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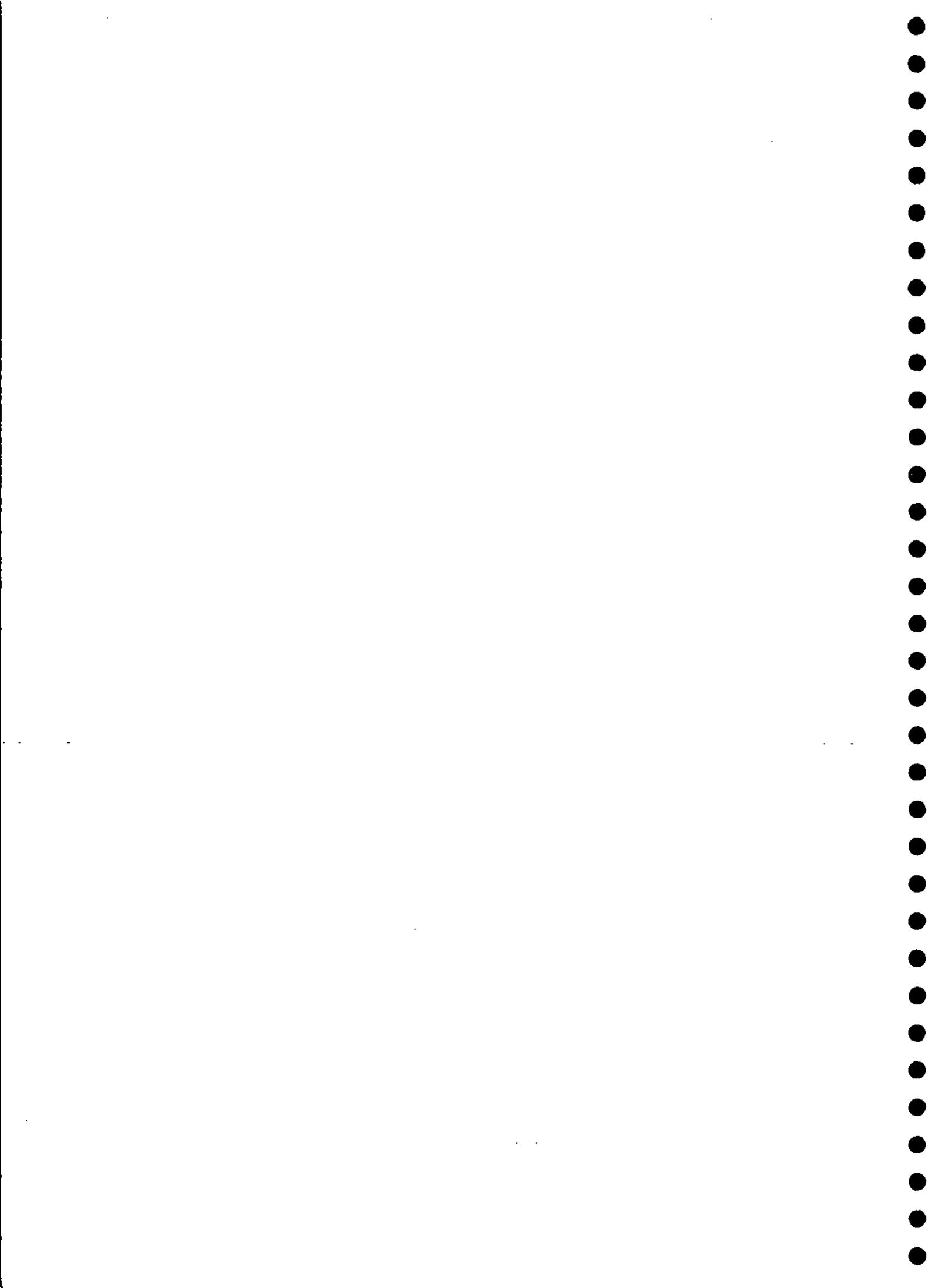
**The Anglo-Brazilian Amazonian  
Climate Observation Study  
(ABRACOS)**

**Report No. 12**

**Final Report on Phase 2**

**1 July 1995 to 30 June 1996**

**IH/ODA Report No. 96/09**





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# **The Anglo-Brazilian Amazonian Climate Observation Study (ABRACOS)**

