

## **WATER: Policy Needs and the Future**

**WATER is a vital key to our survival, as feedstock for food and as basis for industry. Global warming has made an even more urgent and important issue of how we manage this resource.**

In order to ensure fair water sharing and trading consistent with sustainability for ALL in the catchment, and provide integrated management of the resource, there must be responsible research and education for attitudinal change, openness in administration and open public control of the resource called water.

### **Attitudinal Change**

We need to grasp the reality that we are custodians of our globe and its resources with responsibility to future generations. Human inventiveness has made it possible for us to destroy our own heritage in a few short years. We need to turn our efforts towards building sustainable peaceful and cooperative economic and social lifestyles. It can be done provided we recognise that our economy and social structures depend on our physical environment, including the clean water that the physical environment can provide.

We need to concentrate our efforts on developing attitudes and approaches that encourage living within the limits our finite planet imposes rather than the current mindless, and in the longer run destructive, concentration on growth regardless of the consequences. Policies which encourage short term consumerist lifestyles and the accumulation of wealth by a small minority need to be replaced by those which work towards ecological, economic and social sustainability, with a good quality of life and equity for all.

### **National Water Initiative**

Every government in Australia has signed up to the National Water Initiative (NWI), which aims to restore or ensure surface and groundwater systems remain at environmentally sustainable levels. If this is to be meaningful some accounting is required so as to define needs and levels.

The NWI considers water sharing and trading, neither of which may be problematic if appropriate agreements are prepared. But there are proposals, and processes, to sell the publicly owned natural resource and to detach water rights from land. Water supply should be priced relative to costs. Loss of central control or management of such an important resource renders any capacity to manage the resource, deal equitably, and make sense of any budgets and audits impractical. This should not be allowed to happen, or continue happening, for the result will be absolute chaos and stress for all parties involved.

In some jurisdictions catchments have already been over-allocated and this means that some painful adjustments are necessary to the public purse (for having permitted it by poor policy) and private users (they having invested or borrowed against the allocation promises). A timed program should be published whereby the catchment can be restored to balance - as referred to the ongoing audits.

### **Water Supply Management**

Catchment calculation must be based on real catchments and at all scales in which catchments are occupied or used. Larger catchments may need integrated sub-catchment management. Any proportional allocation rules must be related to the level of catchment used or occupied. Environmental flows, or retained surface flows, depend on retention of groundwater levels and an assessment of biodiversity requirements for the species range desired. All calculations should be based on monthly needs and catchment balances. Any allocations or diversions may be defined as the difference between water actually available and water required for retention in that month. "Groundwater ...forms the crucial flywheel driving surface water systems whilst providing support for most flora and fauna" (Dr David Leaman p. 6 2007)

Simple take periods, like "winter", are not necessarily valid and the effect of changing rainfall patterns may modify times and quantities. Dams and storages need careful review. Local small dams on farms, off stream, if shaded and enclosed, where water is locally used, need not cause serious problems.

Large, or on stream, or shallow dams may be problematic and wasteful. Large implies a storage greater than the land area proportion of the catchment water. Initial audits and budgets can be quickly derived on basis of extant data (or inferred from adjacent situations), derived trends and total usage.

Detailed usage indication can be supplied by questionnaire to every property owner which would cover matters such as dams (types, numbers, capacity), bores (types, numbers, volumes). water table state (up, down, static), use of springs, stream takes and allocations approved or licensed, comments on evaporation and property weather data (is there any), how water is used (crop, business, stock, irrigation etc), area of forest, cleared land proportion, extent of forest regenerations, plantations etc. This is enough to assess catchment health in a gross fashion. Further monitoring, verification and refinement can follow.

### **Water Use and Conservation**

In agriculture, Australia's largest water user, attitude changes are most critical. Priority needs to be given to sustainable production of food for people, be they in country, town or city. Diversification and where possible production for local markets are important. Bigger is not always better and in agriculture is often worse, e.g. when dust storms destroy valuable soil and other resources.

Reforestation and forest industry purposes claim much upper catchment and other water in Australia and this diversion is not planned nor are its consequences investigated and taken to account. Fire and land clearing are serious hydrological factors which must be planned in hydrological terms at catchment budget level.

Translocation of water should not be considered for large scale agricultural or industrial use since it leads to problems at source and possibly problems at receiver. Modest translocation for urban support may be justified.

Water use and reuse in cities requires creative thinking and the allocation of adequate human and other resources to ensure attitudinal and practical change. Where possible it should be linked to local production of food. Urban water problems could be eased by policies involving modest house collection or reuse and, in more testing situations, of storm water recycling and treatment of waste water. Use of efficient facilities, waste-saving education and

provision of material support for people with limited resources are important here. Governments should subsidise retrofitting of showers, taps and cisterns to reduce water use, and installation of rainwater tanks. These programs reduce both the use and the costs of water, which is especially important for those on low incomes.

## **Privatisation**

Because water is a scarce commodity that can deliver mega profits, some global water companies have attempted to change international trade rules to promote privatisation of water services. This has resulted in secret contracts, loss of public accountability and loss of the ability to regulate water services to meet environmental and social goals. In many cases, notably in Latin America, privatisation contracts have been terminated and water services have been taken back into public hands. Access to safe water is a human right; it is recognised as such by the United Nations and social regulation to ensure access for all is essential.

In Australia, three state governments have funded energy-intensive desalination plants operated by private global water companies, with little public discussion or scrutiny. There must be full public debate of such proposals, and scrutiny of the record of the companies involved, to avoid the pitfalls of privatisation.

## **Questions for governments and for wider consideration in policy development**

What steps have been taken to estimate best and most productive use of water within available limits for the location/region? What audits have been completed? If none, why so?

Given the evidence that climate is changing, what measures have been taken to educate users about these changing circumstances and their significance for allocation and availability?

Why has the path of long distance modelling been taken of uncertain models, data and predictions and not direct use of observed current trends, continuously updated?

What measures have been taken to prepare an initial status report of catchment budgets and then, as part of forward planning and water use, for refinement and monitoring of those estimates?

Are we managing water for essential social, industrial and other outcomes within the context of availability?

Are we using water sensibly to maximum benefit and profit in terms of region, crop and soil type?

Are we planning our reforestation or plantation coverage in hydrological terms and selecting areas and rotations which are consistent with local/regional water budgets?

Are we planning or allowing future developments in terms of available water (now and in future, including recycling) in difficult or coastal situations? Should density or population restrictions apply in such areas or be limited to supply and catchment provisions?