

**DARWIN INITIATIVE  
A BIODIVERSITY ACTION PLAN FOR SANTIAGO, CHILE  
1995 - 1998  
FINAL REPORT  
LONDON ECOLOGY UNIT OCTOBER 1999**

**1. BASIC PROJECT DETAILS**

Title: A Biodiversity Action Plan for Santiago  
Contractor: London Ecology Unit  
Host Country collaborating institutes: Ministry of Housing and Urban Development  
 University of Chile  
Grant Round 3  
Grant value £77,296

**2. PROJECT EXPENDITURE**

**Table 1. Project expenditure**

	Expenditure	
	Estimated	Actual
Postage, telephone, stationery		
Travel and subsistence		
Printing		
Salaries		
<b>TOTAL GRANT EXPENDITURE</b>		

**3. PROJECT BACKGROUND/RATIONALE**

Need for the project

Prior to the Darwin Project, staff at the London Ecology Unit were invited to Santiago to provide training to Chilean professionals on urban nature conservation programmes. Much of this work targeted planners at the Ministry of Housing and Urban Development (MINVU). The City of Santiago suffers from a variety of environmental problems (e.g. air pollution, low groundwater table), including a lack of data on its biodiversity resource. The Unit collaborated with key staff at MINVU and within the University of Chile to devise a project to produce a Biodiversity Plan for the city.

Relation to conservation priorities in the host country

The project helped to meet obligations in the Chilean National Biodiversity Plan in terms of raising awareness of biodiversity issues in urban areas.

In terms of MINVU, the project aimed to provide detailed information on important wildlife sites in the city which could then be protected through the planning process. It was envisaged that new ecology policies would be drawn up in the revised Metropolitan Plan for Santiago to protect important sites. Therefore the project had a clear end-user in this respect.

**4. PROJECT OBJECTIVES**

**The project's objectives were**

- 1. To develop an ecological approach to planning and land management in Santiago, Chile.**
- 2. To provide specialist training in ecological survey methods and in techniques for management of habitats for nature conservation in urban areas.**
- 3. To assist in the setting up of a multidisciplinary forum to address and co-ordinate ecological issues on a strategic, city-wide basis.**
- 4. To assist in the production of a Biodiversity Plan for Santiago covering the protection and enhancement of important habitats and species, promoting the city's ecological resources and raising public awareness.**

These were met as follows:

- 1. To develop an ecological approach to planning and land management in Santiago, Chile.**

We sought to influence both the planning and management of land in Santiago. At the end of the three years we had achieved considerable influence in both areas. This was achieved by targeting key individuals for involvement in the project, particularly in terms of training in the UK. Ximena Oliva, Head of the Parks Department for the central 'borough' of Santiago trained with the Unit in London for 2 months in 1996: she has been very active in seeking to integrate ecological thinking into open space creation and management since her return to Chile. In 1997, Patricio Hermosilla, Head of Planning for the Metropolitan Region of Santiago (and responsible for the development plan for the city) trained with the Unit for 2 weeks. Again, he has been instrumental in introducing an ecological dimension into the main plan, both in terms of policies and the inclusion of sites. Also, crucially, our main contact in Santiago, Sergio Leon plays a key role within the Ministry of Housing and Urban Development: not only is he Head of the Park Programme, but also advisor to the Minister.

In addition to the work of individuals, the project has served to raise the whole profile of ecology within the city.

- 2. To provide specialist training in ecological survey methods and in techniques for management of habitats for nature conservation in urban areas.**

The initial phase of the project concerned training a Chilean ecologist in specialist surveys for urban areas here in the UK: this training was passed on to other surveyors in Chile. Our approaches in London were adapted for use in Santiago. This resulted in the first ever successful ecological survey of a South American city.

- 3. To assist in the setting up of a multidisciplinary forum to address and co-ordinate ecological issues on a strategic, city-wide basis.**

The project set up an Ecology Forum for Santiago. This consisted of representatives from Government departments (the Ministry), national conservation bodies, local government, universities and institutions.

