

# **WATER**

**A Report on the provision of water and sanitation in remote Aboriginal and Torres Strait Islander communities**

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## **Chapter 1 - BACKGROUND TO THE WATER REPORT**

### **1.1 Background**

In 1987, the Human Rights and Equal Opportunity Commission conducted a public inquiry into the social and material needs of residents of Toomelah, an Aboriginal settlement of 500 people on the New South Wales/Queensland border.

The report of the inquiry noted that the most urgent of the community's many significant difficulties was a lack of access to adequate and reliable supplies of water. A system of water rationing had been practised at Toomelah for more than a decade: water was made available from the bore for two fifteen-minute periods per day. At public hearings of the inquiry, Aboriginal health workers attributed ailments such as infected sores, gastroenteritis, growth failure, respiratory disease, ear, nose and throat infections and stress to the absence of adequate water supply at Toomelah.

Most Australians would regard this situation as an affront to basic human rights as well as an obvious source of health risks which would not be tolerated in non-Aboriginal communities.

In response to these findings many other Aboriginal and Torres Strait Islander communities contacted the Race Discrimination Commissioner with comparable accounts of their own water situations. Many of these communities had been attempting for a number of years to have their grievances heard by the State or Territory authorities responsible for their water supply, only to face a long process of frustration. It appears that these grievances have largely been met with superficial attempts to address the complex web of socio-economic and lifestyle factors which are relevant to understanding the problems. In addition, the tendency to deliver services through mainstream<sup>1</sup> programs in practice exacerbates the failure to recognise the lifestyle and culture of Aboriginal and Torres Strait Islander people in communities as a key factor in addressing some of the issues.

It was in the light of the approaches to Race Discrimination Commissioner by Aboriginal and Torres Strait Islander people that the present investigation into the provision of water and sanitation to Aboriginal and Torres Strait Islander communities was instigated. Beyond the need to address specific complaints which have been brought to the Commission, there is currently no satisfactory benchmark against which to assess claims of denial of human rights with respect to the provision of water. Thus, it is the purpose of the Report to examine the question of access to water and the provision of water-related services within a human rights perspective.

### **1.2 The Principles of the Investigation**

The investigation began with the premise that all people must be able to provide themselves with water, for without it they die. Problems in water supply are therefore concerned with issues of quality and quantity of water and access to it; plus the strategies employed by Aboriginal and Torres Strait Islander people to achieve an acceptable level of service.

In establishing the investigation, the Race Discrimination Commissioner believed that in order to assess the observance of human rights with respect to the provision of water, it was necessary to explore the entire complex of factors involved in the provision and use of water and water-related services by Aboriginal and Torres Strait Islander communities.

The first principle of this study was that the issues in the provision of water were not primarily technical in nature, but rather social and political. Factors affecting service requirements for water include land use and practices, levels of health, degree of specialisation, other infrastructure, political and economic circumstances and the levels of skills and resources available in the community. Accordingly the investigation does not focus solely on the health or engineering aspects of water supply.

A second principle was that the involvement of the Aboriginal and Torres Strait Islander people who were to be served by the project was paramount to the success of any water provision project irrespective of technical expertise.

### **1.3 Aims of the Study**

The overall aim of the Report is to develop a deeper understanding of the process of the provision of water to Aboriginal and Torres Strait Islander communities within the context of human rights expectations. The major objectives of the Report are:

- To provide an overview of the provision of water to Aboriginal and Torres Strait Islander communities in a national and international context.
- To document the situations in the case study communities as they have developed and currently exist.
- To identify factors and constraints which have hindered or helped in the provision of water and sanitation services and recommend action.
- To initiate a process whereby Aboriginal communities might work through the solution of their problems and where technological options might be suggested and addressed by communities, local and state governments, resulting in action plans for future developments in each community.

### **1.4 Methodology**

Given the principle that technological issues alone are not the most significant factors, the study devoted considerable attention to the interaction between communities, technologies and service providers (both Government and private enterprise). It is here that both the problems and the possible solutions may be found. This focus on the process of the provision of water is not intended to occur at the exclusion of technical assessment, rather it is believed that it is only where such assessment takes place within the context of the social process that sustainable technical solutions may be found.

Secondly, the investigation involved extensive consultation and Aboriginal involvement. This involvement was maximised through consultations and negotiations at two levels. There have been multiple visits to the majority of the case study communities (three to four days per community) together with a combined meeting with representatives of all communities to discuss the findings of the case studies and the general principles emerging from them. Consultations have also occurred with many of the peak Aboriginal organisations and policy bodies around the country. The complex nature of the analysis recognises that the process of consultation will not be complete at the time of the release of the Report. Accordingly the Report makes only structural and procedural recommendations. A useful contribution of the

study is to facilitate a discussion among Aboriginal and Torres Strait Islander leaders as to some of the strategies they may adopt to redress the problems investigated in the Report. This method of conducting and reporting on the investigation removes the time constraint from the consultation and negotiation process which has hindered so many other studies.

## **1.5 Structure of the Investigation**

The study was conducted in three parts:

- (i) *Background investigation of the major issues involved in water and Aboriginal and Torres Strait Islander communities*

The investigation proposed to give overview and of the situation of water supply to remote Aboriginal and Torres Strait Islander communities and then review certain aspects of Aboriginal land use which are inextricably linked to water. The history and patterns of European settlement and development in Australia, and the impact they have had on Aboriginal and Torres Strait Islander communities and lifestyle figured prominently in this review. The investigation examines aspects of water and water supply in Australia, looking at the mechanisms of delivery, regulation and control involved in resource management as well as the relevance of water quality guidelines and supply standards.

A useful extension of the investigation of background issues was an analysis of the experiences of other indigenous people, as well as international developments and studies relevant to the Australian context. Relevant international instruments and domestic human rights legislation are reviewed to determine their implications for human rights with respect to water provision.

- (ii) *Case studies*

The detailed case studies are presented in the latter half of this Report. It is clear from the literature there are no precedents to which Aboriginal people or Government officers can refer when it comes to the application or interpretation of water quality guidelines or human rights instruments when decisions regarding levels of service and cultural implications and values are involved. Thus, this part of the investigation consist of a series of case studies looking at water supply and management on Aboriginal and Torres Strait Islander communities in order to develop a profile of the complexity of problems and issues which can make water supply a human rights concern.

The case studies selected highlight the diverse conditions and relationships which impinge upon the issue of the provision of water in Aboriginal and Torres Strait Islander communities. Accordingly, the studies demonstrated a range of issues. The ten case study communities were chosen to represent a range of supply types, methods of servicing, organisational problems and technological problems. They encompass communities where sophisticated technologies have been employed, as well as situations where finding water appears to be hopeless. They represent the range of climatic and environmental conditions in which Aboriginal and Torres Strait Islander live, including desert, coastal, island and river-based communities. Relationships between communities on the fringe of small agricultural and mining towns are covered, as are pastoral areas where land and water are still in strong competition.

According to the above criteria the following communities were selected and agreed to participate: in Western Australia - Punmu and Upurl Upurlila Ngurratja (Coonana); in South

Australia - Yalata and Oak Valley; in New South Wales - Tingha and Dareton; in Queensland - Doomadgee; in Northern Territory - Mpweringe Arnapipe; and in Torres Strait - Coconut Island and Boigu Island. Each State and Territory is represented (with the exception of Victoria, Tasmania and the Australian Capital Territory). The frontispiece map shows the location of the case study communities.

*(iii) Analysis of themes and findings and the projection of strategies for the future*

This part of the investigation included return visits to case study communities, briefing of peak organisations and individuals and a National Water Forum bringing together representatives of case study communities and peak organisations. Analysis of findings from the early parts of the investigation established and highlighted recurring themes and issues. The analysis broadened the understanding of structural issues involved in water supply.

A number of strategies and options arising from discussion of the analysis and findings among Aboriginal and Torres Strait Islander people are proposed. The strategies offer ideas for the improved provision of water and sanitation systems in Aboriginal and Torres Strait Islander communities.

## **1.6 The Audience of the Report**

There are many groups who have an interest in the findings of this Report, ranging from Aboriginal and Torres Strait Islander people in remote parts of Australia, through service providers and facilitators, to policy makers and academics. A process of consultation and negotiation has been occurring with a range of Aboriginal and Torres Strait Islander groups concurrently with the preparation of this Report. These consultations have included issues raised and specific concerns that case study communities wished to address.

The significant findings of the Report revolve around the implementation of standards, technologies and policies and the interaction of two technical cultures and the values, attitudes and mind-sets<sup>2</sup> which shape this interaction. It is here that change is found to be required. If it is possible to effect change of mind-set at all levels, it is envisaged that it will be much easier for Aboriginal and Torres Strait Islander people to undertake their own negotiations and make sustainable choices. Accordingly, the Report is broadly targeted at the facilitators, service providers and bureaucrats who have a part in the provision of services, as well as at the Aboriginal and Torres Strait Islander communities with whom they must interact. Notwithstanding theoretical elements of the arguments which may appeal to academia, the purpose has been to achieve a tangible mind-shift at the practical interaction level between the technical providers and expressed needs of Aboriginal and Torres Strait Islander people.

It is recognised that this Report will not accord with the views or wishes of all Aboriginal and Torres Strait Islander people. It is impossible to reach all groups with the same message or to achieve a consensus on whether certain approaches may be more useful than others. The Report does, however, raise issues which require debate among Aboriginal and Torres Strait Islander people. This process of review of ideas has been continued in meetings attended by the Race Discrimination Commissioner and her staff throughout the last four years and culminated in the National Aboriginal and Torres Strait Islander Water Forum in Alice Springs in April 1993. In addition, meetings have been held with representatives of many peak organisations around Australia to present issues and to demonstrate with concrete examples the less tangible aspects raised in this Report.

## **Chapter 2 - FACTORS RELATING TO THE PROVISION OF WATER AND SANITATION**

### **2.1 The IDWSSD Experiences**

The world community has recently completed the International Drinking Water Supply and Sanitation Decade (IDWSSD), spanning the years 1980 to 1990. It was endorsed by the United Nations General Assembly in November 1980 following reports by the World Health Organisation and recommendations from the Water Conference in Mar del Plata in 1977. It was one of a number of initiatives designed to provide health for all by the year 2000.

Throughout the IDWSS Decade there was an ongoing exchange of information and a considerable investment in infrastructure, but many communities both here and overseas remain in a dire situation. Hence it was timely that the Race Discrimination Commissioner conducted a comprehensive investigation into the provision of water and sanitation to Aboriginal and Torres Strait Islander communities in order to understand why the provision of water remains problematic.

There are a number of consistent factors in the literature analysing the Australian and international experience in water supply. These factors provide a wealth of knowledge through which to interpret the case studies in Aboriginal and Torres Strait Islander communities. Internationally and nationally there are many programs which have been tried, both before and during the United Nation's IDWSSD. Some approaches were found wanting, others showed signs of success. The perplexing question is why there are recurring themes in the implementation of current policy when it is patently obvious that such responses are inappropriate and have been shown to be inappropriate time and time again.

