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Development of Sustainable Policies in WA

The following definitions are noted.

UN World Commission on Environment and Development:
Development which meets the needs of the present without compromising the ability of future generations to meet their own needs.

WA Government:
Sustainability is the simultaneous achievement of environmental, economic and social goals.

The basic needs of water, food, shelter, health have been met in WA with a degree of quality not seen in the third world. The majority of WA citizens will have economic and social goals that predicate a high level of consumption. This creates an inherent conflict with the fragile environment in WA which is sensitive to any turbation resulting from use.

The perceived threat of sustainabililty to economic development has changed from one of rapid dirty resource use where a small population had a relatively small impact on the environment to one where the larger populations total consumption of any natural resource may far outstrip the natural replenishment of that resource. Water and forest are two resources well known to the WA public for their limited reserves.

Some resources are seen as being essentially limited to known reserves. Oil and gas are formed over millions of years and therefore their replenishment rate is practically zero for the purposes of human lifetime reckoning. Personal space is limited eventually to an average availability limited by the total land available and the population size sharing that land. WA is not going to increase its land area and therefore a precious resource is becoming much more expensive. The standard area of land purchased for a domestic dwelling has decreased from the old quarter acre (about 1000 m3) to half that amount.

A few resources are still essentially unlimited in terms of immediate replenishment. These include solar, tidal, hydro-electric and wind power. Harnessing of these resources is limited by infrastructure costs and geographical considerations.

Factors affecting the development of sustainability policies

Each resource utilised requires its consumption rate and replenishment rate to be monitored to allow accurate assessment of the sustainability of that resource.

The total consumption of any resource will be proportional to the population multiplied by the average individual rate of consumption. Measures to adjust the total consumption rate depend on altering the average individual rate of consumption, and on changes in the total size of the consuming

population.

Consumption is likely to be increased where providers of the resource profit in proportion to the amount of that resource consumed. Particularly where there is no monitoring of the total resource reserves, short term profit obtained from readily provided resources may and has resulted in unsustainable consumption of those resources.

Resources particularly at risk in WA.

Species diversity, water, forest, arable land.

The relative lack of control of land clearing as resulted in large losses of species diversity before potential floral or faunal products could be catalogued and assessed for their possible commercial benefits. Western Australia due to its extreme geological age has enormous species diversity compared with the rest of the world. The implications for the discovery of new biological compounds are immense. Strong policies are required urgently to encourage an assessment and conservation of these resources.

Water consumption is well monitored when provided by town and city water schemes. The public is well informed as to the state of the reserves by media exposure of dam levels and reports regarding the scarcity of the resource in spite of underground water supplementation. Underground water replenishment rates are less transparent to public appreciation. Changes in individual consumption rates have been strongly encouraged by a stick approach involving rostered garden watering days. Discussion at community level vis a vis water requirements for lawn, paved yards, english or european versus native gardens is occuring. Local councils are considering a carrot approach by subsidising development of native plant gardens.

Changes of total consumption by population number variation are simply expected to be inexorably upward. Population growth in Western Australia and Perth in particular needs to be seriously addressed. Most locals understand that our population cannot keep growing without a serious change in our individual use of water. Less well known is that the average rainfall in the Southwest has decreased by 20% and runoff into our dams by 40% over the last 20 years. Seven out of nine climactic models forcast that the southwest will continue to become drier.

The cost of substantial supplies of desalinated water is some 50% more than current scheme water supplies. Kimberly pipeline water would be some five fold more expensive. If scheme water is to be supplied at current relative costs to the user, there needs to be a substantial decline in demand per person or a substantial decline in the population using scheme water at current consumption rates.

Old growth forest logging needs little further detailed discussion in this presentation although much further work is needed to develop a sustainable logging industry.

Arable land is declining not only as a result of salt but also as a result of surburban sprawl. The latter in particular is directly related to Perth's population growth. Current policy is to increase housing density in the inner city suburbs. The penalties of this policy are a decline in the personal space, and an increase in the kind of problems inherent with large crowded cities. They are crime, vandalism, polution, traffic congestion, graffitti.

Australia as a whole has adequate rainfall over only 11% of its area sufficient for agrarian purposed such as cropping. Of this area only 6% has soils amenable to primary production. Australia in general has ancient soils deficient in trace elements for the production of European crops. Western Australia in particular has its own problems due to the extreme geological age of most of its land area. The Yilgarn block dates to preCambrian times, has therefore weathered over eons, is extremely poorly drained and as a result suffers immensely when subjected to landcare practices appropriate to the geologically young well drained soils of Europe.

Australia has a population of some twenty million but produces sufficient

for eighty million. This represents an important source of export income. Any loss of the land due to degradation or urban encroachment should be seen as inimacable. Little of that produce has been from indigenous flora or fauna. The sustainable commercial development of such indigenous products is extremely important to the conservation of our Western Australian environment. Some products such as sandalwood, are making a small comeback. Kangaroos, treated as vermin in our south west, have never had much more status as a meat product than petfood. Yet kangaroo tail soup has a slight aura of a delicacy. Certainly the animal degrades the environment much less than our standard grazing animals. Emus have unfortunately to compete with ostrich farms in New Zealand, but still represent a possible sustainable industry especially in terms of conservation of our environment. Our indigenous crustaceans are a highly valued primary industry, both the saltwater crayfish and the freshwater marron, with both needing and currently having regulations controlling their harvesting from the wild. There are many other examples of potential industries that may promote environmentally sustainable harvesting, and others which require regulations to protect them from “overkill”.

Harvesting at rates not more than the replenishment rate divided by the population represents a guide to the maximum standard of living that Western Australians can enjoy.

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