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Final Report on Phase 2**

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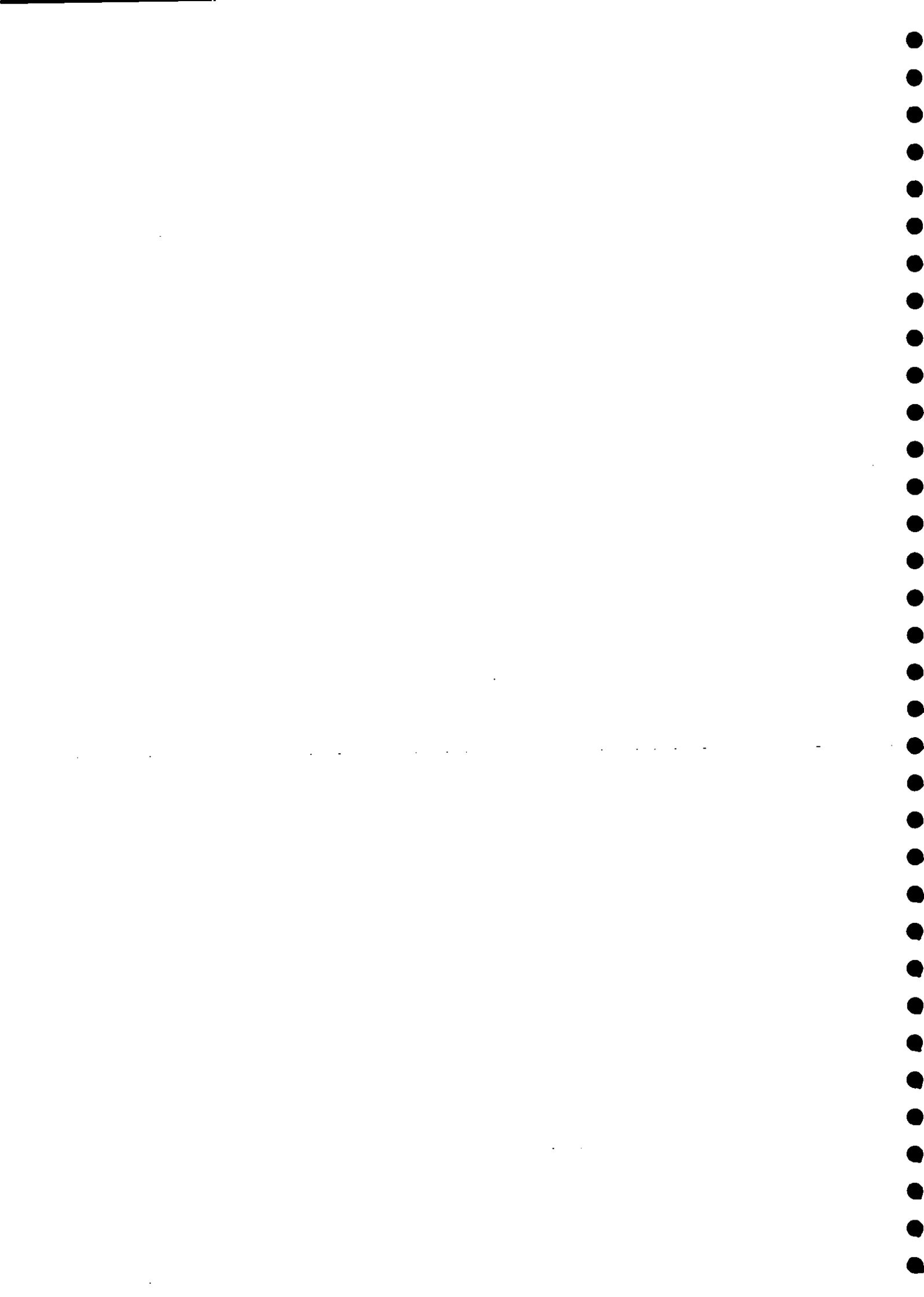
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**The Anglo-Brazilian Amazonian Climate  
Observation Study [ABRACOS]**

