

**ATCM XXVI  
Information Paper  
Agenda Item: CEP 7  
NEW ZEALAND**

**Original: English**

**“BIOPROSPECTING IN ANTARCTICA”**

**AN ACADEMIC WORKSHOP**

## **“Bioprospecting in Antarctica: An Academic Workshop”**

### **Information Paper New Zealand**

Gateway Antarctica, the Centre for Antarctic Research and Studies at the University of Canterbury, held a two-day workshop on “Bioprospecting in Antarctica” in Christchurch, New Zealand on 7-8 April 2003. New Zealand is pleased to submit the following record of the workshop discussions for the information of the Committee for Environmental Protection. It is hoped that it may be of assistance to the Committee’s consideration of the issues surrounding bioprospecting. Please note that the views reflected in the workshop record are not necessarily the views of the New Zealand Government.



**“Bioprospecting in Antarctica”  
An Academic Workshop  
Gateway Antarctica, University of Canterbury  
Christchurch, New Zealand**

**7 – 8 April 2003**

**Ms. Michelle Rogan-Finnemore & Dr. Alan Hemmings**  
*Convenors*

**Background**

Bioprospecting (or biological prospecting) is the search (generally in the natural world) for biologically useful materials – usually chemical compounds or genes. Antarctic researchers are already bioprospecting in Antarctica – or are examining the biological potential of material gathered for other purposes. It is known that patents have been acquired for Antarctic-related products and processes.

In 2002, for the first time, bioprospecting was discussed in the Antarctic Treaty System (ATS), at XXV ATCM, CEP V, and (briefly) at XXI CCAMLR.

The CEP agreed to discuss bioprospecting at CEP VI during XXVI ATCM in Madrid in June 2003. It noted that some aspects went beyond its brief. The Final Report of the Warsaw meeting specifically noted the legal and political issues and urged Parties to be prepared to discuss these.

Gateway Antarctica, The Centre for Antarctic Research and Studies at the University of Canterbury, held a two-day Workshop on Bioprospecting in Antarctica, which considered scientific, commercial, environmental, ethical, equity, legal and policy facets of the issue.

A preliminary note on this Workshop is provided in the hope that this may be of assistance to Parties discussing Bioprospecting at XXVI ATCM.

## **Workshop Agenda**

Day 1 of the Workshop was dedicated to presentations by six keynote speakers:

***"Bioprospecting: Uniqueness of Antarctica and potential for commercial success"***

Professor Roberta L. Farrell

Professor, Department of Biological Sciences, University of Waikato, Hamilton, New Zealand;

***"The international regime for bioprospecting: Existing policies and emerging issues."***

Mr. Sam Johnston

Senior Research Fellow, Institute of Advanced Studies, United Nations University, Tokyo, Japan;

***"Environmental, ethical and equity issues posed by Antarctic bioprospecting."***

Mr. Alistair Graham

Tasmanian Conservation Trust, Hobart, Tasmania, Australia;

***"Patents, property rights and benefit sharing issues in relation to bioprospecting"***

Ms. Kim Connolly-Stone

Senior Advisor, New Zealand Ministry of Economic Development,  
Wellington, New Zealand;

***"Bioprospecting in Antarctica under the Antarctic Treaty System and international law."***

Associate Professor Donald Rothwell

Associate Professor, Faculty of Law, University of Sydney, Sydney, Australia;

***"Discussion of Antarctic Bioprospecting within the Antarctic Treaty System."***

Dr. Alan Hemmings

Senior Fellow, Gateway Antarctica, University of Canterbury, Christchurch,  
New Zealand.

Day 2 of the Workshop was dedicated to 3 thematic, concurrent workgroups as follows:

***Workgroup 1 "Science and Commercial Interests"***

Chair: Dr. Don Robertson, General Manager Biodiversity, Biosecurity and Information Systems,  
National Institute of Water and Atmosphere (NIWA), Wellington, New Zealand.

Specialist Advisor: Dr. Dean Peterson, Science Strategy Manager, Antarctica New Zealand,  
Christchurch, New Zealand.

***Workgroup 2 "Environment, Ethics and Equity"***

Chair: Dr. Julia Jabour-Green, Post Doctoral Fellow, Institute of Antarctic and Southern Ocean  
Studies (IASOS), University of Tasmania, Hobart, Tasmania, Australia.