There has been a wealth of words and theories advanced to attract grant moneys to procure better technological solutions and thereby improve health. Reports generally reflect success in technical areas without highlighting the human cost in other areas. In general, the human element in water and sanitation has been kept at a distance or treated as a physical input to the water supply design.

The urgent focus on health improvement and technical interventions to achieve this goal within given time frames has resulted in the subject (water and sanitation supply) being dehumanised. In the majority of reports and water supply solutions reviewed in this Report, there is very little human contact demonstrated. The solutions have resolved themselves to technical problems - driven by technical or industry norms and subject to technical advice from professionals in the field. There is little opportunity for involvement by users and clients. Whilst many would argue this is no different to the situation applying to all Australians, the Report demonstrates that such a presumption is not valid for remote communities.

Experience in the IDWSSD has shown that a solution which is dependent on transfer of technological equipment or processes will not necessarily provide equivalent outcomes in different locations or cultures. The push for rapid improvement in water supply has led inexorably to the selection of readily available (generally offshore or urban-based) technologies rather than the development of indigenous (local, regional) responses. In attempting to achieve rapid outcomes, technologies have been transferred and scaled down with little thought for local performance characteristics.

Many projects aimed (consciously or otherwise) to totally eradicate traditional sources of water supply and replace them with safe water supplies. However, experience (Christmas 1991, Therkildsen 1988:27) now shows that people do not give up their traditional sources for many years. Despite new sources being developed they often have many cultural traditions attached to the old water source: these traditions do not change just because new machinery arrives. Specifically, the IDWSSD has shown that solutions depend on political will rather than technology.

Many project sponsors (AIDAB 1988:15, Therkildsen 1988:20) underestimated the thought and behaviour patterns of rural villagers, in particular the relationship of health to other priorities in village life. Villagers use a synergetic<sup>3</sup> approach to their assessment of life and what is priority to a water supply or sanitation engineer may have a markedly lower priority in the village. Safe water to a visiting engineer may be different to what a villager regards as safe water.

Early results from post IDWSSD evaluations (Christmas 1991:5, Ittisa 1991:25, Therkildsen 1988:28) indicate provision of safe water is declining as people's inability to maintain and sustain infrastructure takes effect. The increased and ongoing burden on budgets to cover recurrent costs in order to sustain capital investment is significant. In this context, the notion of preventive maintenance is anathema to people who are conditioned to dependence on government aid. Few governments provide adequate money for on-going maintenance. Often the best way to sustain a water supply is to allow it to run down and attract a donor for a new item; or argue for an upgrade of the technology so that new standards can be met.

The international experience leads to the conclusion that sustainability and water security are the significant issues to be addressed in determining levels of service (quantity, quality and access) to be provided in water and sanitation projects. In this context, user characteristics, organisational and institutional resources and other development activities are significant components of a viable solution. While training is often viewed as an important contributor to sustainability, it is heavily dependent on the existence of many other networks and in many situations needs to be designed to take account of these other characteristics.

## **2.2 Sectoral Studies and Integrated Responses**

Studies and reports on Aboriginal and Torres Strait Islander concerns have been usually analysed on a sectoral basis within the departmental frameworks established by federal and state governments. There has been very little attempt to integrate findings. Health, housing, education and employment have been the major sectors of interest. The role of integration has been left to groups like the House of Representatives Standing Committee on Aboriginal and Islander Affairs and the Royal Commission into Aboriginal Deaths in Custody. These sectoral studies reflect recurring themes and issues which afflict Aboriginal and Torres Strait Islander people. In the main they represent the opinions of non-Aboriginal people and the issues are analysed in the context of the specific discipline or brief which is being examined. The Report of the Royal Commission into Aboriginal Deaths in Custody provides the first analysis of the past which reflects the complex inter-relationship between factors. Responses to the recommendations thus far appear to be within existing sectoral frameworks and hence are not well integrated.

All levels of government and Aboriginal and Torres Strait Islander organisations have been slow to realise that an integrated response requires more than a co-ordination committee to oversee the implementation of sectoral programs. A process is required to allow elements of the programs to be combined and presented as an integrated response. Further more, a significant

component of the process (one which governments can neither dictate nor contain) has to flow from Aboriginal and Torres Strait Islander people.

Without such a process, it appears there can be little significant advance. For example, a review of health care intervention statistics shows infant mortality and morbidity have no doubt improved. However, the indicators of the quality of life of Aboriginal and Torres Strait Islander people have shifted and are now reflected in statistics on diabetes, coronary disease and alcohol-related trauma. In sum, the expenditure on health care is higher and while the lifespan is extended, the death rate is still up to four times higher and life expectancy up to 21 years less than that of other Australians (Reid 1991:37). It is clear that pursuit of an intervention model principally focussed on technology inputs and medical outcomes is insufficient for the provision of water and sanitation and will lead in all likelihood to further distress both for Aboriginal and Torres Strait Islander people and for governments. When AIDAB reviewed its water sector activity it found that project objectives such as improved health created monitoring problems, since it was impossible to separate the effects of the water supply from other factors improving health, such as education, hygiene training, sanitation and housing (AIDAB 1988:15). In face of this evidence it is rather surprising that governments and agencies persist with policies, models and programs whose outcomes are so difficult to evaluate.

### **2.3 Negotiating Processes**

The literature, particularly the work on Native American water rights, demonstrates that through processes of negotiation, where one partner is unequal in terms of bargaining power, weight of numbers in government, or legal or constitutional backing indigenous people constantly lose portions of their heritage - land and water (Burton 1991, Wolfe 1989, Therkildsen 1988).

The shift from semi-traditional to contemporary values as a basis for negotiations has forced negotiations which (even with the opposite intent in mind) reduce the viability of a particular culture. This position arises because the ground-rules of the negotiation process and the underlying criteria and values, are those of the dominant culture. There is evidence that consultants and advisers to indigenous people are not broadly skilled enough nor willing enough to point out the overall losses to indigenous people. Often people do not recognise the value shift because they believe what they have achieved is the 'right' solution. Therefore, unwittingly, the ability to practice culture is impeded by events which are intended to increase cultural identity. American writers report that Indian leaders seem to recognise this but are powerless to do anything.

As the RCADIC pointed out, non-indigenous people are unable to see or feel the loss because they do not share the common history of oppression which is expressed in the contemporary culture of Aboriginal and Islander people. Burton (1991:85) indicates in his writing on Native American water rights that indigenous people are now just about at the limits of the law and are in need of new options to resolve disputes and preserve their chosen lifestyle.

International literature (Burton 1991) carries a significant message regarding cases where people have suffered a history of oppression. It is necessary to acknowledge the circumstances and outcomes of that oppression as an integral part of further development work.

Whilst it is a common feeling among non-Aboriginal Australians that they are not responsible for the events of two hundred years ago and owe little if anything to Aboriginal people, it is precisely this lack of sensitivity and awareness which fuels a reaction from Aboriginal people. In



almost all cases, Aboriginal people are affronted when people refuse to acknowledge the past or, worse still, are unable to recognise the significant impact of many subtle contemporary actions.

## **2.4 The Value of Water**

There is evidence (NH&MRC 1990:22) of a shift in technical values regarding water supply which recognises that the economic development of the 1970s and 1980s has slowed and that in future realistic economic, human and environmental constraints need to be applied to water supply. The *Low Cost Water and Sanitation Supply Guidelines* issued by the Australian Water Resources Council (AWRC 1988, AWRC 1989) address some of the technical variables which can be applied to make small community water supplies more efficient and affordable.

From a human rights perspective, the proposed review of water quality guidelines and the renewed emphasis on recognising these as guideline values, not legislated standards, may be more significant. The recent draft drinking water guidelines issued by the National Health and Medical Research Council (NH&MRC 1993) emphasises the need for community consultation in arriving at decisions on water quality issues. Clearly, there are other factors in addition to water quality criteria that need to be taken into account before assessing equality of service provision.

This brief summary of the experience of the past provides evidence of the range of issues about which we already have knowledge and experience. Whilst the summary is not exhaustive it does indicate that any response to water and sanitation issues has to have a broad focus before specifics are identified.

## **Chapter 3 - STATEMENT OF THE PROBLEM**

### **3.1 The Size of the Problem**

Most Australians at present receive water of good to excellent quality. However, many small communities have inadequate supplies, both in terms of quality and quantity. There are some 440,000 Australians living in small communities which are not served by a water supply scheme supplying at least 1,000 people. This figure includes Aboriginal communities in the database (PWD 1989).<sup>4</sup>

There are some 154,000 people in Australia living in 1,200 communities of between 30 and 1,000 people who are without a reticulated water supply.<sup>5</sup> Some 50% of these are in NSW and QLD and 60% live in communities with a population of less than 300 (AWRC 1989:5). There are 285,000 people in Australia who are supplied by water supply schemes serving fewer than 1,000 people. A further 82,000 people were connected to supplies with inadequate capacity to meet peak demand. In total, some 440,000 Australians were served by a water supply scheme designed for fewer than 1,000 people. These figures were assumed to include Aboriginal people. It was estimated 54,000 Aboriginal people were served by water supply schemes supplying fewer than 1,000 people although it highly likely this assumption is underestimating on the basis of the nil returns from some communities (AWRC 1989:10). Table 1 provides detail of State and Territory data.

**Table 1 Small Communities Without a Reticulated Water Supply and Water Supply Schemes Serving Fewer Than 1000 People**

	Communities of between 30 and 1,000 people without a reticulated water supply		Water supply schemes serving fewer than 1,000 people				Total number of people living in small communities not served from a large water supply scheme (8) = (2) + (4)
	Number of People (2)	Number of Communities (3)	Number of People Supplied (4)	Number of Schemes (5)	Inadequate Quantity <sup>1</sup> (6)	Inadequate Quantity <sup>2</sup> (7)	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8) = (2) + (4)
NSW	50,500 55%	428	40,800 45%	144	7,800 9%	5,000 5%	91,300
VIC	20,000 29%	200	49,400 71%	141	3,400 5%	4,900 7%	69,400
QLD	31,800 24%	208	102,300 76%	518	17,500 13%	8,900 7%	134,100
WA	11,000 24%	85	35,300 76%	80	4,500 10%	900 2%	46,300
SA	22,600 65%	169	12,400 35%	25	0	4,100 12%	35,000
TAS	4,300 18%	10	19,400 82%	59	200 1%	5,000 21%	23,700
NT	13,400 35%	66	25,000 65%	160	6,100 16%	0	38,400
Australia	154,000 35%	1,166	285,000 65%	1,127	40,000 9%	29,000 7%	438,000

\* Percentages shown are with respect to the total number of people shown in Column 8.

