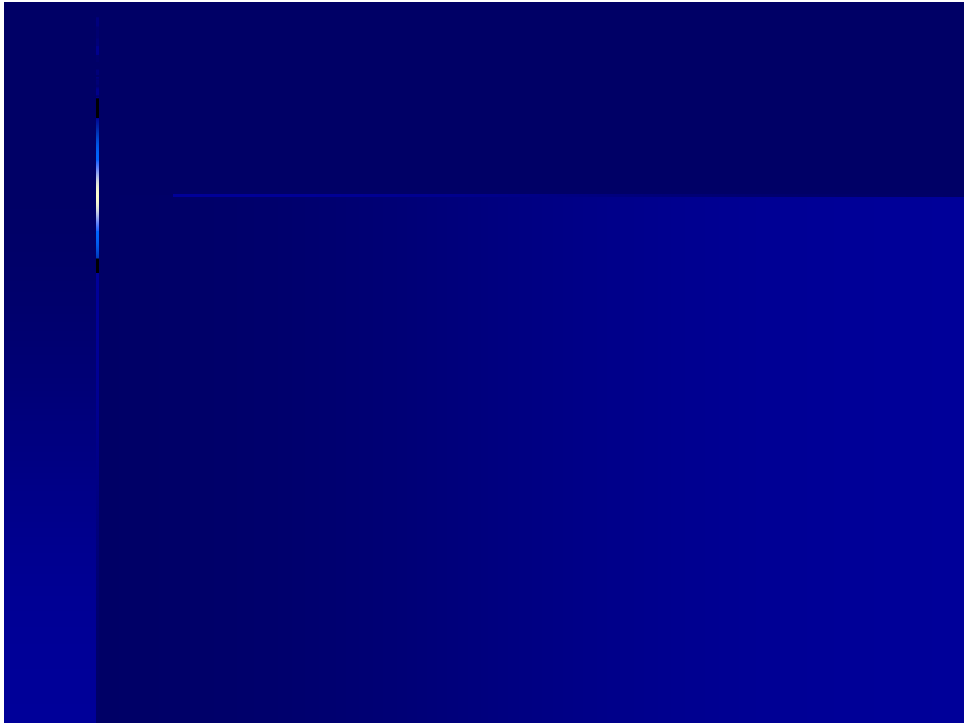
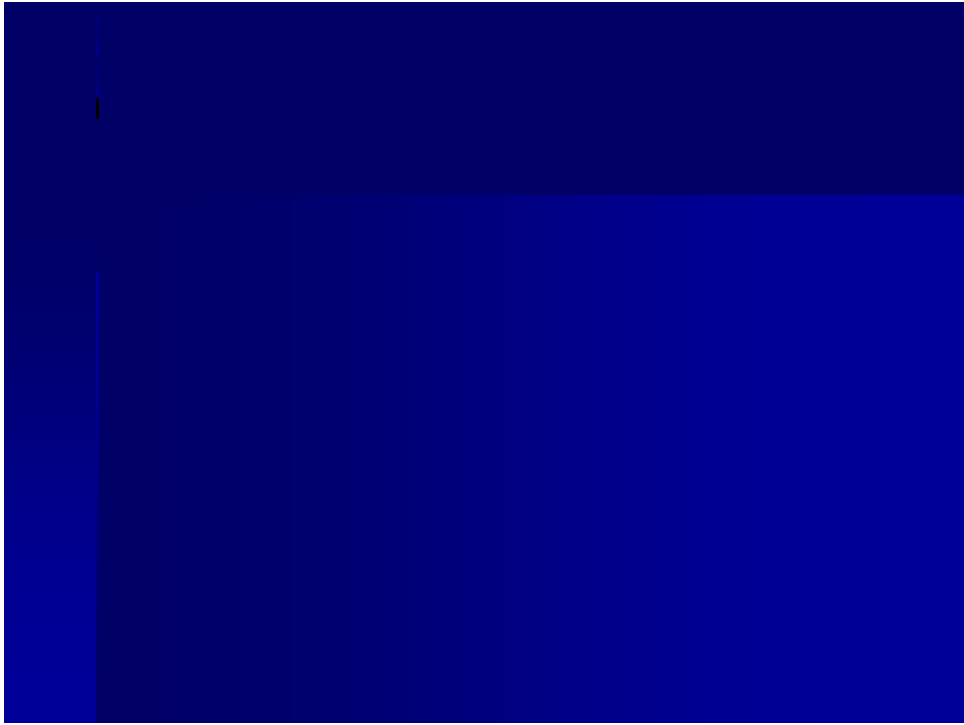


Overview of other challenges,  
gaps in understanding and  
cooperation

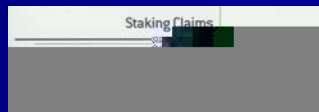
Sam Johnston  
Senior Research Fellow  
UNU-IAS





# Bioprospecting

- › Patents based on Antarctic organisms
  - Bayer
  - Du Pont
  - Astra Zeneca
  - Henkel KGAA (Germany)
  - Lion Corp
  - Nippon Soda
  - Roche
  - Tokuyama Corp
  - Novonordisk AS



# Bioprospecting

- International Polar Year
  - › Origin, evolution, biodiversity and survival of epi/endolithic microorganisms