**Report No 12**

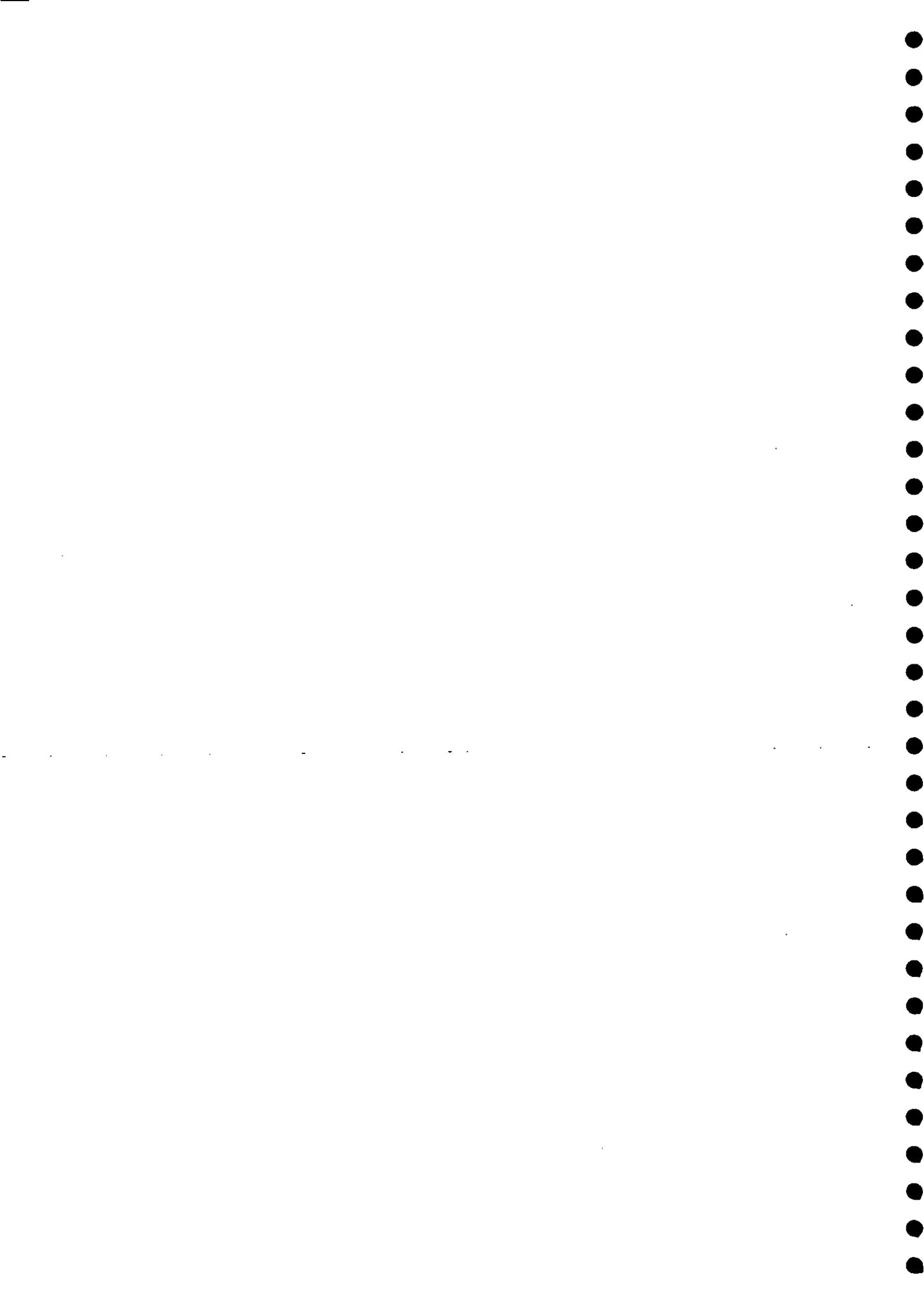
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1. Summary
  - i) The ABRACOS observing network has continued operations as planned
  - ii) The ABRACOS database is available via electronic transfer
  - iii) The editing and publication of the ABRACOS book is complete.
2. Introduction

The first phase of ABRACOS ran for the five years up to March 1995. The results of this first phase have been fully reported in report Number 10 and in the booklet "Amazonia: forest, pasture and climate, Results from ABRACOS". The project was granted a one year extension to enable the network of climate and soil moisture stations to continue operating in the run up to the Large-Scale Biosphere Atmosphere Experiment in Amazonia (LBA). The second phase also provided funds for the editing, production and purchases of the book resulting from the end of project symposium.

### 3 Achievements

#### 3.1 Observation network

The network of climate and soil moisture stations has continued to be operated as the responsibility of CPTEC, but with the stations in Manaus managed by INPA, in Marabá by the Federal University of Pará, in Ji-Paraná by INCRA and in Brasilia by the University of Brasilia. ABRACOS funding for operating the network ceased at the end of 1995. CPTEC have obtained Brazilian funding for the continued operation of the stations for the calendar year 1996 and data collection therefore continues.

The satellite transmitters for the automatic weather stations have been returned to the UK manufacturer for service and repair. These have now been returned to Brazil and are currently being re-deployed in the field.