1 Number of People Supplied by Schemes with large Deficiency in Capacity to Meet Peak Day Water Needs.

2 Number of People Supplied by Schemes Needing Treatment for Physical Problems to Meet the Desirable Current Criteria of the 1980 NHMRC Guidelines.  
(Source: AWRC 1989:4)

The population of Aboriginal and Torres Strait Islander people has been steadily increasing over recent national censuses. The 1986 census revealed a total of 227,645 people or 1.5% of the Australian population identifying themselves as Aboriginal or Torres Strait Islanders and thus increased in the 1991 census to 257,333 people (1.53% of the Australian population). Table 2 opposite provides the State and Territory break down of the census data. More than half the Aboriginal population is under 20 years of age. Approximately half the population of Aborigines live in Queensland and NSW and more than one-fifth of people in the Northern Territory are Aboriginal.

The 1992 ATSIC Housing and Community Infrastructure Needs Survey (ATSIC 1992) noted that 33% (85,000) of Aboriginal and Torres Strait Islander people lived in rural area (populations less than 1,000). In the Northern Territory, 69% lived in rural areas. The figure opposite provides the relative urban and rural distribution by State and Territory. It is therefore a significant portion of Aboriginal and Torres Strait Islander people who are affected by policies that relate to small community water supplies.

The cost to rectify the severe water supply problems of small communities was estimated in 1989 (DPIE 1989:12) to be over one billion dollars on the basis of conventional engineering approaches and supply standards, and \$632 million adopting low-cost guidelines outlined by the AWRC.

The diseconomies of scale of small systems means that the cost of addressing water supply deficiencies can be exorbitantly high on a per service basis. For very small communities, ie below 100 people, the cost of providing a new system is in the order of \$11,000 per service, \$5,000 per service for improvements to quantity and \$2,700 per service for improvements to quality. The annual charge per household for a new supply, without subsidy, is about \$1,550 (DPIE 1989:12).

As many of the residents of small communities tend to be socially disadvantaged, the cost of financing water supply improvements is often well beyond their financial means. Similarly, the small community as a whole is likely to have a low level of community wealth and median household income. It becomes a question of social equity whether a community should be expected to pay such high rates for a basic human need, or if unable to finance necessary improvements, that they are obliged to exist on severely deficient supplies.

**Table 2 Aboriginal and Torres Strait Islander Population by State and Territory in 1991 (Australian Bureau of Statistics 1992(a))**

State/Territory	Aboriginal and Torres Strait Islander Population			
	Total	% Total Aboriginal and Torres Strait Islander population	% Total State/Territory population	% Total Australian population
NSW	68,941	26.8	1.2	0.41
Qld	67,012	26.0	2.3	0.40
WA	40,002	15.5	2.5	0.24
NT	38,337	14.9	21.9	0.23
Vic	16,570	6.4	0.4	0.10
SA	16,020	6.2	1.1	0.09
Tas	8,683	3.4	1.9	0.05
ACT	1,768	0.7	0.6	0.01
Australia	257,333	100.0		1.53

### 3.2 Small Community Water Supply Policies

In 1983, the *Water 2000* report (Department of Resources and Energy 1983) identified the water supplies for small towns as a pressing water quality problem, noting the inability of many small communities to meet the cost of necessary improvements. The major water quality problems identified in *Water 2000* were turbidity, colour, microbiological contamination and hardness.<sup>6</sup> The report concluded that inadequate water supplies and treatment could disadvantage growth and development in rural communities, and that external assistance was necessary.

As noted above, the problem confronting small communities is one of generating sufficient finance to meet the diseconomies of scale imposed by small systems. Financial constraints also impose limitations on the ability of small systems to employ skilled operators to operate and maintain the system.

Although the dimension of the problem was not quantified in *Water 2000*, it is accepted that inadequate water supplies can impose constraints on economic development, result in significant risk to consumers' health from water borne disease, have a significant impact on the standard of living in that community and raise fundamental questions of social equity in relation to the services provided to larger towns.

In response to *Water 2000*, the Federal Government in September 1984 developed a new water policy with the overall goal of efficient and equitable utilisation of the nation's water resources. One policy objective was 'the availability of water, adequate in quantity and quality, for all beneficial uses', recognising that 'water supplies to many small communities are often below the standard considered desirable by the community at large for the enjoyment of prevailing living standards'. To give effect to the water policy, the Government established the Federal Water Resources Assistance Program (FWRAP).

The Country Towns Water Supply Improvement Program (COWSIP), now a sub program of FWRAP, was initially established in 1983 under the auspices of the Community Employment Program.

The rationale and underlying policy goal for Commonwealth involvement in this area was the acceptance of two principles:

- social equity - all Australians should have reasonable access to reasonable water supplies for health and quality of life considerations; and
- economic development - inadequate water supplies can be a significant barrier to economic growth and development, and the Commonwealth should assist in removing impediments to economic growth.

COWSIP as incorporated into FWRAP in 1985-86 had two objectives to achieve these social equity and economic development goals:

- firstly, to assist in providing an adequate water supply to those small communities suffering from gross water supply deficiencies which have the least capacity to finance necessary improvements; and
- secondly, over the long term to encourage the use of alternative low-cost approaches which could make water supply improvement more affordable by small communities, and thereby significantly reduce or even eliminate the need for subsidies.

The second objective recognised that the intractable water supply problems of small communities were a reflection of the very high costs per service involved in conventional systems. These systems were beyond the realistic financial capacity of government and local communities to meet. Alternative low-cost approaches, covering new technological solutions, changed institutional arrangements and reassessment of suitability of existing engineering and supply standards, offer in many cases the only likely prospect of improvements to existing grossly inadequate supplies.

A recent review of COWSIP found that although projects undertaken have met the selection criteria and warranted COWSIP support, the most needy cases, in terms of the severity of problem and the least capacity to self-finance improvements, were not always identified in State submissions. A number of such cases came to light following the Toomelah Inquiry (Human Rights Australia 1988), in correspondence directed to and through analysis of the Water Quality and Low Cost Water Supply Databases. The Water Quality database contains data on the quality and capacity characteristics of all water supply schemes throughout Australia.

### **3.3 Water Supplies in Aboriginal and Torres Strait Islander Communities**

The Toomelah Inquiry found that the provision of water and sewerage to Toomelah had been mismanaged, unco-ordinated and inadequate, and that the conditions were intolerable. Since the publication of that report, the Race Discrimination Commissioner has been approached by numerous communities with accounts of similar problems.

An analysis of water supplies in Aboriginal and Torres Strait Islander communities (Australian Water Resources Council, 1989:10) found:

- there are some 21,000 Aboriginal people in Australia living in communities of between 30 and 1,000 people who do not have a reticulated water supply. The average population of these communities is 160 and some 90% of them live in Western Australia and the Northern Territory. There are some 54,000 Aboriginal people in Australia served by reticulated water supply schemes supplying fewer than 1,000 people.
- there are some 19,000 Aboriginal people served by water supply schemes having insufficient capacity to meet the reasonable water demands of their communities. Some 75% of these live in Queensland and the Northern Territory.
- there are at least 1,000 Aboriginal people served by water supply schemes having severe water quality problems in that quality fails to meet the desirable current criteria of the NH&MRC-WRC 1980 *Guidelines for Drinking Water Quality* in Australia. The large population for which no data is available suggests that this number could be substantially higher.
- there are at least a further 14,000 Aboriginal people served by a water supply which met the desirable criteria of the 1980 NH&MRC Guidelines but which does not meet the earlier 1987 Guidelines. Allowing for the supplies for which no data is available, the population affected could be as high as 30,000 people.<sup>7</sup>

The above results provide an indication of the conventional technical analyses of water supply issues. However, they omit a number of factors which would be relevant in understanding the situation in Aboriginal and Islander communities. These sociological factors will be explored further in this Report.

The Aboriginal and Torres Strait Islander Commission (ATSIC) has recently completed Stage 1 of a national survey of housing and community infrastructure needs (ATSIC 1992a). The survey had nine questions related to the water supply of discrete communities, including outstations and homelands. An analysis of the data from 907 discrete communities (Hearn et al 1993), led to some of the summary observations presented in Table 3 over page.

Groundwater is an important source of supply for many Aboriginal and Torres Strait Islander people. It was used by 63% of discrete communities surveyed. Tables 4 and 5 over page detail the distribution of water supply types.

The quality of water available for use by a significant number of Aboriginal and Torres Strait Islander people is less than the accepted Australian standard. As shown in Table 6 over page, some 17% (14,616 people) of the population living in discrete communities relied on water not complying with the NH&MRC guidelines on water quality. Only 38% of communities had a qualified person doing regular water testing.

The quantity of water available for use is not satisfactory for a significant number of people. Table 7 over page shows that water restrictions occurred during the past twelve months in 33% of the discrete communities surveyed.

Equipment breakdown was one reason for water restrictions in 62% of these communities. The appropriateness of the equipment used to supply the water should be questioned given the high failure rate. A significant number of communities (14%) did not have a maintained water supply

system, and 45% said their water supply infrastructure was inadequate to meet their housing needs over the next five years.

The national survey (ATSIC 1992a) has thus provided, for the first time, comprehensive quantitative data on the water supply situation for Aboriginal and Torres Strait Islander people throughout Australia. A recent audit of water supplies of the Torres Strait Islands (Water Resources Commission 1992:19) further investigated some of the financial implications of maintaining small water supplies. The life of infrastructure in the Torres Strait is currently between 7 and 10 years when it could normally be expected to be 25 - 35 years. The existing water supplies were constructed between 1986 and 1988 at a cost of \$9 million and would cost in the order of \$4.5 million (June 1992 prices) to bring back to designed performance levels. The audit recommends that 5% of the existing investment by the Commonwealth in Aboriginal and Torres Strait Islander infrastructure and housing in Queensland (currently \$55 million per annum) be dedicated to the express purpose of implementing sound asset management practices. There is no reason to doubt that similar performance characteristics exist in other States and Territories.

