chapter |

12.

Liability issues

12. Liability issues

Key issues:

- Submitters' concerns
- What kinds of liability exist?
- Whether insurance is available
- How liability issues have been addressed overseas
- Are bonds a solution?
- Genetic discrimination.

Introduction

1. Who is, or is not, liable for damage caused by genetic modification? Who should be? To what extent? These questions were raised throughout the Commission's inquiry. There was particular concern about who would bear the responsibility for environmental damage, such as adverse effects on biodiversity if invasiveness turned out be a characteristic of genetically modified plants.

2. This chapter of the Report examines the potential liability, under current New Zealand law, of those involved in creating, using or approving the use of genetically modified organisms or products, if harm is caused to others or the environment by such organisms or products. It also looks at whether the existing liability regime is adequate, and at the role of insurance.

3. An overriding concern was whether it was appropriate to leave liability to be decided according to the current regulatory and legal frameworks. For members of the general public wishing to claim for damage to health or property, major problems included establishment of liability and identification of liable parties.

4. The effects of genetic modification are expected to:

- be likely to manifest only in the long term
- be diffuse in nature
- involve difficulties and expense in establishing proof of cause, nature and extent of any damage.

Choice of approach

5. Submitters maintained that a policy decision was needed to decide between two differing approaches to liability: whether liability was to be assumed by the state as a "socialisation of the risks" of genetic modification; or whether the producer or user should be responsible for any damage under a "polluter pays" approach.

6. A number of submitters argued that, as the state approved or regulated use of genetically modified organisms, it should assume the ultimate liability for genetic modification activities.

Types of liability

7. Submitters distinguished between harm that was foreseeable, or caused by negligence or failure to comply with regulatory requirements, and damage that was unanticipated, and occurred despite all requirements and precautions being followed.

8. Practical examples frequently mentioned included:

- StarLink™ corn
- genetic contamination of seeds in Europe
- Monsanto damages claims for unlicensed use of patented genetically modified seeds
- the BSE crisis in the United Kingdom.

While these illustrate situations giving rise to damages claims, they do not necessarily point to any specific deficiencies in the current New Zealand legal position.

9. A number of submitters raised the prospect of the loss of valuable markets or even the wholesale collapse of the organic farming sector, with no clear avenues of redress, in the event of general release of genetically modified crops.

Regulatory framework for liability

10. Submitters expressed varying views as to the appropriate framework for liability. Opinions spanned a continuum from the position that liability arising from genetic modification should be no different from liability for any non-genetic modification products or activities, through approval of the current regulatory framework of offences, penalties and powers to mitigate or remedy any adverse effects under the Hazardous Substances and New Organisms Act 1996 (HSNO), to the position that the current arrangements are inadequate,

given the potential risks and the difficulty of ensuring that those who benefited assumed the risk.

11. The following changes were advocated:

- legislation regulating genetic modification should include provision for liability and compensation
- there ought to be strict liability for environmental and economic damage
- "liability funds" should be established
- users of genetic modification technology should be required to give bonds for cleaning up adverse environmental effects, similar to those provided under the Resource Management Act 1991 (RMA).

Liability

Statutory liability

Hazardous Substances and New Organisms Act 1996

12. The use of genetic modification technology in New Zealand is controlled by HSNO and other statutes.

13. HSNO provides for strict liability for certain offences, and includes penalties and enforcement actions in the case of breaches of the legislation. The strict liability offences in HSNO are:[1]

- developing a genetically modified organism in contravention of the Act (for example failure to obtain Environment Risk Management Authority (ERMA) approval to develop a genetically modified organism)
- failing to comply with any conditions imposed by ERMA on an approval under the Act
- non-observance of a compliance order.

14. In these cases, the prosecution does not need to prove that the defendant intended to commit the offence. However, as with other statutes imposing strict criminal liability, HSNO provides for limited defences, such as reasonable actions to protect human life or health or prevent serious damage to property or the environment, unforeseen events beyond the defendant's control, or that all reasonable steps were taken to prevent an occurrence.[2] Other offences under HSNO include:[3]

- knowingly importing or releasing a genetically modified organism in contravention of the Act

- knowingly, recklessly or negligently possessing or disposing of a genetically modified organism imported, developed or released in contravention of the Act.

