

# GENETIC ENGINEERING POLICY

November 1992

The following policy was carried at the NCC's 1992 Annual Conference, but the Executive is requested to fine-tune and amplify this policy in consultation with relevant organisations and member societies.

## INTRODUCTION

The problems associated with genetic engineering are complex. The full implications of releasing genetically modified organisms are not understood.

Therefore this policy is based on the precautionary principle and it will be regularly reviewed to take into account new information.

It should be noted that genetic engineering is already occurring in many countries, and that Australian scientists are operating under a self-regulatory system of procedural guidelines for planned releases.

## 1.0 DEFINITION

Genetic engineering is here defined as the process of deliberately altering the genetic make-up of organisms by the addition or deletion of multiple genes or parts of a gene using recombinant DNA.

### Notes:

a) These modifications may be passed on to the next generation only if the alteration occurs in the germ cells of the genetically modified organism.

Genetic engineering allows the transfer of genetic material between unrelated species.

## 2.0 AIMS

2.1 To ensure that the release, deliberate or unintentional, of any genetically modified organism does not threaten the integrity of indigenous ecosystems or reduce biodiversity.

2.2 To ensure that any research, development or release of genetically modified organisms is in line with the principles of ecological integrity and sustainability.

## 3.0 PRINCIPLES

3.1 Research, development and release of genetically modified organisms should require the prior and ongoing assessment of environmental, social and ethical impacts and be subject to full public scrutiny, and third party rights.

- 3.2 Genetic engineering should not be undertaken for economic gains alone, but only when it can be shown to be for the long term benefit of both humanity and the environment.

35 4.0 STRATEGIES

- 4.1 There should be a moratorium on the release of all genetically modified organisms (GMOs) into the environment until:

- a) low risk predictive processes are developed to the extent that they are capable of adequately assessing the impact that GMOs will have on the environment, AND  
40 b) legislation is in place covering risk assessment and minimisation, environmental protection, public notification, procedures for planned release and a process for ethical review.

- 4.2 Strict containment laws to prevent accidental releases must be achieved.

5.0 PROCEDURAL GUIDELINES

45 Procedural guidelines must be comprehensive and precautionary and form the basis of legally enforceable regulations.

- 5.1 Procedural guidelines applicable at Commonwealth and State levels should cover research, development, release and monitoring of GMOs.

- a) Guidelines should require that a GMO should be released only if certain criteria  
50 have been satisfied, including:  
b) that all of the traits that the modified gene encodes for should be known, and rigorous studies made to ascertain the possibility of cross species transfers and other implications for the environment;  
c) that it will not diminish the diversity or integrity of the indigenous ecosystem into  
55 which it is released, particularly if techniques for large scale cloning have been used;  
d) that its purpose is environmentally benign in that it will not encourage unacceptable ecological practices, such as a herbicide resistant plant that promotes increased usage of chemicals.

- 5.3 Applicants who wish to release GMOs should prove that the organisms satisfy  
60 the above criteria.

6.0 LEGISLATION

Legislation setting the highest standards for environmental protection from genetic engineering procedures and outcomes is urgently needed, reinforced by meaningful penalties for non-compliance.

65 Legally enforceable regulations, rather than self-regulatory controls, over all stages of genetic modification of organisms and their release should be put in place before any release of a

GMO is permitted.

6.1 Commonwealth legislation should:

- a) control research, development, release and monitoring of GMOs;
- 70 b) allow free public participation in the decision making process that determines the acceptability of purpose and environmental impact of a proposed GMO;
- c) be consistent with recommendations of the procedural Guidelines;
- d) require the notification of release proposals to regulatory authorities and the relevant Commonwealth and State Government departments;
- 75 e) (e) require an applicant for the release of a GMO, whether successful or not, to pay the cost of public participation, risk assessment and monitoring, and compensation to any individual deemed by the Courts to be adversely affected;
- 80 f) (f) require to be kept a public register of GMOs, of persons and organisations approved to carry out the release of such GMOs, and of the relevant monitoring plans.

6.2 States should enact complimentary legislation.

## 7.0 IMPLEMENTATION

7.1 A new Commonwealth agency should be set up with responsibility for all matters concerning genetic manipulation, including:

- 85 a) updating of procedural guidelines and regulations;
- b) implementation of relevant legislation and the prosecution of non-compliance;
- c) imposition of conditions for approval of GMO release, and withdrawal if conditions are not met;
- d) ability to take action to minimise unanticipated effects after GMO release;
- 90 e) co-ordination of inter-agency mechanisms for effective control and monitoring of genetic manipulation.

7.2 Any agency concerned with control of genetic manipulation and setting standards for environmental protection, should appoint a board of management with balanced representation from the community, government, 95 experts and the conservation movement.

7.3 Commonwealth and State Ministers for the Environment should be responsible for administration of their respective genetic manipulation legislation.

7.4 The Genetic Manipulation Advisory Committee should continue as an advisory body to the Commonwealth Minister for the Environment.

## 100 8.0 OTHER CONSIDERATIONS

- 105 8.1 Patenting of genetically modified organisms is not acceptable. Current legislation allowing the patenting of these organisms should be repealed.
- 8.2 Sufficient government funding should be allocated for:
- a) a) implementation of public education programs about genetic engineering and the implications of the release of GMOs;
  - b) b) the research and development of alternative technologies to genetic engineering.
- 110 8.3 Public spending on genetic engineering for medical purposes should be publicly debated. Large public expenditure on 'genetic cures' which will only benefit a few people may not be justifiable, and should be evaluated in terms of the implications to human biological diversity and in terms of equity to health services.
- 115 8.4 There should be no government funding or any other involvement in research involving the development of organisms for genetic warfare.
- 8.5 The Commonwealth Government should lobby for the formation of an International Convention which defines and implements standard procedures for the release of GMOs.
- 120 8.6 The research and development of GMOs intended for release overseas should require clearance from the Commonwealth Government, so that Australian legislation cannot be bypassed.