Specialist Advisor: Mr. Trevor Hughes, Head, Antarctic Policy Unit, New Zealand Ministry of  
Foreign Affairs and Trade, Wellington, New Zealand.

***Workgroup 3 "Legal"***

Chair: Mr. Bill Mansfield, Barrister, Member of the UN International Law Commission,  
Wellington, New Zealand

Specialist Advisor: Dr. Wendy Lawson, Senior Lecturer, University of Canterbury,  
Christchurch, New Zealand.

## Issues and Aspects Identified as Significant

### *Workgroup 1 “Science and Commercial Interests”*

- Bioprospecting is already underway in the Antarctic
- Bioprospecting is considered to offer some benefits to science and can be seen as merely another form of science.
- Science focus may shift from Bioprospecting naturally-occurring materials to synthesis for specifically desired properties.
- Any regulation of Bioprospecting should be science-neutral or science-positive.
- Obligations for scientist in relation to Bioprospecting in terrestrial, freshwater and marine environments should be consistent.
- In relation to any Bioprospecting resources that are made available for secondary users, benefit-sharing plainly has costs for the initiator in terms of opportunities foregone. However, access arrangements which reduced the need for additional field activities could lessen any environmental impacts.

### *Workgroup 2 “Environment, Ethics and Equity”*

#### Environment

- Sample collection in Antarctica appears to be the immediate focus.
- Need to distinguish between “bioprospecting” and “harvesting” since the latter presents additional management issues.
- Consistent definition of “environment” required.
- The Protocol is a necessary but not a sufficient management tool for Bioprospecting.

#### Ethics

- Scientists need to justify what they are doing.
- Processes should be transparent.
- End users should be identified in the bioprospecting activity/authorization process.
- Reference collections and depositories may facilitate freer access to materials.
- The Protocol is not a sufficient management tool.
- Whether criteria such as benefit to humanity, or priority for medical research etc., could be established?

#### Equity

- Do questions of equity (and ethics) arise in relation to bioprospecting in Antarctica, and if so, at a level significant for the stability of the Antarctic Treaty System?
- Are wilderness or other values in Antarctica compromised by bioprospecting?
- How might benefit-sharing be addressed given the differing interests in stakeholders? Are approaches found in CRAMRA worth examining?

### ***Workgroup 3 “Legal”***

- Bioprospecting *per se* appears not to pose legal issues in relation to Article III of the Antarctic Treaty.
- Patenting of an application, process or product from Antarctica does not preclude the scientific information from being in the public domain and therefore is not in breach of Article III (1) (c) of the Antarctic Treaty.
- However, intention to maintain “trade secrets” in relation to bioprospecting (or other activities) may be contrary to Article III.
- In relation to Bioprospecting, Treaty States need mechanisms to ensure full disclosure of plans and outcomes.
- The most significant issue appears to relate to “benefit sharing” – for which there is presently no mechanism within the Antarctic Treaty System (in contrast to UNCLOS).
- Legal mechanisms available to regulate bioprospecting include:
  - For interim regulation – a Resolution which:
    - Restates the obligation to provide advance information on plans for activities in the Antarctic related to bioprospecting
    - Addresses issues of access to data and samples related to bioprospecting by the international community
    - Recognizes the need to address the issue of benefit sharing with the wider international community
  - For long-term solutions – either an
    - Additional Annex on Bioprospecting to the Protocol on Environmental Protection to the Antarctic Treaty; or
    - An Antarctic Bioprospecting Convention – drawing on CRAMRA and/or UNCLOS for its model
- The group noted the issue of timeliness of response – noting that it would, on past Antarctic experience, be advantageous to commence the development of regulatory mechanisms earlier rather than later

The Workshop Convenors are preparing Proceedings which will contain papers written by the Keynote Speakers. The Proceedings will also include accounts of the discussions of the Workgroups prepared by the Chair of each group. Additional details from the Workshop including the presentations from Day 1 and a full list of participants are available via the Gateway Antarctica website at [www.anta.canterbury.ac.nz](http://www.anta.canterbury.ac.nz).

Michelle Rogan-Finnemore & Alan Hemmings  
15 April 2003