15. The above offences carry maximum penalties of three months imprisonment or a fine of $500,000 plus $50,000 a day for continuing offences. The Act confers wide-ranging inspection and enforcement powers upon authorised enforcement officers.

16. If a company is convicted of an offence under HSNO, every director and every person concerned in the management of that company will also be guilty of the same offence if it is proved:

- that the act constituting the offence took place with that person's authority, permission or consent; and
- that the person knew, or could reasonably be expected to have known, the offence was to be or was being committed and failed to take all reasonable steps to prevent it.

Compliance orders under HSNO

17. HSNO also provides for compliance orders requiring recipients to stop any dangerous conduct or actions contravening the Act, regulations, or controls under an approval. The orders can require a person to do anything necessary to ensure compliance, or to avoid or mitigate adverse effects on people or the environment. A compliance order is available to require remedying any adverse effects on people or the environment caused by a breach of the Act, for example an unauthorised release, or non-observance of conditions of a field trial approval.

18. Currently, ERMA has no power to impose conditions on general releases. Consequently, it is at present arguable (as New Zealand Life Sciences Network submitted [IP24])[4] that any adverse effect on the environment or people arising from an approved release cannot be the subject of a compliance order. In Chapter 6 (Research), we have recommended the addition of a new category of conditional release.

Resource Management Act 1991

19. Remedies for damage through genetic modification may be available under RMA.

20. It is open to anyone to apply to the Environment Court for orders to prevent or stop any dangerous, offensive, objectionable or noxious activities that are or would be environmentally harmful.

21. The Court may also order that parties responsible for any actual or likely environmental damage must repair or mitigate the damage, or reimburse

anybody else who has taken action to remedy damage due to non-compliance with the Court's orders by the person responsible for the damage.[5]

22. It should be noted that these remedies are restricted to effects on the environment. They do not extend to personal damage or loss suffered by an individual. This is consistent with the approach in many other countries where reliance on laws of horizontal application (that is, laws that apply to all cases of contamination or pollution and do not discriminate between industries) is preferred to enacting laws creating specific liability for particular industries or activities.

Civil or common law liability

23. The Commission asked Professor Stephen Todd, Professor of Law, University of Canterbury[6] for a formal opinion on the potential liability, under current law, of persons or bodies who develop, use or approve genetically modified organisms or products. The Commission adopts Professor Todd's descriptions and conclusions, which are summarised below. The Commission has placed the full text of the opinion on the Commission website.[7]

24. Broadly, there are three kinds of damage that may be caused by a genetically modified organism: personal injury, property damage and financial or economic loss. The existence or extent of any potential liability may differ according to the kind of damage claimed to have been suffered. In New Zealand, the possible application of the Accident Insurance Act 1998 needs to be considered at the outset, because all questions of liability for personal injury operate subject to the accident compensation regime that has been in force in New Zealand since 1974. Where the Act does not apply, the existing rules of liability for torts (civil wrongs) will determine whether and to what extent a defendant is subject to civil liability.

25. Since there is no New Zealand case law dealing with harm caused by genetically modified organisms, any assessment of the trends of future decisions is necessarily speculative.

Personal injury and the accident compensation scheme

26. Before any question can be answered as to the liability of any person for causing injury to another's health by a genetically modified organism, it has to be determined whether the injured person (the claimant) is covered by the accident compensation scheme. The Accident Insurance Act 1998 is the current statute. The Injury Prevention and Rehabilitation Bill now before Parliament is proposed to repeal and replace the 1998 Act. In its existing form, the Bill will make certain minor amendments to the ambit of cover, but the substance of the law will not

change, so the principles concerning cover and the scope for actions for damages for injury-related harm are likely to remain as discussed below.

