the *People and Corals* activities were being applied in schools and the close links with the curriculum, which involved ‘no extra teaching work’ made the teachers ‘glad for the book’. Class sets were requested by some teachers. The Museum linked them to outreach activities and the Director had promoted the resource at an international conference. Similarly, staff producing educational resources at the Barbados fisheries department had used the *People and Corals* approaches as a template for their project.

5.4 Independent evaluation

In 2001, DFID commissioned a report entitled *Mainstreaming Environmental Education in DFID Programmes* (Contract No: 000928). The Darwin project was reviewed as part of this global review and included a Caribbean field visit in February 2001. The report included a number of recommendations for DFID and several of these identified the Darwin Initiative project as an example of good practice. The main points identified have been referred to in Section 2 above, but are also given in Appendix XIII. Overall, the references to this Darwin project are very positive, and cite this as an example of good practice at regional level.

6. Recommendations for the future

Although the final publications and resources developed as part of this project have met with general approval and are likely to be copied in the future, it is the training process leading to their production which is proving to be a major legacy. Therefore, most of the recommendations listed below refer to that process, and suggest possible improvements.

For institutions

- The selection of team members and teachers was delegated to local partners. The Caribbean, as in many other developing regions, has a highly dynamic working population particularly amongst young junior staff and this does mean that training may be lost if those staff move elsewhere. This may not be important if the skills are generic and transferable and are kept within the sector/region. Six of the seven development team members have moved to other jobs, and two have moved out of the region. It is not known whether their experience has been cascaded sufficiently into their previous working environments to enable the local gains and new approaches to be maintained, but the most sustained activity seems to be in the only country where an original team member remains. Selection of staff for future projects should encompass a long-term view on maintaining regional and sectoral skills and staff retention.
- Improved dissemination of the project outputs may have been achieved by instituting some form of succession planning; formally requiring the cascading of training within NGOs or encouraging a within country 'buddying' system might have reduced the impact of staff leaving their posts. In reality, this may be difficult to achieve in smaller countries where staff numbers are very small.

For the Development Team

- The training process for the development team, and the way in which it cascaded into local teacher training and communities, was a major success. It provided a suite of skills that were used throughout the project, but also introduced a strong team ethos during the three workshop periods. There was a genuine feeling of personal and shared ownership which was mainly due to the consultative and participatory ways in which the training workshops were structured. Everybody could contribute actively. This was the 'glue' which held the project together and is a 'bottom up' process which could be used as a model for similar projects in the future.
- The workshops were critical because communication at other times was problematic. If more resources had been assigned to support regional travel the 'mentoring' role which was evident amongst some

team members could have strengthened the impact of the project even further.

- One of the requirements for this project was for team members to raise funds for local community projects. In retrospect, this was very demanding and should have been supported by more fund-raising training. Success in this area would have contributed greatly to the project's impacts being sustained. This is one area in which mutual support and mentoring amongst team members would have been very productive.

For Teachers

- The cascading of workshop training to teachers was partly successful and has resulted in a reasonable take-up of approaches and resources. In Antigua it has been successfully extended to other education levels and groups.
- Future projects may have more impact through the inclusion of more intensive teacher training, and if more resources were devolved towards post-workshop support.
- Timing of events needs careful consideration and did cause some problems where educational timetables and project milestones were incompatible. This needs to be considered for future projects.
- Although the resources were designed to be self-sufficient, they have highlighted the teachers' needs for more information – basic facts and figures which can support the implementation of EE.

For other education staff

- This project was never intended to be a general training vehicle for NGO staff involved in education and community projects, but it has illustrated the need for sectoral transference of EE skills in the Caribbean. Future DI projects in this area could help in achieving this.

Involvement of others

- The success of the UK element of this project was largely dependent on influencing the curriculum content and working with a UK team member who was innovative and influential enough to make this happen. Many teachers – particularly scientists - will argue that their subjects are overloaded and, therefore, "if it's not in the curriculum it's not important".
- The same pressures apply in the Caribbean and a closer association with curriculum developers and political decision makers may have led to a more rapid uptake of the packs in Caribbean schools. However, this influence can stifle debate and the development of innovative practice and would need to be uncoupled from the developmental process which was a major strength of this project.

7. Acknowledgements

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