- 4. To assist in the production of a Biodiversity Plan for Santiago covering the protection and enhancement of important habitats and species, promoting the city's ecological resources and raising public awareness.**

The project culminated in the production of a draft Biodiversity Plan for the city. This plan consisted of a detailed report on over 100 sites of nature conservation importance in Santiago which was issued to the 33 local government municipalities (boroughs) for consultation. As a result of this consultation, a revised list of sites, or 'Areas Naturales', was issued in August 1999, together with a draft policy for their protection. This draft policy is now subject to consultation.

Therefore, the work has resulted in the creation of a new land use open space category for Santiago - Natural Areas - with a new policy for their protection.

The project was promoted through the local press in Santiago and papers have been presented to International conferences in Chile.

## 5. PROJECT OUTPUTS

Specific outputs in terms of Darwin Report codings were not specified in the original bid. However, for the purposes of this report, outputs have been derived from the original objectives and the table on the following pages sets out expected outputs against achieved outputs.

Table 2 shows that all the main outputs were achieved. The project kept to its agreed objectives throughout the 3 year period.

### Assessment of achieved outputs

In general, the Project was very successful in meeting its objectives. From the comparison presented in the above table, the achieved outputs were slightly different in some areas, to those originally envisaged. The main change was regarding 'Number of people receiving training/time spent in host country by UK staff'. The original programme was changed slightly to train a wider range of Chilean professionals (including key players in the project) and to reflect personal circumstances of the trainees. In increasing the number of trainees from Chile to the UK, we had to reduce the number of visits of UK staff to Chile (and time spent there). The total number of training weeks in the UK was reduced - the original level was too high (e.g. 6 months was too long for one person to train in another country away from their family, work etc.). The alterations proved to be highly beneficial to the success of the project.

The training budget was underestimated as we failed to allow for the cost of trainees attending conferences and seminars. Reducing the number of training weeks also helped in this respect.

**Table 2. Expected versus achieved outputs**

Original target output (using Darwin output codes)	Achieved
<u>TRAINING OUTPUTS</u>	
<u>6a. Number of people receiving training</u>	
(i) 1 Chilean ecologist/planner training in UK for 6 months (ii) 2 Chilean park/open space managers to train in UK for 3 months (iii) UK staff to spend 2 weeks in Chile providing additional training.	(i) 1 Chilean ecologist trained for 3 months in UK. (ii) 1 Senior Chilean environmental planner trained in UK for 1 month. (iii) 2 open space managers/green architects trained in UK for 2 months. (iv) 1 Senior Chilean Planner trained in UK for 2 weeks. (v) UK staff provided 2 weeks training in Chile.
<u>6b. Number of training weeks provided.</u>	
Total training weeks in UK: 48 Total training weeks in Chile: 2	Total training weeks in UK: 34 Total training weeks in Chile: 2

<p><u>RESEARCH OUTPUTS</u></p> <p><u>8. No. of weeks spent by UK project staff on project work in host country.</u></p> <p>Weeks in host country expected: 6</p> <p><u>9. Action plans produced for host country</u></p> <p>Production of Biodiversity Plan for Santiago.</p> <p><u>10. Formal documents produced to assist work related to species classification or recording.</u></p> <p>Survey methodology for Santiago</p> <p><u>11. Number of papers published.</u></p> <p>Papers would be published as part of publicity for project.</p> <p><u>12a. Number of databases established in host country.</u></p> <p>Establish a city-wide database of habitat types.</p>	<p>Weeks in host country achieved 4</p> <p>Draft Biodiversity Plan produced for consultation, with new ecological planning policies.</p> <p>Urban ecological survey format produced for Santiago.</p> <p>Paper published in Landscape Design No.255 November 1996 'Urban parks programme and the Darwin Initiative in Chile'.</p> <p>Paper (in press) in the Proceedings of the Fourth International Symposium on Urban Wildlife Conservation, University of Tucson, USA (1-5th May 1999): 'Biodiversity Action Plans in Santiago, Chile and London, UK'.</p> <p>Database of ecological information and important sites established for Santiago following the survey.</p>
<p><u>DISSEMINATION OUTPUTS</u></p> <p><u>14. Conferences/seminars/workshops.</u></p> <p>Would form part of publicity for project.</p> <p><u>15. Press releases/ publicity articles.</u></p> <p>Would form part of publicity for project.</p> <p><u>17. Dissemination networks established or</u></p>	<p>Two papers presented to International conference in Chile in 1995. Two papers presented to National conference in Chile in 1996. Reception held at the Linnean Society in London in 1996. Director of London Ecology Unit attended reception at British Council in Chile in 1996 in honour of the Chilean President. Paper presented at International Conference in Chile in 1997. Major launch and reception for the consultation report in Chile 1998.</p> <p>Paper presented at International Symposium on Urban Wildlife, USA 1-5th May 1999.</p> <p>Two articles in local government newsletter in UK in 1996 and 1997. Major article in national Chilean newspaper on the results of the project and launch of the draft report 1998.</p>