Relationship with the common law

27. Where there is cover under the Act, it is not possible to bring a claim for damages in respect of personal injuries or death caused by another. Conversely, where there is no cover then an action for damages can still be brought.[8]

Personal injury by an accident

28. The first question is whether injury to health caused in some way by a genetically modified organism is personal injury within the meaning of the Act. Under section 29(1) "personal injury" means death or physical injury (and some forms of mental injury). "Physical injury" is not further defined but should be understood as meaning any condition involving harm to the human body, including harm by sickness or disease, that is more than merely trifling or fleeting.

29. For the purposes of the accident compensation scheme, it is likely that personal harm shown to have been caused by transgene technology, or some associated infection, would qualify as personal injury caused by an accident on a specific occasion. Damage caused by ingestion or exposure to genetically modified organisms or genetically modified products over time would not be covered under the scheme, but a common law action would be possible.

Medical misadventure

30. A second possibility is that there is cover for personal injury caused by medical misadventure. This means personal injury caused by medical error or medical mishap.[9] As noted, in this context "personal injury" includes injury by disease or infection and any other form of bodily harm. It includes an existing condition that does not get better or gets worse, such as where a patient is not properly diagnosed or treated.

Work-related disease

31. A third possibility is when personal injury is suffered by practitioners or researchers in the field of genetic modification. For example, they may suffer an infection from picking up a virus associated with their work. There is cover under the scheme where a person suffers personal injury caused by a work-related gradual process, disease or infection.

Claims for personal injury not covered by the accident compensation scheme

Negligence

32. If the claimant is not prevented by the accident compensation scheme from taking a personal injury action, in principle the claimant can bring a damages action based on negligence (a form of tort) against the person or persons whose negligence contributed in some way to the damage sustained. Victims of personal injury must show that the defendant owed them a duty of care, that the duty was broken and that the breach caused damage of a reasonably foreseeable kind. On the duty issue, normally this is determined by asking whether the defendant should reasonably have foreseen that his or her negligence might cause injury to the claimant. On the issue of breach, the defendant must meet the standard of care reasonably and objectively to be expected of persons holding themselves out as possessing the relevant skill and experience. The claimant must also show that, on the balance of probabilities, any breach caused the harm in question.

33. A number of submitters drew attention to potential problems in establishing the cause of damage arising from genetic modification activities. They may be real and substantial, but probably are not so different from those that arise in other tort actions, for example those facing claimants in lung cancer actions against tobacco companies, or those bringing claims for asbestosis.

34. A claimant could also bring a negligence action for damage to property or for economic loss caused by genetic modification techniques or products. The same principles apply as with claims for personal injury. A claimant must show that there was a foreseeable risk of damage, that the defendant was negligent, and that the negligence caused the harm. Again, any difficulties will not necessarily be greater than those faced by claimants in negligence actions in other circumstances.

35. Negligence principles can apply in the case of damage to land, but, where possible, a claimant is likely to rely on stricter forms of liability. Where damage is done to land, this may give rise to liability in nuisance or under what is known as the rule in *Rylands v Fletcher*. These two related forms of civil liability are not founded on negligence and will usually be easier to establish.

Nuisance

36. Where people use their land to carry out an activity that causes harm to the land of a neighbour, they may commit the tort of nuisance. The activity may cause actual damage to the neighbouring land or it may interfere with the enjoyment of the land without physically damaging it. Liability depends on whether the

interference is reasonable or unreasonable: the law has to strike a balance between the conflicting interests of neighbouring occupiers.[10] People must put up with the reasonable activities of their neighbours, but an interference becomes unreasonable and actionable where it exceeds what an ordinary neighbour could reasonably be expected to tolerate. Nuisance is a tort protecting the use of land, so claimants can sue only if they have an interest in land.[11] The defendant's liability is based upon possession and control of the land from which the nuisance emerges.[12]

The rule in Rylands *v* Fletcher[13]

37. This rule has been regarded as an extension of the law of nuisance to cases of an isolated event. The rule applies to the "escape" from the defendant's land of something likely to cause damage. Liability applies even if the defendant was not at fault or took all reasonable precautions to prevent the escape; the defendant must be in possession or control of the land from which the "harm" came and be making a "non-natural" use of the land; and the possibility of escape and the consequent harm must have been foreseeable, although the manner or immediate cause of the escape need not have been foreseeable. The effect of the rule is to impose a higher standard of responsibility for activities with inherent risks. Since, however, such activities generally have utility for the community, they should not be subjected to the kind of disincentive a rule of absolute liability would impose.