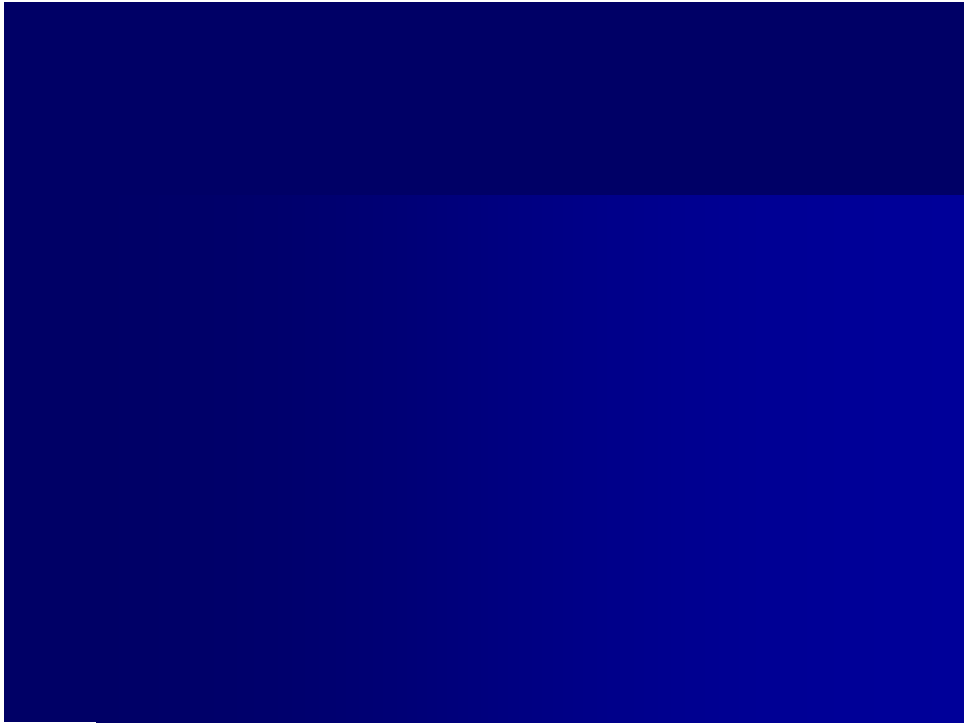
10.5861/100004D3(i)8003-nts (ID 49)

## Bioprospecting

- › Biological prospecting activities, though currently modest in scope, are taking place in Antarctica and the Southern Oceans
- › Further biological prospecting is planned
- › The prospecting activities in Antarctica appear to be confined to sampling, with no indication of plans to harvest material

## Bioprospecting

- › Collection of material is generally carried out for many purposes
  - Difficult to clearly distinguish between commercial and scientific activity
- › Questions that have arisen in the development of products include:
  - how can ownership be properly acquired?
  - what procedures need to be followed to ensure that the use is legitimate?
  - what if any approvals are necessary to ensure that the patent application is valid?
  - is benefit sharing required and if so with whom?



## Antarctic Treaty System

- › Scientific observations and results from Antarctica should be exchanged and made freely available to the greatest extent feasible and practicable
  - Article III of the Treaty
- › Prior assessments of the environmental impacts of activities planned pursuant to scientific research programmes, tourism and all other governmental and non-governmental activities must be carried out
  - Article 8 of the Protocol and Annex I
- › Any harvesting regulated to prevent the decrease in size of harvested populations to levels below their maximum sustainable yield as well as of non-target species and the marine ecosystem as a whole
  - Article 2 CCAMLR
- › Parties annually provide statistical, biological and other information
  - Article 20 CCAMLR

## Antarctic Treaty System

- › SCAR Report to ATCM
  - Information Paper XXIII ATCM/IP 123 SCAR (1999)
- › CEP V considered the matter in 2002
  - Working Paper WP-043 UK
- › ATCM XXVI first took up the issue in 2003
- › CEP VI in 2004 dropped bioprospecting from its agenda
  - the existing provisions of the ATS adequately dealt with the environmental impacts of bioprospecting

# Antarctic Treaty System

ATCM XXVIII - Resolution 7 (2005) Biological Prospecting in Antarctica

Recommend that:

- 1) their governments draw to the attention of their national Antarctic programmes and other research institutes engaged in Antarctic biological prospecting activities the provisions of Article III(1) of the Antarctic Treaty;
- 2) their governments continue to keep under review the question of biological prospecting in the Antarctic Treaty Area, and exchange on an annual basis information and views relating to that question as appropriate.

# Antarctic Treaty System

- › ATCM XXX – 2007
- › Some delegations welcomed the proposal to develop a web-based database on biological prospecting
- › Agreed to establish an Intersessional Contact Group (ICG) to examine the issue of biological prospecting in the Antarctic Treaty Area
  - identify issues and current activities related to biological



## Observations

- › Environmental impacts of genetic resource use addressed by the existing procedures
  - use has been confined to sampling
  - likely to remain so
- › Definitions
  - “bioprospecting”,

## Database

- › Antarctic Bioprospecting Database
  - provide a more systematic way of providing information on this issue
- › Searchable fields
  - Project details
  - Companies using Antarctic research
  - Parties approving or sponsoring relevant research
  - Benefit sharing terms
  - Patents
  - Commercialized products

## Observations

- › The effects of IPRs with regard to the free exchange of scientific information
  - Adverse or Positive?
  - The changing dynamics of R&D highlighted by Geoff Burton
- › What are the legal issues relating to the ownership and protection of these resources (or who owns the commercial products resulting from the resources?)
- › Is benefit sharing feasible and if so with whom?
- › Developments in other international processes of relevance