**Table 3 Water Supply Aspects of National Survey of Aboriginal and Torres Strait Islander Discrete Communities 1992**

State/ Territory	Communities surveyed <sup>1</sup>	Groundwater was a source <sup>2</sup>	Water quality does not comply with NH&MRC guidelines <sup>3</sup>	Water restrictions in the past 12 months <sup>4</sup>	No water supply maintenance <sup>5</sup>	Insufficient water for next five years <sup>6</sup>
		%	%	%	%	%
NSW and ACT	67	10	6	34	13	22
Vic and Tas	2	50	50	50	0	50
Qld	81	44	36	56	22	44
SA	96	84	22	71	8	36
WA	179	70	19	9	14	41
NT	482	66	46	30	13	51
<b>Australia</b>	<b>907</b>	<b>63</b>	<b>34</b>	<b>33</b>	<b>14</b>	<b>45</b>

1 Number of discrete communities surveyed

2 Percentage of communities that used groundwater as a source of water

3 Percentage of communities whose source of drinking water does not comply with NH&MRC guidelines

4 Percentage of communities that had water restrictions applied at any time in the past 12 months.

5 Percentage of communities in which the water supply system is not maintained

6 Percentage of communities with a water supply system unable to meet the housing needs over the next five years.

**Table 4 Source of Water Supply: Types Used by the Discrete Communities Surveyed (ATSIC, 1993)**

Source of Water Supply	Number of Communities	Percentage of Total Sources
Bore water	568	63
Rainwater tank	165	18
Extension of town water supply	159	17
River water/lagoon	125	14
Carted water	94	10
Catchment reservoir	18	2
Dammed waterway	7	1



**Table 5 Source of Water Supply: Groundwater as percentage of Total Sources used by Discrete Communities within Each State/Territory (ATSIC, 1993)**

State/Territory	Number of discrete communities	Groundwater as percentage of total sources used
SA	81	84
WA	126	70
NT	317	66
Vic and Tas	1	50
Qld	36	44
NSW and ACT	7	10

**Table 6 Quality of Water available for Human Consumption within the Communities which do not comply with NHMRC – AWRC Guidelines (ATSIC, 1993)**

State/Territory	Communities affected	Population affected
Vic and Tas	1	38
NSW and ACT	4	71
SA	21	776
Qld	29	4,283
WA	34	1,241
NT	222	8,207
Australia	311	14,616

**Table 7 Water Restrictions experienced by Discrete Communities over the past twelve months (ATSIC, 1993)**

State/Territory	Communities affected	Population affected	1	2	3	4	5	6	7	8
NSW and ACT	23	3,354	15	5	2	4	1			4
Vic and Tas	1	38		1		1	1			
Qld	45	16,691	28	21	14	7	15	2	4	8
SA	68	2,207	8	57	2	6	5	23	1	1
WA	17	1,854	8	12	5	3	7	5	2	1
NT	146	10,126	10	90	54	16	13	7	2	35
Australia	300	34,270	69	186	77	37	42	37	9	49

Reasons for water restrictions

1 Drought	5 Water source exhausted
2 Equipment breakdown	6 No wind
3 Lack of storage	7 No fuel
4 Inadequate reticulation	8 Other

While the latest ATSIC and Torres Strait data is a significant base on which to establish decisions, the focus on technical compliance and comparative adequacy needs to be augmented with information on the actual water strategies and attitudes to water which people hold. Communities do not exist unless people have access to water or have a defined water strategy which allows them to live in certain geographical areas. In some communities the need for water may be associated with a broad range of issues. In some situations people may not directly refer to their need for water, but other cultural aspirations imply a need for changes in the level of service provision. Many of the case studies show the intricate social web between the need for particular types of water supply and the ability to follow culturally-defined lifestyles.

Therefore, while it is useful to know how many services do not comply with standard guidelines, it would be equally useful to have an appreciation of whether the community can sustain the application of those standards if rigidly applied. An examination of water needs under this broader framework could provide meaningful results. This aspect of water supply audits in Aboriginal and Islander communities is a significant omission. The focus on data

collection suggests a purpose of achieving equity against external norms rather than equity through Aboriginal ownership and control.

With the exception of the recent ATSIC data, little is known about contemporary Aboriginal and Torres Strait Islander water supplies. The information which does exist is often in government or consultants' reports and not easily accessible for wider scrutiny. Useful articles most relevant to communities in arid areas appear in several workshops, conference and seminar proceedings and papers (see Foran & Walker 1986, Mansell et al 1990, RADG 1988).

Apart from Walker (1990, 1992) and Davis & Kirke (1991), understanding of the range of complex issues involved in the provision of water supplies to many Aboriginal and Torres Strait Islander people is inadequate.

### **3.4 Provision of Services to Remote Communities**

The technological and sociological issues of water supply fall within the context of the wider provision of all services to remote communities. Issues of remoteness also contribute to the problem.

The impulse towards concentration of settlements is promoted by increased demand for access to a wide array of amenities and basic services. Service delivery combined with the depletion of indigenous resource bases provided the rationale for concentrating previously semi-nomadic and nomadic groups into urban settlements with schools, clinics, stores, welfare offices, power generators and regular communication with the world beyond (Loveday and Wade-Marshall 1985).

Service networks reveal special attributes within sparse lands. Attenuated service delivery and the logistical problems of servicing have received scant attention, save only in in-house feasibility studies, specialist reports, and in a few recent publications (Loveday, 1982, Equal Opportunity Commission WA 1990).

The new set of government policy directions, having a marked impact throughout sparsely populated zones, are those arising from the growing acceptance of the principle of equity in the provision of an expanding array of basic services. There is a long tradition of special intervention to minimise disparities in access to basic educational and health services, with attention to both the socially and the locationally disadvantaged. Special consideration for the latter group can be readily identified in such Australian innovations as the Royal Flying Doctor Service and the School of the Air.

Recently in most Western societies, principles of social justice have been extended to embrace a much wider array of services (Holmes 1988). While the initial impulse has been directed at remedying social disadvantage the benefits often have been shared disproportionately by the locationally disadvantaged.

The Australian context exemplifies the conjunction of forces leading to high cost delivery of services to remote consumers. Holmes (1988:92-93) identifies the following factors:

- There is a strengthening view that all citizens, irrespective of their location, are entitled to reasonable access to basic services at reasonable cost to the consumer.

- The array of basic services is constantly being expanded to include infrastructure such as telephone, radio, television, all-weather roads, electricity and public housing, as well as services of education, health and welfare.
- The diversity, complexity and cost of these services is progressively increasing, largely through the introduction of new technologies. These technologies enhance the capacity to conquer distance, thereby increasing the feasibility of effective service delivery, but usually at considerable cost.
- Remote rural populations are increasingly vocal in their demands, with the muted requests for governmental assistance towards support of rural production units (via subsidies, drought assistance and other support programmes) being in sharp contrast to their strong insistence upon public support for their consumer demands. The most successful of these groups has been the Isolated Children's Parents Association, which has expanded its campaign for improved education services and substantial financial assistance into further campaigns for improved telecommunications and satellite-relay services. Peak Aboriginal and Islander groups could also be numbered in the successful groups.
- Because of the very substantial income and employment multiplier effects, the demands of rural consumers receive strong support from the service providers, including powerful public utilities, trade unions, public servants and private business in country towns.
- Of particular importance is the role of major public utilities operating at state level (education, electricity, hospitals, railways, main roads) or at federal level (post and telecommunications) whose centralised structure is largely justified as a means of ensuring service delivery to those locations incapable of meeting full costs, and with very substantial direct or cross-subsidies within their financial structure. Recent calls for privatisation have not been echoed in Australia's peripheral zone, or in comparable sparse lands in other countries, where government continues to be regarded as having responsibilities in fostering economic development. In national debates concerning deregulation and privatisation, the first line of defence of the major utilities has been to highlight their responsibilities to ensure reasonable service access to the locationally disadvantaged. In self-justification, this has involved more vigorous efforts at upgrading services in remote areas. These efforts may be further accelerated where the public utility has promoted one particular technology over the claims of an alternative. This is most apparent in Telecom Australia's efforts to install very costly Digital Radio Concentrator Systems throughout remote communities to counter the claims for satellite relayed telecommunications.
- There has been an explosion in delivery costs per unit of service as these services become increasingly sophisticated and capital intensive, while remaining resistant to high labour productivity, because of the big distances and low demand levels. Indeed, maintenance of equipment at remote locations is leading to costly ongoing labour inputs (Holmes 1988). These high cost components are rarely recognised, even by consumers, as they are hidden within aggregate budgets.
- Remoteness adds to the cost burdens additional to those arising from physical distance and poor access. Projects are remotely planned and controlled, often ill-designed and disproportionate to local needs.

- For remote communities, it is politically and financially impossible to pursue a policy of full cost recovery on fee-charging services. Few consumers, even those with the capacity to pay, would be prepared to receive services at prices equal to delivery costs.

Persistent trends in upgrading services do pose a number of basic policy issues, most of which have yet to be exposed to thorough enquiry and public debate. The three major issues are:

- those relating to equity goals, however these goals are defined and operationalised, and the implications of the persistent moves towards redefining equity in terms of equality of access;
- those arising from growing regional dependence on public transfer payments and subsidy;
- those concerning national priorities in population distribution, regional development and settlement systems.

There are two further policy issues. Firstly, there is the markedly different locational impact of development policies compared with policies of improved service delivery. Developmental programs are highly localised and very selective in their regional impact, engendering differential regional growth rates. Service delivery programs have a more widespread regional impact and indeed can be expected to provide some economic impetus in almost all populated locations.

The second issue is the reinforcing effect on regional economic growth arising from special programmes directed towards the needs of indigenous peoples. In Australia's sparse lands, the Aboriginal sector is an increasingly powerful impetus to economic growth, arising not only from the increased consumer expenditure of Aboriginal peoples and their propensity to direct their expenditures into the local economy, but also because of the growth in specialist public-sector employment providing services to Aborigines. These regional economic impacts have received inadequate attention, whereas those arising from other economic activities, such as tourism, are commonly overemphasised (Crough 1989).

Thus governments must fulfil an increasingly diverse and complex set of roles within remote communities. Conflict will inevitably arise given the multiple roles of governments as developers, as entrepreneurs, as service providers and welfare sponsors of indigenous peoples. These conflicts become institutionalised and magnified in federal systems where the greatest sources of disagreement between 'regional' and national states commonly arise from policies directed towards their remote and rural areas. Nowhere is this more evident than in dealings between the NT Government and the Federal Government or shire council structures of the State Governments of NSW, QLD and WA.

### **3.5 Impact of Technology on Remote Communities**

Technological advances have a distinctive impact on remote communities, offering opportunities and problems markedly different from those obtained in well settled zones. The opportunities are often so spectacular, notably with distance-spanning modes of transport and communication, that it can easily be assumed that the overall net impact of new technologies is markedly in favour of remote communities.

The new technologies have their most obvious impact on the quality of life of remote populations, enabling their closer integration into national lifestyles. However, this integration can lead to an erosion of value systems essential to effective living in remote locations. The consequences of this erosion have yet to be assessed.

Technological change has contributed spectacularly in reducing the hardships and deprivations caused both by remoteness and an inhospitable climate. While these benefits have been widespread, they have operated selectively to foster economic and population growth in restricted regions, as also has been the case with large scale materials processing technologies. This has aggravated the problem of maintaining a productive economic base in many sparsely populated zones and has further increased dependency on governmental support.

In themselves, new technologies cannot solve the problems of remote communities. In resolving one set of problems, technologies will generate an entirely new set, particularly where new, sophisticated technologies incur high costs, beyond the reach of the small, scattered populations. Cost burdens are accepted by governments because local aspirations for betterment are found increasingly to coincide with national aspirations directed towards near equality for all people in gaining access to a widening array of basic services. This is creating a distinctive, ever changing set of problems and policy issues for Western countries containing extensive sparse lands. The problem is exacerbated in the context of the development and self-determination process of Aboriginal people.