38. Courts have applied the forms of action discussed above (nuisance, and *Rylands v Fletcher*) to many different factual situations. Those having some analogy to present subject matter include damage caused by water,[14] weeds,[15] and sprays.[16] If faced with a novel situation, such as a claim by a farmer for damage to a crop caused by contamination from a neighbour's genetically modified canola, the courts would deal with the issues by drawing on principles established by earlier cases.

Other liability problems

39. We have discussed the various forms of legal liability on which a claimant seeking to recover damages may rely. To succeed in establishing liability arising from genetic modification activity (typically against a manufacturer, vendor or user of genetically modified products, or an approving agency), the claimant must also establish that the defendant's activity or product caused the damage. For example, in the case of a motor accident or an explosion, it is a simple matter to prove a link between the event and the damage sustained. In other categories of claims it can be intensely difficult; those relating to liability arising from genetic modification are likely to be of the latter kind. Devising a new form of liability will not, however, resolve the difficulty; it is inherent in whatever kind of liability regime is adopted.

A claimant always has to establish a causative link between the activity or product and the damage sustained.

40. The same considerations apply to the final hurdle that faces any person seeking financial redress: having succeeded in the courts, will the claimant be able to obtain payment? The defendant may be a shell company without substantial assets, or may be insolvent. Indeed, by the time damage is discovered the potential defendant may no longer be in business. The problem is illustrated by the environmental damage at Mapua referred to by submitters.[17] By the time the community started to address the issue, no target remained from which compensation could be recovered. Again, adopting some new category of liability would not mitigate the problem. Even bonds would be only a partial answer. Some of these problems are captured in a passage from a paper issued by the Commission of European Communities. After stating the expectation that liability would create incentives for more responsible behaviour, the paper continued:

> However, a number of conditions need to be met for this effect to happen. For instance, experience with the US Superfund legislation (liability for cleaning up contaminated sites) shows the need to avoid loopholes for circumventing liability by transferring hazardous activities to thinly capitalised firms which become insolvent in the event of significant damage. If firms can cover themselves against liability risk by way of insurance, they will not tend to resort to this perverse route. Availability of financial security, such as insurance, is therefore important to ensure that liability is environmentally effective …[18]

Environmental damage

41. Some forms of "environmental" damage are not, or not easily, remediable through a regime of individual liability. For an action in tort, there needs to be an identifiable defendant, quantifiable damage, and a causal connection between the defendant and the damage. Where damage is widespread and diffuse and the possible sources and their contribution to the damage uncertain, finding a remedy is no longer a matter for legal action between individuals. Some types of damage that may be caused by genetic modification, such as plants developing resistance to herbicides, or harm to beneficial insects, may raise this problem.

Liability of approving agencies

42. HSNO controls and manages the use in New Zealand of new organisms, including genetically modified organisms, which are living or viable. It does this by setting up mechanisms for processing and determining applications to manufacture, import or release new organisms. The Act lays down a process under which the approval of a tribunal, ERMA, is required:

- to import, develop or field trial any new organism in containment

- to import for release or release from containment any new organism
- to import any new organism for release in an emergency, or release any new organism from containment in an emergency.

43. As discussed in chapter 6 (Research), ERMA can delegate some low-risk applications. The only decisions it delegates externally are applications by research institutions such as universities and Crown Research Institutes to develop genetically modified organisms in containment. Such entities must set up Institutional Biological Safety Committees (IBSCs) to assess the applications.

44. As part of its responsibilities under the Biosecurity Act 1993, the Ministry of Agriculture and Forestry (MAF) approves the facilities where work is carried out.