#### 3.2 Data

Data from the network are continuing to be archived by CPTEC. The main ABRACOS database is now available by electronic transfer (FTP) from CPTEC for users in Brazil, and from the Institute of Hydrology for the rest of the world. The database will also be available on CD-ROM, released as part of an IGBP-BAHC initiative to make all available data relevant to the LBA experiment accessible in the public domain prior to the observational phase of that experiment.

#### 3.3 The ABRACOS book

The editing of the ABRACOS book took considerably longer than was originally planned, however the book has now been published by John Wiley of Chichester. The book contains 32

of the papers presented at the ABRACOS symposium held in Brasilia in September 1994. Each paper is followed by a summary in Portuguese, and all of the papers have been peer reviewed by independent international scientists. 350 copies of the book have been sent to Brazil for distribution to individual participants of the project and for donation to the libraries of relevant Brazilian universities and research institutions. Copies have also been sent (via the British Council) for donation to the relevant national libraries of all other Amazonian countries as well as to individual scientists in Bolivia, Columbia and Peru.

#### 3:4 Public dissemination of results

An article on the ABRACOS results is being prepared for the popular scientific journal *Ciencia Hojé*. The article has already been accepted in principal and is being written by Carlos Nobre and the scientific editor of the journal.

#### 4 Financial overview

The financial summary, as given by the project rolling budget, follows. Permission was given to draw on the contingency fund for the repair of the satellite data transmitters and for extra staff time for the unforeseen additional costs involved in editing the ABRACOS book. A breakdown is given in Table 1. Permission was also given to transfer the cost of purchasing and shipping the book from 1995/96 to 1996/97. All these expenses have now been incurred.

Item	Cost (k£)
Repair to anemometer	1.1
Repairs to satellite transmitters	5.8
Additional staff time for editing book	9.8
Total	16.7

Table 1: Contingency spend during financial year 1995/96

Rolling project budget (in £k)

		total	Year 7	Year 8	Total
		years	95/96	96/97	
		1 to 6			
1	<b>CAPITAL COSTS</b>				
1.1	Hardware associated with Phase 2				
1.1.1	Micrometeorological equipment	108.9			108.9
1.1.2	Plant physiological equipment	82.5			82.5
1.1.3	Soil moisture equipment	14.7			14.7
1.2	Hardware associated with Phase 3				
1.2.1	Chimatological equipment	133.1			133.1
1.2.2	Soil moisture equipment	45.1			45.1
1.3	Transport and site facilities				
1.3.1	Forest towers	68.4			68.4
1.3.2A	Transport (Op. & Maint)	42.2			42.2
1.3.2B	Transport (Purchase)		8.6		8.6
1.3.3	Site facilities	88.0			88.0
1.3.4	Site computers	31.4			31.4
		13.7			13.7
1.4	UK based hardware facilities				
1.4.1	Computers	24.3			24.3
	<b>TOTAL CAPITAL</b>	652.3	8.6		660.9

2. RECURRENT COSTS (other than vehicle support)		total years 1 to 6	Year 7 95/96	Year 8 96/97	Total
2.1	Sundry scientific supplies	101.2	6.1		107.3
2.1A	Exhibition & publication	7.4	0.7	6.3	14.4
2.2	Freight charges	73.0	1.1	1.6	75.7
2.3	Counterpart travel (scientific)	112.5	5.7		118.2
2.4A	Counterpart travel (project man)	23.4			23.4
2.4B	Short term training in UK	41.3			41.3
2.4C	English Language Training	14.0			14.0
2.4D	Dissemination of results	24.6			24.6
2.5	IH travel costs	362.7	3.6		366.3
2.6	IH consultant	45.4			45.4
2.7	IH staff costs	1342.2	26.5	0.1	1368.8
2.8	Mid-term review	30.0			30.0
	<b>TOTAL RECURRENT</b>	2177.7	43.7	8.0	2229.4
	<b>TOTAL PER YEAR</b>	2830.0	52.3	8.0	2890.3
	Contingency spend	3.3	16.7		20.0
	Total including contingency spend	2833.3	69.0	8.0	2910.3
	Financial limit (including contingency)				3057.7

Appendix

Acronyms

ABRACOS Anglo-Brazilian Amazonian Climate Observational Study

BAHC Biological Aspects of the Hydrological Cycle

GD-ROM Compact Disk, Read Only Memory

CPTEC Centro de Previsão de Tempo e Estudos Climáticos

FTP File Transfer Protocol

IGBP International Geosphere Biosphere Programme

INCRA Instituto Nacional de Colonização e Reforma Agrária

INPA Instituto Nacional de Pesquisas da Amazonia

LBA Large-scale Biosphere-Atmosphere Experiment in Amazonia