There is a growing need for public recognition of the increasing problems and costs imposed in servicing remote communities, so that priorities can be determined in a more informed manner.

While the above discussion concentrates on the particular context for Aboriginal water supplies a compounding factor is created through competition for the resource between Aboriginal and non-Aboriginal people. Water is a scarce resource in many parts of Australia and the purposes for which modern Australia has secured water sources has impacted upon Aboriginal people in culturally destructive ways. This conflicting use has of itself become part of the water problem.

### **3.6 Provision of Services to Urban and Peri-Urban Communities**

The ATSI data (ATSI 1992) noted that 66% of Aboriginal and Islander people lived in urban centres of populations above 1,000. Some 42% of these were likely to be in large rural towns (population 1,000 to 99,999) and in general are serviced from a town water supply. Whilst many of the problems raised by these types of supplies are picked up in the AWRC Review of Low Cost Water Supplies (AWRC 1989), many other issues unique to these types of communities are identified in the case studies of Dareton and Tingha. Invariably problems arise around housing tenure, payment of rents, water and sewerage rates to local councils. Aspects of the issues are also outlined in the Toomelah Report (HRA 1988).

### **3.7 Water and the Health of Aboriginal and Torres Strait Islanders**

There is considerable literature describing the ill-health of Aboriginal and Torres Strait Islander people.<sup>8</sup> The National Aboriginal Health Strategy Working Party (NAHSWP 1989) pointed out the health status of Aboriginal and Torres Strait Islander people is significantly lower than that of other Australians. The third biennial report of the Australian Institute of Health and Welfare (AIHW 1992:210-218) documents this health inequality, showing that Aboriginal and Torres Strait Islander people have, in comparison to the total Australian population:

- a life expectancy at birth 15-17 years less
- a standardised mortality ratio of 2.5-4.4
- a higher age-specific death rate (eg the 35-44 year age group for males and females have rates 11.4 and 8.6 times higher respectively)
- babies on average 150-350 grams lighter
- an infant mortality rate 1.9-3.8 times higher
- a higher standardised hospital admission rate for all age groups.

The consistent excess of respiratory, skin, ear, eye, infectious and parasitic problems observed in the Aboriginal and Torres Strait Islander health data implies that inadequate physical living conditions are an important contributing factor to health inequality and the presumed central importance of the provision of improved water supplies for Aboriginal and Torres Strait Islander health improvement is well documented (HRSCAA 1979, RACO 1980, DAA & DTC 1982, Nganampa Health Council 1987, NAHSWP 1989, Hollows 1989, Pholeros 1990, Griffiths & Henderson 1991, Davis & Kirke 1991).

The National Aboriginal Health Strategy Working Party (NAHSWP 1989) said:

*Integral to health systems infrastructure are support services such as sewerage, water supplies, communication etc. These environmental health facilities were mentioned in almost all community consultations and were common in the submissions received by the Working Party. Safe and adequate water supply, improved number and design of houses, shelter, dust control and other environmental factors are vital to sustain improvements in Aboriginal health and well being... Without question the inadequacy of sewerage and water supply systems are a major factor in the poor health status of Aboriginal people...*

The Aboriginal and Torres Strait Islander Commission (ATSIC 1992) states:

*The Government will provide up to \$232m over five years to lift unacceptable health and infrastructure standards in Aboriginal communities...Funds will be used to address urgent needs in Aboriginal and Torres Strait Islander communities such as housing, water, sewerage, electricity, communications and roads...*

However, international and Australian experience shows the provision of a clean, adequate water supply does not automatically result in significant health improvement. There are many other factors to consider as well (NAHSWP 1989, Huttly 1990, Walker 1992). Nevertheless, it is a vital step towards health improvement.

Despite a large international literature examining the nexus between water supply and health (Saunders & Warford 1976, NAS 1977, McJunkin 1982, Blum & Feachem 1983, WHO 1984, Kerr 1990, Pickford 1991, Esrey et al 1992, WHO 1992), it remains difficult to quantify the relationship accurately. The 1976 conclusion of an expert panel (World Bank 1976) remains pertinent today:

*Other things being equal, a safe and adequate water supply is generally associated with a healthier population. This has been unequivocally demonstrated for urban areas and in varying degrees for rural situation. The difficulty lies in measurement rather than in qualitative trends. The problem with collecting field observations on the health effects of water supply is that on a cross-section basis other things are never equal. On a through-*

*time basis other things usually cannot be held constant or accurately controlled. Consequently, it is extremely difficult to identify and measure exactly the health effects of improved water supply, and there is a limit to the precision attainable. Furthermore, even if a case were found where governmental, physical, environmental, economic, cultural and educational factors which affect health could be reasonably controlled, the detailed findings of a health and water supply study are unlikely to be transferable from that particular setting to situations elsewhere.*

Mortality and morbidity data show the low life expectancy and illness suffered by Aboriginal and Torres Strait Islander people due to infectious and parasitic disease. Whilst this is a broad group of diseases, poor environmental living conditions, including availability and use of water, would have contributed to this health inequality (refer to for example: RACO 1980, Torzillo & Kerr 1991, Munoz et al 1992).

Diarrhoeal disease, often associated with a lack of water and poor hygiene, is unquestionably a serious health problem for Aboriginal and Torres Strait Islander people, particularly infants and young children (Gracey 1992). Diarrhoea is the most common reason for presentation of children to clinics in central Australia (CARPA 1991).

There is no national data to quantify the extent of waterborne disease in the Aboriginal and Torres Strait Islander population.

The findings of a recent study (Craun 1992) of waterborne disease outbreaks in the United States may offer a useful guide for Australia, given the two countries have a comparable standard of living and health status.

Concerning the causes of outbreaks, Craun states:

*During 1981-1990, contaminated, untreated groundwater or inadequately disinfected groundwater was responsible for 43% of all reported waterborne outbreaks, and contaminated, untreated surface water or inadequately treated surface water was responsible for 24% of all reported outbreaks. Contaminated groundwater has consistently been responsible for more waterborne outbreaks than contaminated surface water. In each decade since 1920, 43-56% of all outbreaks were caused by contaminated groundwater, against 14-37% by contaminated surface water. Contaminated, untreated groundwater has declined in importance as a cause of outbreaks, and inadequate or interrupted disinfection has increased in importance, causing 17-27% of all outbreaks since 1971. Prior to 1971, only 2-6% of all outbreaks were caused by inadequate disinfection of groundwater. The increased occurrence of outbreaks in disinfected groundwater systems may be due to increased use of disinfection with little or no effort to reduce or eliminate sources of contamination. The lack of attention to providing effective, continuous disinfection is also important.*

Concerning the aetiology of outbreaks, 95.9% were caused by infectious agents and 4.1% by chemical agents. Four cases of methemoglobinemia, presumably all caused by high nitrate, were reported since 1971, with one case resulting in death. Craun (1992) points out that since 1971, giardiasis was the most frequently identified aetiology.

Contaminated groundwater was frequently associated with particular agents, causing 82% of hepatitis A and 60% of campylobacteriosis outbreaks. Contaminated groundwater also caused 48% of viral gastroenteritis, 27% of shigellosis, and 13% of giardiasis outbreaks.

These United States findings are of interest given the importance of groundwater in Australia (AWRC 1987) and its common use as a source of drinking supply in Australia's arid zone (Wade 1992) particularly for Aboriginal and Torres Strait Islander people.



## Chapter 4 - RESOURCE AND REGULATION

Central to any investigation of water is an analysis of the availability of the resource; the organisations who monitor and regulate the provision of the resource; and the technical characteristics of the resource. These three points are dealt with below.

### 4.1 Water - The Resource

*The ancients revered water. In the age of innocence, earth, air, fire and water were regarded as the four constituent elements. Mythology lent to them a richness of character and a range of mysterious attributes. During the intervening millennia, human settlements, human activities and human festivals have all reflected the central role of fresh water.*

*Today, in the age of science, myths and mysteries are not in vogue. Neither, seemingly, is respect for water. Human indifference and human greed combine globally to waste it, foul it and divert it, thereby denying it to neighbours. There is probably no other commodity so treasured by some, while regarded with such indifference by others (IDRC 1988:3).*

Next to oxygen, fresh water is the most important substance for sustaining human life. Without it, people cannot survive more than about three days. Water accounts for 67% of human body weight and 90% of body volume. Only 3% of the world's total water supply is fresh water: the rest is sea water. Much of the world's fresh water exists as glaciers and polar ice sources that are largely unavailable for human use. Similarly, much of the world's groundwater is locked away in deep rock formations, out of the reach of conventional human technology. The annual global harvest of fresh water is estimated at between 2.6 and 3.5 trillion cubic metres. The lesser value would be sufficient to fill over one billion Olympic-size swimming pools (IDRC 1988:6).

Although it makes up only a tiny fraction of the world's water, the planetary supply of accessible fresh water is more than enough to sustain the growing world population. The problem of villagers, city dwellers, governments and development agencies is to deliver fresh water where it is needed, at an affordable price and at acceptable quality.

While globally most water is used for crop irrigation these proportions vary from region to region depending on the economic base. Industries in Eastern Europe, for example, account for up to 80% of the regions use of fresh water. By contrast, industry in Ghana accounts for only 3% of the countries total use of fresh water.

#### **Percentage of Annual Global Harvest of Fresh Water used for different purposes.**

<b>Water Use</b>	<b>Percentage</b>
Crop Irrigation	73
Industry	21
Domestic and Recreational	6

Source: World Resources Institute and the International Institute for Environment and Development 1987.

Human settlements and commerce have often appeared where fresh water was most accessible and plentiful although in some instances people have survived in areas of water deficit as a result of highly developed cultural practices.

Since settled people harnessed and reticulated water, the variety of human water uses has diversified and the resultant level of human contact with water has increased. At all stages the development and refinement of water use is affected by the mix of culture, technology and social change. In a complex contemporary society there are a range of personal and community water uses covering recreational, industrial, commercial, agricultural and mining functions. This diversity of water-related human functions increases conflict and competition for the resource. The coming together of different cultural groups and lifestyles exacerbates this competition.

Although human beings consume only about two litres of water each day (WHO 1992a:64), good health and cleanliness demand a further 24 or 25 litres/day. In fact, it is often argued that for many of the world's poor, the first health requirement is not cleaner water but more water. Even water of questionable potability (because of high salt content, for example) may be sufficient for bathing and washing clothes, cooking utensils and plates, thereby promoting cleanliness and health.

However, modern societies have dramatically changed their interface with the water environment by introducing an ever-expanding range of water-based activities such as swimming pools, spa and plunge pools, fun parks with heated wave pools and water slides and air conditioning. These changed functional uses of water increase the quality and quantity of water required while at the same time influencing aspirations and potential water uses in communities subject to lesser levels of access and service.