<p><u>enhanced.</u></p> <p>The project aimed to set an environmental forum in Santiago in year 1.</p> <p><u>18. Television programmes.</u></p> <p>Would form part of publicity for project.</p>	<p>The Forum was established year 1 and held regular meetings throughout the period. In addition, the project's development was also disseminated through the existing London Ecology Committee in the UK.</p> <p>Interview on the national Chilean news (Channel 7) on the launch of the draft report in 1998.</p>
<p><u>FINANCIAL OUTPUTS</u></p> <p><u>23. Value of resources raised from other sources for project work.</u></p> <p>None were expected, other than staff time and help in kind from the Project's collaborators in Chile, notably MINVU.</p>	<p>Considerable staff time and help in kind from MINVU (transport, stationary, office space, computer time and so on).</p>

## **6. PROJECT OPERATION/MANAGEMENT**

### Management problems

Despite being the first Darwin Initiative Project to be co-ordinated by the Unit, project management was fairly smooth. The following issues created the main problems:

i) Initial discussion of project programme and objectives with Chilean partners.

Although the general outline and objectives of the project were agreed with key individuals in Chile, the project would have benefited from a greater period of discussion of finer details. In this respect, certain flexibility of objectives and Darwin funding is useful.

ii) Selection of Chilean trainees.

The Unit was placed under some pressure from the Chilean Ministry of Housing and Urban Development with regard to securing a place for a particular trainee. All 5 Chilean professionals trained in the UK were suggested by our partners and 4 of these were immediately acceptable to the Unit based on either our knowledge of the individuals or their CVs. However, the fifth trainee who secured a place on the insistence of the Ministry turned out to be extremely suitable (in fact we have involved this person in our subsequent Darwin Project in Santiago following his successful training in the UK!).

iii) Commitment from Chilean partners

At the project outset, we expected considerable input from our Chilean partners. In the event, we were disappointed over a particular work item where we had expected greater commitment and funding from the Ministry. The Ministry were as helpful as possible, without actually providing the funding we were expecting. With hindsight, some sort of Memorandum of Understanding would have been useful.

iv) Financial transactions

We experienced some difficulties in setting up a bank account in Chile to pay staff wages, transferring money to Chile and in dealing with the local taxation system. These problems were eventually resolved satisfactorily and the British Council were very helpful in this respect.

### Training programme

Five Chilean professionals received training in the UK. All trainees were based at the Unit where they worked with staff and visited appropriate projects in London and the UK. Each trainee had an allocated member of staff at the Unit responsible for their programme and were expected to produce a report of their experiences (see attached information). Individual training programmes are outlined below:

**Christian Von Bohlen, Ecologist.** Trained for 3 months in Year 1. The training involved studying urban ecological survey techniques and the application of ecology to urban planning. A major objective of the training was the formulation of a survey proforma and methodology for the Santiago survey. Back in Chile, Christian supervised the ecological survey of Santiago and trained other local surveyors.

**Sergio Leon, Environmental Planner (MINVU).** Trained for 1 month in Year 1. Sergio was our main contact in Chile. His training concentrated on strategic ecological planning in urban areas.

**Ximena Oliva (Director of Parks, Municipal District of Central Santiago) and Hector Altimirano (graduate Architect, Parks Programme).** Trained for 2 months in Year 2. Training concentrated on ecological park management and included issues such as: an ecological approach in parks; safety; conflict with amenity use; green buildings; afteruse of landfill sites; trees; wildlife monitoring; environmental education; and wildflower gardening. Part of their training included examining projects in Sheffield and Liverpool.

