

## **APPENDIX C: THE PRINCIPLES OF ECOLOGICALLY SUSTAINABLE DEVELOPMENT**

### **Precautionary Principle**

The precautionary principle reinforces a ‘risk averse’ approach to development. Acknowledging that the predictive process of Environmental Impact Assessments is imperfect, the precautionary principle ensures that the uncertainty and the associated level of risk is considered in the decision making process by adopting a worst case scenario (DUAP, 1995).

Absolute proof that environmental harm will occur should not be necessary for precautionary measures to be adopted. The onus of proof of environmental damage (or lack thereof) should be borne by the developer, rather than the public or the decision maker.

### **Inter-generational Equity**

Social equity, incorporating inter-generational equity, embraces value concepts of justice and fairness, so that the basic needs of all sectors of society are met, and there is a fair distribution of costs and benefits. Inter-generational equity refers to the present generation ensuring that the health, diversity and productivity of the environment is maintained or enhanced for the benefit of future generations. Intra-generational equity refers to the present generation ensuring that improved well-being and welfare are accessible to all sectors of society within Australia, and that improved welfare within Australia does not result in decreased welfare in other nations (DUAP, 1995).

Inter-generational equity is about the needs of future generations being considered in current projects, and ensuring that such projects do not limit the ability of future generations to attain quality of life at least equal to the current generation. Future generations should not be responsible for repairing environmental damage created by projects today.

### **Conservation of Diversity**

The conservation of biological diversity and ecological integrity relates to the protection of biodiversity and the maintenance of ecological processes and systems. The loss of biodiversity is in most cases irreversible.

Biodiversity is usually considered at three levels: genetic diversity; species diversity; and ecosystem diversity. Ecological integrity is maintained when the productivity, stability and resilience of the ecosystem are sustained.

Maintaining biodiversity and ecological integrity is important for both anthropocentric and ecocentric reasons. Anthropocentric justification relates to the needs of society to maintain food, medicine, building materials and other life support resources. It also provides significant cultural, economic, educational, recreational, scientific and social benefits. Ecocentric justifications relate to rights of plants, animals and the non-living elements of the planet to existence irrespective of human needs or wants (DUAP, 1995).

### **Improved Valuation and Pricing**

Natural resources have often been misconstrued as being “free” or underpriced. This has led to their wasteful use and consequent degradation in the past. Natural resources have historically been subjected to the same monetary market place economic analysis as general commodities. Based on

supply and demand, for items that are plentiful, such as air and water, the value of the resource is low. This principle is based on ensuring that there is a broader approach to valuation, including ecological function values and other environmental factors.

In essence, this principle strives for *polluter pays* schemes, whereby those who generate pollution and waste should bear the cost of containment, avoidance or abatement, and *user pays* schemes, whereby consumers should pay prices based on the full life cycle costs, including the use of natural resources and assets, and the ultimate disposal of any wastes (DUAP, 1995).