## **4.2 Water in Australia**

Prior to settlement of Australia by Europeans, there was minimal interference with the hydrological cycle by Aboriginal people due in part to the lack of tools and technologies with which to modify the environment. The fragile resource balance necessary to sustain life would also have restricted any tendency to interfere. However, since settlement there has been increasing interference with the cycle.

In both Aboriginal and non-Aboriginal settlement patterns the water resource is inextricably linked with the land. The linkage with land came long before any linkage with improved public health. This relationship reflects a more basic human need than improved standards of living and health and hygiene goals which for many are developed economy goals. The impact of land use has led to differing water values and water use. To Aboriginal people water and land and culture equal life. To non-Aboriginal people, water and land and culture have thus far led to environmental degradation.

The deterioration of land and water resources (environmental degradation) since settlement has recently been acknowledged as a serious problem for Australia (Australian & New Zealand Environment and Conservation Council 1992).

*It is a problem generated by human interference with the hydrological cycle, in part because of farming techniques that were imported into an environment where the climate and soils were different from those of the source areas of the settlers. Initially then, degradation was due to ignorance of the environment. Subsequently, as knowledge was learned from experience, the use of water as a resource has become better adjusted, but the nation is still far from evolving an optimal solution for land and water use. During two centuries, European settlers have been attempting to deal with the problems of rainfall*

*scarcity and variability with dry farming practices and irrigation. The building of dams, whether economically justified or not, has become a general means of increasing water storage. Substantial land degradation and interference with the hydrological cycle has resulted from these activities* (Smith and Finlayson 1988:7).

Seasonal drought occurs in summer in southern Australia and in winter in the north because of the seasonal concentration of rainfall. For Australia as a whole, only 10% of the rainfall becomes runoff: the remaining 90% is returned to the atmosphere by evaporative processes.

The largest water use activity in Australia is irrigation which accounts for 70% of the total applied water for the continent and represents a mean daily demand equivalent to 3,000 litres for every inhabitant of Australia. Irrigation so dominates the agenda that in a recent Industry Commission Report the discussion on rural water supply concentrated entirely on irrigation without reference to rural towns or Aboriginal communities.

### ***Surface Water Supplies***

Australia's rivers have low mean annual flows and they are also more variable than a broad sample of world rivers (Finlayson et al 1986). Consequently they are more difficult and expensive to manage than rivers generally throughout the world.

In many areas of Australia, surface water may carry significant amounts of particulate matter, both organic and inorganic, which may present a serious problem when the water is used as a drinking supply. Excess suspended material is undesirable, not only from an aesthetic point of view, but also because particles can carry a heavy load of micro-organisms. Furthermore, the particles may screen pathogenic micro-organisms from effective disinfection.

Water collected from open catchments may be polluted by pathogenic organisms carried in the faeces of humans and other animals. However, the risk of contamination in protected catchments is substantially reduced because of the virtual exclusion of humans and certain other animals.

Pathogens which may be present include bacteria, viruses and protozoa most of which can be destroyed by effective disinfection. However, many rural supplies are neither disinfected, nor is the microbiological monitoring adequate. Water may also be contaminated by micro-organisms from birds and from dust, particularly if it is held in open service reservoirs or tanks before distribution to households.

The presence of dissolved organic matter, particulates and some ionic species makes disinfection without full treatment difficult. If chlorination is used for disinfection, the amount of chlorine required is greatly increased. Any attempt to reduce the formation of chlorinated organics must not compromise the efficiency of disinfection as the risk of disease transmission far outweighs the very low risks associated with the formation of disinfection by-products.

### ***Groundwater Supplies***

Groundwater from public and private supplies is estimated to contribute some 14% of the current water requirements of Australia. About 80% of small town water supplies are reliant on water from bores and artesian wells - water that has been underground for months to millions of years. Over time, minerals from surrounding rocks and soils dissolve in the water, giving it its characteristic colour, salinity, and hardness. It is estimated (Jacobson et al. 1983) that there is a total of some 400,000 bores in Australia and that the mean yield from surficial, sedimentary and fractured rocks is approximately 3.5, 2.5 and 1.0 litres per second respectively.

Many of Australia's groundwater resources have high natural levels of salinity, hardness, nitrate, iron and manganese salts, carbon dioxide or sulphides. The introduction of controls can reduce the accession of pollutants to groundwater; however, the prevention of contamination of groundwater systems is a complex problem, particularly in relation to salinity.

Undisturbed groundwaters are often free of harmful micro-organisms except where they are in contact with ground surfaces (e.g. open wells and soaks) or where water flows freely from surface to groundwater (e.g. in limestone areas).

### 4.3 Water Quality

In the case of urban water supply, it is considered by some to be essential to provide fully reticulated high pressure, high quality water supply of relatively unlimited quantity without any interruption or restriction. It is also accepted that water charges have to be paid by the consumer.

The availability of adequate volumes of water of good quality within reasonable distance cannot always be guaranteed for communities in remote locations. If the water quality standards are stringently applied in these circumstances the cost of providing the high quality water will be prohibitive. Quite often there are no health risks directly associated with groundwater and groundwater needs no treatment. Its suitability for drinking depends solely on the chemical attributes of the water. Surface water on the other hand may have both chemical and biological contaminants. In remote communities and outstations there are often economic and technical constraints to attaining an urban level of service provision. In such situations, many of the places where Aboriginal people want to live may have to be abandoned on the ground of non-availability of potable water. In others there may be a preparedness to negotiate alternative expectations of services. Fundamental to this approach is the need to determine appropriate levels of servicing including quality, quantity, access and regulation.

The following parameters determine the availability and adequacy of water supplies to communities.

*Both biological and hydrological evidence make it certain that the uncritical application of northern hemisphere 'standards' and freshwater water quality management strategies are inappropriate for the Australian environment. What is required is a determined and comprehensive effort to obtain appropriate water quality information in order to modify, or totally rewrite, these exotic criteria and to provide a foundation for the sound management of such a critical resource (Smith and Finlayson 1988:34).*

Water quality research in Australia has been described as inadequate, fragmented, and poorly balanced and has substantial gaps (Williams 1982:1). Many water supplies in Australia require treatment to make them either drinkable or suitable for domestic use. Ideally, drinking water should be clear, colourless, well aerated with no unpalatable taste, odour, suspended matter, turbidity, toxic chemical substances or harmful micro-organisms. Although appearance, taste and odour are useful indicators of the quality of drinking water, suitability in terms of public health is determined by microbiological, physical, chemical and radiological characteristics. Of these, the most significant is usually the microbiological quality.

In practice, it is neither physically nor economically feasible to test for all harmful materials or organisms which may be present in water. For the majority of characteristics, local conditions

and a knowledge of the supply system will help determine whether and how frequently an analysis should be undertaken. Generally, water does not need to be tested frequently unless the characteristics are critical to the safety and acceptability of the supply or are known to be variable.

The way in which samples are collected has an important bearing on the results of their examination and it is important, therefore, that sampling personnel should be properly trained for the work.

Decisions about drinking water quality cannot be taken in isolation from the other aspects of water supply that compete for limited financial resources. The two major decisions to be made are firstly, the levels of service to be adopted, and secondly, the time frame within which those levels can be achieved.

Water quality priorities will depend on the impact of quality improvements on public health and on aesthetic considerations such as taste, colour and odour). Obviously, public health must take a higher priority than aesthetics. It would be helpful to be able to predict the improvements in public health that might be expected to flow from the improvements in water quality.

Many water authorities are currently operating to levels of service for coliform, colour, turbidity, pH, chloride and sodium which differ from those proposed in national guidelines. Where these levels are known to be generally acceptable to the community and do not constitute any significant health risk to consumers, then, for the authorities concerned, the local knowledge of the supply system and level of monitoring provides the basis for the present levels of service.

It is not possible to improve all drinking water supplies in the short term and governments and water authorities, in association with their customers, need to make practical decisions on the most appropriate course of action. This requires a balanced consideration of the health risks, the cost of treatment and public desire for improved water quality.

### ***Factors Affecting Water Quality***

The quality of water drawn from surface and underground supplies can be affected by natural and induced changes. Protected catchments and groundwaters in confined aquifers are the least likely to be influenced by these. However, natural events such as bushfires, droughts and floods can affect water supplies from protected catchments, while changes in land use in intake areas far removed from the point of extraction can alter the quality of groundwaters.

Some of the more significant natural and induced processes which affect the quality of water sources in Australia are discussed in Appendix B. Also included are key indicators of water quality in Aboriginal communities reliant on groundwater supplies and some of the available technical responses to treat these supplies.

## **4.4 Quantity**

The amount of water used per person is a function of the quantity of available water, the closeness to the point of use, the cost of water and the relationship between a variety of physical, social and climatic factors specific to the area.

Water usage can be split into several classes including survival, cooking and washing, full ablutions including septic tank systems and garden use. Collins (1985) has provided a

breakdown of water consumption of various classes in Alice Springs. He has calculated the daily demand as 180 litres per person per day (L/p/d) covering all non-gardening uses. A survey of eight major centres in the Pilbara by the Water Authority of Western Australia showed that the average household consumption was 2000 L/day which was calculated as roughly 130 L/p/d for domestic use. The domestic consumption for Perth was 154 L/p/d.

McDonald (1002) has reported on water consumption at a number of Aboriginal communities in central Australia. Calculations from this data showed that the mean water consumption in litres per person per day by seven communities with a population of 300-1,000 people was 876 L/p/d with a standard deviation plus or minus 457; and by fourteen communities with a population less than 100, it was 710 +/- 311. For comparison, the mean per capita water consumption for Alice Springs, Tennant Creek and Yulara was 1,400 +/- 212. Thus the water consumption was relatively high and variable by the Aboriginal communities, but less than the towns with a large non-Aboriginal population.

The AWRC established three levels of supply as guidelines for situations where water was scarce or economic constraints were necessary. The AWRC Low Cost Water Supply Guidelines shown in Table 8 (over page) indicate typical consumption figures for small communities in each of these categories. The assumed occupancy ratio of three people per house would exclude almost all Aboriginal families. Notes on the guidelines are to be found on the following page. Table 9 (over page) summarises the consumption rates for households and establishes the percentage of total water used for various functions. The levels compare favourably with McDonald's data from small Aboriginal communities in the Northern Territory.

By way of comparison, the following consumption rates for various levels of facilities have been calculated by White (1977) from a number of studies conducted in the Developing World:

<b>Facility</b>	<b>Consumption (L/p/d)</b>
No water tap or standpipe	25
Water available in public taps	10-50
One tap connected inside house	15-90
Multiple taps inside house	30-300

Several researchers have estimated the demand for water for basic living within Aboriginal communities. For those whose needs are only drinking, cooking and washing, demand is estimated to be 10-50 L/p/d (Gillies 1977, Walker 1980); for those communities with septic tanks or some sort of water carriage system for waste disposal, the demand rises to 30-300L/p/d (Collin 1985, White 1977); and for those communities who, in addition to the previous requirements, make provision for water for gardening, the demand is 580-760 L/p/d (Collin 1985, WAWA 1986).