45. The question arises whether ERMA or MAF could be held liable for negligence in giving or refusing approval. While Clause 33 of the First Schedule to HSNO exempts ERMA members and staff from liability that may be attributed to the organisation for any acts or omissions in the execution of its statutory functions, the statute does not confer any such exemption on ERMA itself. Thus ERMA could be held liable under the headings of negligence or nuisance (already discussed) or misfeasance of public office. This last form of action requires a deliberate and dishonest abuse of a decision-making power with the intention of harming a person or class of persons, or intentionally acting outside the statutory power knowing this would cause harm.

Limitation of actions

46. Civil claims for damage become barred by statute after a set time limit, commonly six years from the event giving rise to the damage. In personal injury cases, the period is only two years but an extension up to six years may be obtainable. Any harm caused by genetic modification technology may emerge only after an extended period of time. The nature of the damage and its cause may be concealed or may develop gradually, posing potential limitation problems. This raises the question whether any possible claim would be barred by the expiry of the relevant limitation period.

47. Current case law suggests that where harm caused by a genetically modified organism is latent the victim may still be able to bring a tort claim on discovering the harm. So in the case of personal injury any possible claim is unlikely to be barred before the victim has a chance to assert it. Where the claim is for property damage or financial loss the position is less certain, but recent case law trends suggest that the discoverability principle will replace the date of damage rule. In that case, the law of limitations is unlikely to cause special problems in the present context. The New Zealand Law Commission has recommended introducing a discoverability principle, but with a 10-year long stop from the date

the cause of action accrued, defined as the date when all facts necessary to establish the claim are in existence, whether or not their existence is known to the claimant. Claims after that date would become barred irrespective of any question of knowledge.[19]

Insurance

48. A report by the international insurance company Swiss Re[20] notes that only a handful of markets define special cover or exclusions for genetic engineering applications. This creates an impression that many insurers are treating genetic modification simply as a continuation of industrial activity using different gradually developing processes. As outlined above, organisations or persons causing harm by genetically modified organisms or products may be legally liable to the victims of the harm. The question arises whether insurance against such risk would be obtainable.[21]

49. Existing liability policies are likely to provide cover. As a general rule such policies have open wording, without specific exclusions for damage or injury caused by genetic modification. In taking out the insurance, the insured party would have given information about the risk to be covered in accordance with the requirements of the insurer, and provided there was full disclosure, and subject to standard exclusions, this type of liability would be covered.

50. However, the position may change quite soon. It appears that on present levels of understanding the leading overseas insurers cannot assess the level of any risk fully enough to accept and price it adequately or to spread the risk by reinsurance. Not enough is known about the degree of any danger and the extent, if any, to which there is a potential for widespread consequences. So it is likely that the insurance industry will introduce changes in liability policies excluding cover for harm caused by genetic modification. Whether or how widely this will affect liability policies is unpredictable but against at least some kinds of risks, insurance is likely to become unobtainable. This may be more likely in relation to personal injury liability than property damage.

51. For the insurance industry, genetic modification is potentially one of the most exposed technologies of the future. This is not only because the loss experience for traditional insurance models is unavailable, but also because there is widespread scepticism in society, as increasingly complex scientific developments are feared to be associated with massive potential for destruction. The more concern the public shows towards new risks, the less trust is placed in the traditional means to deal with them.

52. The Swiss Re report identifies four elements relevant to this possibility of a change of attitude by the insurance industry. They are:

- The socio-political and cultural element; genetic modification is a public issue in terms of structures and values.
- The socio-economic factor; pharmaceutical, agricultural and nutritional sectors are growing disproportionately in the area of genetic modification applications. Their products are entering new markets where reactions from consumers cannot be predicted.
- The coming omnipresence of genetic modification; genetically engineered applications and products are penetrating areas such as health, nutrition, and the environment, which are particularly sensitive because they are essential to everyday life.
- The time factor; the values, laws and risks acceptance relating to genetic modification are subject to constant change, which has no predictable direction or speed. The future risk component for genetic modification is prominent, particularly exposed and long term.