**Patricio Hermosilla, Chief Planner for the Metropolitan Region of Santiago.** Trained for 2 weeks in Year 3. Patricio was responsible for producing the main land use plan for the area - the Metropolitan Plan for the Santiago Region. Therefore, he had an important role in drawing up the new ecological policies for Santiago (based on the results of the ecological survey) which would protect identified areas of biodiversity importance in Santiago. His training centred on strategic ecological planning in London and

approaches pioneered by the London Ecology Unit in association with bodies such as the London Planning Advisory Committee.

## **7. PROJECT IMPACT**

### Helping to meet Chile's Biodiversity Obligations

As the major centre of population in Chile, the project helped to meet the Chilean Biodiversity Plan's objectives of raising awareness. Biodiversity conservation in Chile has traditionally concentrated on various hotspots in areas remote from the vast majority of the population. The project aimed to develop a biodiversity programme for Santiago which, in turn, would raise awareness of biodiversity issues amongst a significant number of the national population.

The project achieved the following in this respect:

- the first ecological survey of a Chilean city (also a first for South America?);
- the first ecological Forum set up in Santiago;
- the first biodiversity sites to be identified in the Metropolitan Plan for the Santiago Region;
- the first biodiversity policies to be drawn up in the Metropolitan Plan.

The project was successful in training and influencing key individuals, in particular:

- Patricio Hermosilla - Chief Planner for the Santiago Region;
- Sergio Leon - Head of the Santiago Parks Programme and Advisor to the Minister (MINVU)
- Ximena Oliva - Director of Parks for the central Municipal District of Santiago.

All these trainees continue to work in their influential posts, implementing ideas and approaches learned through their involvement with the project. Prior to the project, there was very little ecological activity in the city. The Metropolitan Plan contained no nature conservation policies and there was little, if any, ecological input into park design or management. The project has been pivotal in helping to redress this situation - see main benefits, below.

Of the remaining 2 trainees, Hector Altimirano is a practising architect specialising in green buildings (he is currently involved in the design of biodiversity awareness centres in our second Darwin Project) whilst Christian Von Bohlen continues to run a private gardening firm whilst maintaining his ecological activities as an amateur naturalist.

### Main benefits

As a result of the project, Santiago has, for the first time, an inventory of the most important biodiversity sites in the Metropolitan Region, together with a wider habitat database of most of its open spaces. This information will form the basis for important sites to be identified in the revised Metropolitan Plan, together with policies for their conservation. As a result, the first ecological planning policies for the City have been drafted and published for consultation. In turn, this information will be important when considering future development proposals for the city.

In addition, the project has served to raise awareness of biodiversity in Santiago. This is a major benefit given the prominence of the city in Chile. The high profile nature of the project was demonstrated by the launch of the final report in May 1998. Speakers included the Vice Minister from MINVU and the Minister for Santiago. The launch was featured on one of the national TV Channels and generated a major article in a national newspaper. The British Embassy (Vice Ambassador) and the Intendente for the Region were also in attendance.

There has been several ecological initiatives within new parks in the city. As a result, the city now has its first native species nurseries and it is hoped that park design and landscaping schemes will now start to replace some of central Chile's native plant species.

As a result of the project, the Unit has successfully obtained a second Darwin grant to work in Santiago. Building on our collaboration with the Ministry and other bodies, the second project aims to develop Santiago's first nature reserve and first ecological park. Each of these sites will have a biodiversity awareness centre for teaching environmental education. A popular Guide Book on the Birds of Santiago will be produced. The British Embassy has offered its support to this project.

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**Key lessons to be learnt from the project experience**

*Maximise initial discussion with host partners.* Spending time discussing the project objectives and programme in detail before the bid is submitted is crucial for two reasons. Firstly, everyone is clear from the outset regarding their input - financial or otherwise. Secondly, it saves project time - avoiding discussing these issues in the first few months of the project once funding is approved.

*Memoranda of understanding.* Getting an agreement with partners over key issues such as commitment, funding, timing of works and selection procedures (for trainees) is advisable.

**Implications for future Darwin arrangements**

Maintaining a degree of flexibility with the Darwin programme is important - no-one can predict how situations may change in a host country during a lengthy project.

**11. PROJECT CONTACTS**

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## **End users**

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### Universities

Maria Kalin - see above

## **Project trainees**

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