**Table 8 Water Supply Level Guidelines**

A Minimum Supply Level (where water resources are very limited)

B Basic Supply Level

C Desirable Supply Level (where increased supply can be provided at reasonable cost)

It is important to note that the three supply levels shown are essentially only convenient reference levels on a continuum.

Water Use		A	B	C
<b>Domestic Usage (Litres/person/day)</b>		<b>Average Usage</b>		
Drinking/cooking	Minimum potable uses	8	8	10
Dishwashing		12	18	20
Laundry, cleaning		23	30	
Bathroom	Shower	22	30	35
	Bath	-	15	20
	Hand Basin	7	7	10
Toilet		25 <sup>(1)</sup>	35	50
Others inc. car washing		3	7	15
<b>Sub-Total Domestic Usage</b>				
Litres/house/day		<b>100</b>	<b>150</b>	<b>200</b>
Litres/house/day (2)		<b>300</b>	<b>450</b>	<b>600</b>
<b>Leakage</b>				
Litres/house/day		<b>30</b>	<b>45</b>	<b>60</b>
<b>Total Domestic Average Day Usage</b>				
Litres/house/day		<b>330</b>	<b>495</b>	<b>660</b>
<b>Peak Day Domestic Usage</b>				
Litres/house/day		<b>480</b>	<b>720</b>	<b>960</b>
<b>Garden usage</b>		<b>Average Usage</b>		
(Litres/house/day)				
Garden		-	200	400
Leakage (3)		-	20	40
<b>Total Garden Average Day Usage</b>				
Litres/house/day		-	<b>220</b>	<b>440</b>
<b>Peak Day Garden Usage</b>				
Litres/house/day		-	<b>820</b>	<b>2040</b>
<b>Total Household Usage</b>	<b>Total Average Day Usage</b>			
	Litres/house/day (2)	330	715	1100
	<b>Average Annual Usage</b>	120	260	400
	Kilolitres/house/year			
	<b>Total Peak Day Usage</b>	500	1500	3000
	Litres/house/day (2)			
<b>Stock Usage</b>		<b>Peak Day Demand per Head</b>	<b>Annual Demand per Head</b>	
	Milking cows	100 L	12 kL	
	Horses and dry cattle	50 L	6 kL	
	Pigs and sheep	5 L	750 L	
	Poultry	0.35 L	50 L	

Source: AWRC 1989:14

**Notes on Supply Level Guidelines:**

- 1) It is assumed that low volume flush toilets will be used for both septic and sewerage systems. If waterless facilities such as composting or chemical toilets are adopted, this component of usage is deleted.
- 2) For per house usage in occupancy rate of 3 has been adopted.
- 3) An allowance of 10 per cent of average day usage has been used for leakage, operational wastage and fire fighting. Peaking factors are not applied to this allowance.
- 4) Peak day requirements are assumed to be 1.5 times average for domestic usage and 4 (supply level B) to 5 (supply level C) times average for garden usage.

- 5) Evaporative air coolers when used have a significant effect on water demands. An average day usage of 200 L/house should be allowed for the houses likely to have such coolers. A factor of 4 to 5 should be used to estimate peak day usage.
- 6) Where supply for gardening is not provided or is limited, recycling of greywater and water harvesting should be encouraged.

**Table 9 Water Use for Various Purposes**

- A Minimum Supply Level (where water resources are very limited)  
 B Basic Supply Level  
 C Desirable Supply Level (where increased supply can be provided at reasonable cost)

It is important to note that the three supply levels shown are essentially only convenient reference levels on a continuum.

Purpose	Minimum Supply Level A			Basic Supply Level B			Desirable Supply Level C		
	Av. Usage per House (L)	% of Av. Day Usage	% of Peak Day Usage	Av. Usage per House (L)	% of Av. Day Usage	% of Peak Day Usage	Av. Usage per House (L)	% of Av. Day Usage	% of Peak Day Usage
Drinking (includes cooking and dishwashing)	66	20	20	86	12	8	99	9	5
Laundry (includes other uses)	86	26	26	122	17	12	182	17	9
Shower (includes bath and hand basin)	96	29	29	172	24	16	215	19	10
Toilet	82	25	25	115	16	11	165	15	8
Garden	-	-	-	220	31	53	440	40	68
Drinking + Laundry	152	46	46	208	29	20	281	26	14
Drinking + Laundry and Shower	248	75	75	380	53	36	496	45	24
Drinking + Laundry and Shower and Toilet	330	100	100	495	69	47	661	60	32
<b>Total</b>	<b>330</b>	<b>100</b>	<b>100</b>	<b>715</b>	<b>100</b>	<b>100</b>	<b>1100</b>	<b>100</b>	<b>100</b>

Source: AWRC 1989:17

Storage capacity in urban areas is planned to meet the demand of peak days and peak hours, whereas storage in a remote place is planned to provide enough time to cope with a breakdown in the system. There are no recommended standards in this instance.

The pressure in urban water supply systems is generally around 45 metres head. This high pressure is to provide enough head to a double storey building and help in fire fighting. In remote places high pressure is not necessary. Moreover, low pressure will reduce wastage from leakage.

#### 4.5 Regulation and Access

The regulation of water supplies is a perplexing issue. Applicable standards draw predominantly on international experience and are often irrelevant or inappropriate to Australia. The recent Industry Commission paper (Industry Commission 1991) concedes that even within Australia the establishment of one standard may well be inappropriate. There is a concern that the current regulatory regime may not be sufficiently flexible to deal with the diversity of consumer preferences and different cost/benefit trade-offs between regions. For example, it must be



ascertained if the levels of sewage treatment desired or required in Brisbane are the same as those in Yuendumu and if not, whether the differences are reflected in the relevant regulations. It is not easy to change environmental standards even where experience indicates that those standards are inappropriate. Due care needs to be exercised before regulatory standards become so heavily enshrined in legislation that they become impossible to change in the light of relevant experience.

The Industry Commission study (Industry Commission 1992) examined the cost of changing standards and the implications of this on industry. The report investigated the incentives which face regulators and forced them to over-regulate. For example, the tightening of standards for drinking water may reflect a shift in consumer demand but more likely reflects a concern by regulators to cover themselves against all foreseeable eventualities irrespective of cost. The implications of this logic will certainly not be lost on Aboriginal and Islander communities who are seeing an increasing number of consultants and specialists active in their communities.

#### **4.5.1 Australian Drinking Water Guidelines**

Australian drinking water guidelines have undergone a slow metamorphosis. Future changes to the guidelines may be accelerated in response to public challenge and recognition that, as now apparent in Europe and North America, tighter water quality requirements are likely to confer high cost penalties in the form of steeper water rates on consumers. This will place pressure on water authorities and in turn demand of health agencies a realistic if conservative assessment of health risks.

In a review of the 1987 *Australian Drinking Water Quality Guidelines*, Wade (1991) says that the quality of water has proved difficult to define simply - yet every consumer has an innate, if subjective, sense of whether or not water is suitable for the use. Water Quality Guidelines have always had benchmark objectives of accurately defining acceptability and safety. Often, however, such guidelines are characterised by poor content and less than helpful statements in practical value.

The 1987 Guidelines have been widely used and at the time were an enlightened effort to resolve uncertainties about how to judge the quality of drinking water. However, the guidelines could have been more lucidly presented. There were a number of issues like disinfection practices and the parlous state of many small community water supplies that were not well addressed. The manner in which certain factors were listed became confusing to the general public: for example, lay people had difficulty in comprehending the differences between the value of lifetime exposure guideline levels and those set for short-term exposure to chemicals such as pesticides. The 1987 Guidelines list many more pesticides (including those widely in use), than do the World Health Organisation 1984 Guidelines. Australian levels assumed accidental or 'one off' direct contamination of drinking water, whereas the World Health Organisation Guidelines have always assumed chronic lifetime exposure to a chemical; hence Australian guidelines have been widely misunderstood. Such misunderstandings commonly lead to scare tactics amongst lay people.

The guidelines are also too specific on some occasions. For example, the Australian guidelines allow for up to 10 coliform organisms per 100 ml as opposed to 3 organisms per 100 ml recommended by the World Health Organisation. The difference between finding three or ten organisms per 100ml under most circumstances is probably not significant. Perhaps neither criterion could have been justified in technical terms.

The reality that most water supplies always contain some coliforms means that an alternative recommended response to the edict of closing down a supply may have been more practical. In practice, the real problems lie not with the guidelines themselves but with those supplies that are rarely monitored and which rarely comply with faecal coliform or total coliform criteria. Confusion was also generated by the different mechanisms used for comparison.

There has also been little intelligent debate about the low levels of health risk associated with water disinfection and the enormous benefits conferred by conventional water clarification and disinfection.

In summary, there is a general consensus of the need to explain water quality principles more simply than to canvass a wider range of water issues than has previously been considered. Given the entry into public debate of consumer organisations, community groups and environmental protection organisations, the need to be able to convey the reality of technical data is much more crucial. Wade concluded by saying that the problems experienced by consumers in small communities drinking untreated water, water treatment and disinfection practices and revamping of the drinking water quality schedules are probably the most important matters to be addressed in revised drinking water guidelines. Despite this, physical quality of water is still the primary determinant of aesthetic acceptability. Ideally, factors such as the appearance and taste should be issues divorced from health considerations. Community acceptance of a supply is determined by a number of factors including cultural conditioning, perceptions of equity and access to clean water, perceptions of safety, add-on costs to improve water quality, level of consumer education and more recently fears about the possible effects (neglecting the benefits) of water treatment processes.

#### **4.5.2 NH&MRC Water Quality Guidelines**

The area of regulation which causes greatest concern to Aboriginal and Islander people is water quality.

The Water Quality guidelines are prepared by a joint working group of the AWRC and the NH&MRC. Reviews of the AWRC-NH&MRC guidelines and criteria are conducted at regular intervals, with the objective of establishing requirements appropriate to Australian conditions in the light of emerging health issues and public expectations.<sup>9</sup> The guidelines take account of the World Health Organisation *Guidelines for Drinking Water Quality* (1984 and 1992).

While water quality in Australia is essentially a State responsibility, the purpose of the guidelines is to provide water authorities, health officials and consumers with guideline values for drinking water quality, the attainment of which should be accepted as an important national objective.

The guideline values relate to the quality of water delivered to consumers. For a variety of historical reasons, the quality of water currently supplied to consumers can vary significantly between different authorities, with major variations occurring between rural and large urban based authorities. To quickly upgrade all water supply systems throughout Australia to enable them to supply water fully in accordance with the guidelines would require very large levels of public expenditure. Public sector investment in water, sewerage and drainage is of the order of \$80 billion<sup>10</sup>. In the light of this constraint, a staged approach to achieving the guideline values is seen as appropriate.