53. In conclusion, the Swiss Re report notes that the decisive factor is not whether genetic modification is dangerous, but rather how dangerous it is perceived to be. The report concludes that the development of social and legal frameworks unfavourable to genetic modification could lead to impossibly high liability risks that cannot be carried either by the genetic modification industry or the insurance industry alone.

Bond system

54. Resource consents under the RMA may impose conditions, including:

- a requirement that a bond be given in respect of the performance of any one or more conditions of the consent (including conditions as to the removal of structures on expiry of the consent)[22]
- a financial contribution, works or services for purposes specified in the plan.[23]

55. The Ministry for the Environment [IP101] proposed amending the RMA to provide for these 'bonds' be able to be extended beyond the period of the consent in order to deal with events or problems arising later.[24] The Ministry also submitted that bonds should be able to be imposed on any approval for developing or trialling a release of a GMO.[25]

56. Where substantial bonds are required by Act of Parliament, they are rarely provided in cash.[26] Commonly, the person who has to give the bond provides a

performance bond, underwritten by an insurance company. Such bonds are obtainable from insurers operating in New Zealand. The bond guarantees the performance of the person who is required to fulfil the statutory requirements, for example a manufacturer of genetically modified products obliged (let us assume) to give a bond guaranteeing compliance with various safety regulations. Failure to comply will trigger forfeiture of the bond.

57. The question arises whether insurers would be prepared to issue bonds involving risks arising from genetic modification activities. For the insurance industry, this raises the same issues as discussed earlier (see paragraphs 48 to 53). At the present time, having regard to the difficulty in assessing the risk because of limited knowledge and experience about genetic modification, and the unlikelihood that reinsurance could be obtained, it is improbable that insurers would take on such risks. The situation could change were there fewer imponderables, but whether and when this might happen is unpredictable.

58. The Commission sees other problems with a bond system. The substantial premiums involved would equate to a penalty on a particular activity or product, disadvantaging those wishing to trade in the field, compared with other industries. If, as seems likely, insurance bonds would be unavailable, effectively the activity would be prohibited, contrary to the Commission's wish to maintain options.

Liability fund

59. GE Free New Zealand (RAGE) in Food and Environment [IP63] suggested the instigation of a liability fund, into which all companies concerned with carrying out any biotechnology activities in the environment are legally bound to contribute.[27] We were told Spain has such a fund.[28]

Environmental user charge

60. Our attention was drawn to HSNO section 96. On an application relating to a hazardous substance, where ERMA considers a reduction in the likely adverse effects could be achieved by imposing an environmental user charge, it may report to the Minister on matters relevant to such a charge. The possibility arose that this provision might be enlarged to encompass new organisms as well as hazardous substances.

61. As presently framed, section 96 is of limited practical effect. As we read it, further legislation would be required if, following receipt of a report, the Minister was minded to pursue the imposition of a charge. In the event of further legislation, the possibility of amending the provision to include new organisms could be kept in mind.

Overseas approaches

62. Dealing with liability for damage caused by the use of genetic modification and genetically modified organisms is proving difficult and time consuming the world over. The Cartagena Protocol on Biosafety is a protocol of the Convention on Biological Diversity. It covers the safe transfer, handling and use of living modified organisms that might have an adverse effect on biodiversity. Article 27, which requires the parties to adopt a process to set out rules and procedures for liability and redress for damage arising from the transboundary movements of genetically modified organisms, sets a time frame of four years for this undertaking. The European Union has been working on the issue of environment liability, including genetic modification, since the publication of a Commission of European Communities (EC) Green Paper in 1993. In contrast, biotechnology is evolving rapidly and expanding into previously unimagined areas of everyday life. This rapidity creates a fluid situation where liability issues are concerned.

63. Solutions to the problem may appear simple enough at one level: there seems to be general agreement that the polluter should pay, for example, but how this response is to be translated into an effective and practical liability regime raises problems.

