



Conservation Outcomes of Native Plant remedies, Bioprospecting and Access and Benefit Sharing.

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Conservation outcomes of native plant remedies.

- **Groups collecting medicinal raw materials :** Maori rongoa rakau, domestic commercial enterprises, herbalists, research scientists, individuals and international traders.
- **Collected materials :** Genes and micro-organisms to logged trees. Aquatic, marine and terrestrial biological material. Estimate 200 species of potential 600-1000 species. (excluding genes and micro-organisms.)
- **Types of raw materials :** Processed powders, liquids, refined compounds, scents and host materials containing organisms.
- **Methods to supply raw materials :** Commercial monocultures, recycled materials, and harvesting from the wild. (Examples of log extraction and localized endemic populations.)

- **Biological compound extraction processes determine the quantity of raw materials required :
Two examples of processes.**
- **Product development determines conservation impacts :
Tonic to registered medicine. Reasons and two examples.**
- **Sustainable harvest practices : Two examples.**
- **An ideal future ? : NZ sustainable biological material harvesting standards and best practices guide, harvest legislation and policy, (incorporating indigenous values) and national environmental monitoring and reporting, (NERF.)**
- **Maori kaitiakitanga / monitoring and G.I.S spatial mapping of biological resources.**
- **Example for NZ : [http:// www.givaudan.com/sustainability](http://www.givaudan.com/sustainability) (largest fragrance and flavor producer in the world.)**
- **The reality : NZ Plant conservation and sustainable harvesting risks identified.**

Sustainable Bioprospecting. Taramea harvesting.



High country Sth Island Taramea.



Taramea post-harvest regrowth.



Taramea nursery production.



CO₂ Supercritical extraction.



Final supercritical extracts.



Bioprospecting and access and benefit sharing.

- Personal NZ bioprospecting history and policy development :
- Bio-pirates 90's, personal sales to international traders 90's, Green Party, and initial M.E.D meetings and policy development.
- Treaty of Waitangi : Wai 262 and Wai 740. M.O.H Traditional Rongoa Standards. Nga Ringa Whakahaere and Pae Pae Matua.
- G.E Royal Commission : Moratorium lifted, HSNO Act and ERMA.
- Patents Act Review : Relevance to conservation. PVR Act and micro-organisms.

Convention on Biological Diversity

Goals are: conservation of biodiversity, the sustainable use of the components of biodiversity and fair and equitable sharing of the benefits from resources.

ABS: Set of rules on access and benefit sharing as a legally binding Protocol to CBD.

- M.E.D working group.
- A proposed legislation model.
- No domestic sustainable harvest policy or conservation risks assessment component, (except U.N indigenous rights.)
- Proposed NZ bioprospecting regime model flow chart.
- 2010 deadline to complete ABS negotiations.

The Future

- ABS active and sustainability values addressed ?
- E.P.A has centralized national monitoring information.
- More research of micro-organisms, and more ERMA applications for semi-contained GE trials.
- Plant conservation risks identified and mitigated.
- Semi-contained GE trials risk horizontal gene transfers between micro-organisms.
- Maori partnership role in ecosystem management of Crown and Territorial Authority natural resources. (Aquatic, marine and terrestrial)

Summary

- The most valuable assets in NZ are the natural resources.
- Providing outcomes for social, cultural, economic and environmental management that will sustain biodiversity indefinitely, is our challenge.
- Your opportunity to provide comment into the NZ delegation. Email ed.mcisaac@mfat.govt.nz

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Outline of a bioprospecting regime for New Zealand