United States "Superfund"

64. Chris Webster, appearing for the Maori Congress [IP103], referred the Commission to information on the United States Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA) which created "Superfund," a trust fund administered by the Environmental Protection Agency (EPA). Superfund was intended to provide temporary emergency federal funding for the cleanup of chemical waste if responsible parties could not be found or were unable to pay. It is funded by taxes levied on crude oil and chemical feedstock production, an environmental income tax at a certain level of company profits, and general appropriations.

65. In theory, Superfund is supposed to enforce a "polluter pays" policy. That is, if culpable parties can be linked to a polluted site, they must pay for cleanup efforts. In practice, Superfund's rule of "retroactive, joint and several and strict liability" has been claimed to result in lengthy and expensive litigation, delays and inefficiency in clean ups, waste and even fraud; there are claims that 36 to 60 cents of every dollar put into Superfund has gone in legal and other transaction costs.

European Union position on liability

66. Early in 2001, the European Parliament completed a process of amending directive 90/220/EEC, regulating the deliberate release into the environment of genetically modified organisms.[29] The objective of the amendment (first submitted in February 1998) was to extend and clarify the scope of 90/220/EEC and to include all direct and indirect ecological aspects. The amendment proposed mandatory monitoring of genetic modification products after being placed on the market, and an expiry date of 10 years for first consents for such products. It also sought to increase the transparency and efficiency of the decision-making process, harmonise risk assessment processes, and introduce labelling and traceability requirements for all genetically modified organisms placed on the market.

67. The formal adoption process resulted in a number of compromises and amendments. In respect of liability issues, an important outcome was that the EC gave an undertaking to bring forward before the end of 2001 a legislative proposal on environmental liability, covering damage resulting from genetically modified organisms.

68. The EC has published a White Paper proposing the following system of liability for environmental damage, including damage from biotechnology products:

- classes of damage covered are biodiversity damage, contaminated sites, and traditional damage (personal, property damage and economic loss)
- the polluter pays for damage, not society as a whole
- there should be a single piece of legislation covering all sectors
- there is strict liability (with defences) for damage caused by regulated "dangerous activities" including biotechnology
- there is fault-based liability for damage caused by non-dangerous activities, with some alleviation of the burden of proof on the claimant
- where no fault can be established, states will be responsible for restoration or compensation.

69. Limitations to the proposals include:

- biodiversity or sites must have sustained "significant damage" before liability applies
- the extent of liability is restoration to prior state
- producers' exposure under the strict liability regime may be capped to enhance availability of insurance cover

- provision for biodiversity damage will apply only to particular protected areas (estimated to be about 10% of EU territory).

70. However, to date the European Parliament has not accepted the proposals.

Genetic discrimination in relation to insurance and employment

71. A number of submitters and commentators[30] raised the issue of diagnostic tests for genetic disorders being used by the insurance industry to limit or exclude insurance cover for persons suffering from, or with the potential to develop, such disorders. This would be unfair discrimination. There were even suggestions that such action could create a disadvantaged genetic "sub-class".

72. Part II of the Human Rights Act 1993 (HRA) prohibits discrimination in areas of public life in relation to a number of conditions; those most relevant to gene technology include gender, disability, race and colour. Discrimination is also prohibited under section 19 of the New Zealand Bill of Rights Act 1990.

73. Developments in gene technology increase the potential for selecting children on the grounds of sex, race and colour (as well as other attributes not covered by the Act). Potentially, gene technology also increases the likelihood of direct and indirect discrimination against those who do not fit preferred genetic criteria.

74. United States experience shows that "genetic discrimination", that is, discrimination against individuals because of their genetic make-up, already exists, particularly on the part of employers and the health insurance industry. A United States watchdog organisation, the Council for Responsible Genetics (CRG), has documented more than 200 cases of genetic discrimination by employers, while a survey by the Shriver Center for Public Health in Massachusetts reported 582 cases of people who were turned down for jobs or health insurance because of particular aspects of their genetic makeup.[31]

75. In some of the cases, the discrimination by employers and the health insurance industry resulted from the identification of an individual's genetic propensity toward such conditions as breast and ovarian cancer. The same source reported that researchers generally believe these figures are merely the tip of the iceberg, given there are relatively few genetic screening tests in common use. With developments in gene technology and the human genome project, genetic discrimination is likely to increase. On the other hand, there is hope that developments in gene technology and the human genome project will reduce and eventually eliminate genetic conditions presently impairing human well-being.

The wish to improve human health needs, however, to be balanced against the danger of a resurgence of a eugenicist philosophy. Dr Mae-wan Ho, a witness for GE Free New Zealand,[32] described rising genetic discrimination and a resurgence of eugenics as two worrying trends among the biomedical applications of genetic technology.

76. The Commission was urged to consider the necessary legislative and regulatory measures that would prevent the possibility of a "genetic underclass" developing in New Zealand. The World Medical Association has expressed the opinion that it may be desirable to adopt, in respect of genetic factors, the same consensus that prohibits the use of race discrimination in employment or insurance.[33]

77. A significant consideration is the need to determine which groups are most likely to be advantaged or disadvantaged by the use and avoidance of genetic modification. This has particular relevance to issues concerning access to medical applications that prevent certain inherited genetic disorders. As the Human Rights Commission said, all individuals must have equal rights to access available treatments (that is, "goods and services" as defined by the HRA) without discrimination.[34]

78. The Commission emphasises that genetic discrimination is a separate topic unconnected with the question of liability for damage caused by the use of genetic modification techniques or products.

Conclusions

79. To summarise, during our consultation processes there were submissions in favour of legislation to enable recovery of the expense of remedying damage caused by genetically modified organisms or products. Proposals included:

- the imposition of strict liability, meaning that third parties sustaining injury or damage could recover damages if they could prove a causative link with the genetically modified product, without having to establish conventional legal elements such as negligence or nuisance
- the establishment of some fund providing compensation for persons sustaining injury or damage
- those using or selling genetic modification technology or products should be required to enter into a bond for the benefit of persons sustaining injury or damage.

80. The Commission considers it is unnecessary to recommend legislation providing special remedies for third parties, where they may have been affected by the release of a genetically modified organism. As technology advanced with ever-increasing pace throughout the 20th century, the common law (that is, law based on court decisions, as distinct from statute law) showed it was well able to mould new remedies for novel situations. Parliamentary intervention has rarely been needed in this area. From a legal liability perspective we have not been persuaded there is anything so radically different in genetic modification as to require new or special remedies.

81. Strict liability can be a barrier to innovation and progress, and the weight of international precedent is against setting up such a regime: the United States, Canada, the United Kingdom and Japan do not impose strict liability and instead rely on the common law or general environment protection legislation for those seeking recourse. Significantly, the first three countries all have a legal background largely similar to our own. On the information before us, the only major countries with a strict liability regime are Germany and Austria.

82. The Commission's recommendations include enhanced filters for field trials and release of genetically modified organisms. The emphasis is on preventing damage or injury in the first place, rather than creating a liability regime additional to that already in place.

83. Given these recommendations, the Commission's conclusion in respect of liability issues in relation to genetic modification and genetically modified organisms is that it is best to leave the regime as it currently stands, at least in the short term, subject to the specific recommendations made below. We appreciate this means there is the potential for some socialisation of unforeseen or unanticipated loss or damage, but we consider that, with the emphasis on prevention, this is appropriate.

84. In making the recommendations below, we acknowledge the liability issues are difficult. In addition to the technical legal issues, other considerations require delicate balancing: on the one hand, protection of the public and the environment, and on the other the need, in the public interest, not to stifle innovation or drive away investors by imposing overly stringent conditions on research or economic activity. For these reasons, Government may wish to refer the liability issues to the Law Commission for more intensive study.

Recommendation 12.1

that Toi te Taiao : the Bioethics Council, in association with the Human Rights Commission, address the issue of genetic discrimination.

Recommendation 12.2

that for the time being there be no change in the liability system.