The drinking water quality guidelines are intended to provide:

- day to day operational values, generally consistent with those adopted by WHO, which ensure that supplied water does not carry any significant risk to the consumer
- a basis for the design and planning of water supply augmentation and water quality improvement works
- a benchmark for assessing long-term trends in the performance of systems.

The guidelines have not been developed for regulatory purposes and the values given should not be construed as standards. However, achievement of the values will ensure generally aesthetically acceptable water which does not carry any significant risk to the health of the consumer.

Guideline values are included for microbiological, physical, chemical and radiological characteristics. Both health-related and aesthetic characteristics are outlined. Occasional variations above the upper guideline values do not necessarily imply that the water is unsuitable for consumption. The amount by which, and the duration for which, any health-related characteristic can be exceeded without affecting public health depends on the particular characteristic and circumstance.

Major water supply and health authorities have the knowledge and expertise to determine the significance of the guideline values in terms of health and consumer acceptance. Often however this type of expertise is lacking in remote areas. Accordingly, the degree of acceptance of the guideline values will depend on local circumstances and each authority should develop its own levels of service. Such levels must be based on estimates of risk and cost as well as local knowledge of the source of the water including the degree of catchment protection, its treatment processes, distribution history and the quality assurance program exercised over its operation. Authorities are expected to ensure that sufficient monitoring occurs within their systems to enable them to investigate and take remedial action when necessary.

Smaller water authorities with limited knowledge and expertise will need to seek the assistance of health and other appropriate authorities to develop their own levels of service.

#### **4.6 Provision and Management of Water in Australia**

The management of water resources and the provision of water, sewerage and drainage (WSD) services in Australia is primarily a state or local government responsibility. Commonwealth involvement includes provision of financial assistance to the States and Northern Territory for water resource development and management primarily through the FWRAP, the Murray Darling Basin initiative and research responsibilities through the land and water resources research and development corporation. The AWRC plays a monitoring and co-ordinating role.

The Commonwealth provides financial assistance to supply water to remote communities either through the COWSIP (a sub-program of FWRAP) or through the Aboriginal and Torres Strait Islander Commission's community infrastructure programs. The Commonwealth meets only the establishment costs of remote area water supplies, the maintenance and operational costs are left as the responsibility of the States and Territories.

Within and between the states, institutional arrangements for the delivery of WSD services vary widely. Melbourne and Sydney are served by statutory authorities, while in Brisbane services are provided by the City Council. Adelaide and Perth have agencies with state-wide responsibilities for WSD services. The Northern Territory Government has Territory wide responsibility for WSD services. In country NSW and Queensland, local councils and shires provide services sometimes purchasing bulk water from government agencies with state-wide responsibility for water resources management. In Victoria there are numerous regional water boards. In some cases water, sewerage and drainage services are provided by different bodies. There is also diversity in institutional arrangements for irrigation. In NSW regional management boards are supplied with water by the Department of Water Resources. Victoria and Queensland have similar systems with local water authorities purchasing or receiving water from the State Water Resources Commission. In SA, WA and Tasmania irrigation water services are provided on a state wide basis by a single agency.

Sewerage services are generally supplied by the same authorities providing water while drainage services are generally the responsibility of local councils. The extent of over-sighting and co-ordination of sewerage and drainage services varies. In some of the capital cities, decisions on storm water drainage are taken by individual councils with little consideration of impacts on other local government areas. It has been suggested that the merging of WSD and electricity services offers economies in such things as infrastructure planning and construction, meter reading, billing and general administrative costs. These services are already merged in the ACT, NT and some local government areas. The management of water resources is a State responsibility but involves an array of statutory authorities and government departments. The degree to which WSD providers are responsible for the management of catchments varies both between States and between regions within States. Responsibility for water quality is commonly shared between water authorities, environmental protection agencies and health departments.

#### **4.6.1 Trends in Regulation of Water: The Industry Commission Report**

In July 1992 the Industry Commission released its report on water resources and waste water disposal as part of its inquiry into water resource management in Australia. The enquiry focused on the scope for improving performance of the WSD authorities. However, factors external to the water sector, such as urban and regional objectives and social and environmental considerations, are also important. The issues raised in the report are pertinent to the Race Discrimination Commissioners cullnet study because they reflect current thinking about water resource management and supply. Many of the aspirations of Aboriginal and Torres Strait Islanders have been shaped by policies driven by issues of social equity. (Industry trends will be reflected in Aboriginal communities: but the report indicates that some of the assumptions previously held may no longer be acceptable in the industry. As a result, some of the goals people may have been seeking have shifted as a result of an economic or technical adjustment in the mainstream economy. The relevant issues to this Report fall under the headings of pricing, institutional models, water rights and regulation. Whilst the issues are predominantly directed at larger urban situations they reflect changes which will ultimately impinge on Aboriginal and Torres Strait Islander communities.

#### ***Pricing***

Water is more open to direct political pressure because it is a natural monopoly where normal efficiency criteria and market place forces do not operate. The Industry Commission examined the role prices play in managing the demand for water services and in conserving the

environment. It recognised that in some instances whole communities and industries have been established with little concern for the full cost of providing WSD services. Cross subsidies between users of WSD services have long been a feature of the delivery of these services. Water supplied to households, business and industry typically involve a service rental or access charge usually related to property values. This access charge is often accompanied by an allowance of water for which there is no further charge. Where meters are installed, water used beyond this base allowance is usually charged on a unit basis. However, both base allowance and 'excess' water charges vary substantively between authorities. In recent years some of the major authorities have dispensed with base allowances and now charge per unit for all water consumed. Another aspect of pricing is the extent to which Authorities need to cover community service obligations and the ultimate cost of those obligations. The inquiry considered the cost of environmental degradation, asset depreciation, increasing salinity, and whether such costs should be borne by the community or purely by the water supply sector.

An implication of a general shift away from community service obligations and the notion of cross-subsidisation will be a requirement that Aboriginal and Torres Strait Islander people pay full cost or close to full cost recovery. Such a scenario could result in people seeking greater input into the design and specification stage of their water supply in order to protect against large cost increases. This is an option which is practically not available to Aboriginal and Torres Strait Islander people.

Infrastructure development (particularly in country areas) is commonly subsidised. The rate of subsidy to capital works varies between states and regions and may also vary between projects within regions. In NSW, the state government meets up to half the cost of major head works development. In Queensland, capital subsidies of 20% apply. On top of this, funding may be provided by the Commonwealth under the FWRAP. Some \$40 million was allocated to this scheme in 1990-91. These capital subsidies are intended to meet a range of community objectives but they can leave a legacy of poorly performing facilities. They also raise issues of pricing, development, equity and cross-subsidisation. Additional questions are raised in relation to the justification for capital subsidies on the basis of social equity and regional development when there is no commitment to long-term sustainability of the infrastructure.

The Industry Commission report examined issues of security of supply. Water authorities around Australia are now looking closely at the relationship between supply security and the level of investment in water infrastructure. For example, the Queensland Water Resources Commission has moved to reduce supply security in irrigation allocations with the consequence that additional irrigation licences have become available. Where there are localised variations in the level of security of a supply questions relate to what extent consumers are given a sufficient say in the required levels of security and what mechanisms ensure all have a say. In addition, if a particular group benefits from high security of supply or, for example, from a system capable of fighting fires, the question arises whether it should bear directly the cost or whether it should be shared across the whole community. Aboriginal and Islander communities must determine what level of security is required: for example, whether rain water tanks are a valid and secure mechanism for water supply. Another question could be to what extent Aboriginal communities should have a fire fighting capacity. Associated issues then become who will fight the fire, where are the fire hoses to be kept, how long do assets last in communities and is this the best way to protect them. If these additional questions cannot be answered in the affirmative, the necessity of designing a water supply system capable of fighting fires, should be questioned.

### ***Institutional Models***

Pricing, service provision and investment in the water sector reflect the current institutional and regulatory arrangements and practices. Recent initiatives have imposed a discipline on water authorities to operate in a 'commercial fashion', giving full regard to cost and demand considerations. Some reforms have focused on corporatisation including administrative change, tariff structures which link charges to use, competitive tendering in the provision of design, engineering and construction services and requirements that agencies pay dividends to government. In some instances privatisation has been contemplated.

Corporatisation of water supply authorities may well involve a split between activities which are monopoly activities and are therefore not accessible to the private market, and those which are competitive, like engineering services. Such a move to corporatisation could lead to increased contracting out of activities provided there are real savings to be made in that area. The report points out that in France, local governments, representing 75% of the population, contract out the operation of their water infrastructure via private franchises for anything between 15 and 30 years.

Privatisation is also discussed as another option which has the supposed incentives of lack of political interference and the ability of employees to be more highly motivated through the acquisition of direct equity in the organisation. Questions to be asked in relation to the institutional models available in Aboriginal communities are to what extent there is an argument for the retention of government ownership of these discrete water supplies, particularly in remote regions where there is no link to a broader supply network. There is often constant difference of opinion and a lack of direct input in gaining the desired level of service in some of these small communities because the decision-taking and the resources of the water authority are at some distance from the community. It may be logical to examine the formation of utility authorities for water supply and electricity in situations of remote small communities, which would later allow an examination of a mixture of contracting or franchising of services to these communities as well as increasing Aboriginal self-determination.

### ***Water Rights***

Transfer of entitlements to the use of irrigation water has the potential to allow water to be channelled to its most productive use. Under current law, the States own the water resources and grant entitlements to this use. This report explores the concept of tradeable water rights beyond the irrigation sector.

A consequence of such logic could see water made fully transferable among all users and for all uses. It would be possible to sell rights with varying degrees of quality and security, letting the market set the prices depending on the level of service and quality that was available for purchase. One of the implications of this type of logic is that it changes the notion of water as a basic human right to one of water being an element of economic exchange. The obvious question arises is the ultimate impact on people who are unable to pay or to compete for water in the market place.

## **Chapter 5 - RECIPIENTS, RACISM AND RIVALRY: THE SOCIAL CONTEXT**

The technical issues addressed in the last chapter only take on meaning against a backdrop of contemporary social relations. These relationships in turn are conditioned by a history of settlement, conflicts arising out of differing values, and policies which have been invoked to address 'the problem'.

### **5.1 Pre-European Settlement of Australia**

There have been at least three distinct cultures in Australia - one Aboriginal, one Torres Strait Islander and the other predominantly influenced by European settlement. Australia was probably first colonised by homo-sapiens during the last ice age. Carbon tests have established the presence of such a person on the mainland of Australia at least thirty thousand years ago (Clark 1981:9). During the last ice age there was a revolution in climate. Those who survived developed a culture and a civilisation of their own and grew in population to around three hundred thousand on the mainland and between four and seven thousand in Tasmania (Hughes 1988:8).

In the passage of time between the coming of indigenous people over fifty thousand years ago and the coming of the Europeans in 1788, the changes in the appearance of Australia were caused probably more by changes in climate than by human activity. For apart from fire, the implements used for hunting and food gathering, and the rock paintings on which they portrayed their vision of the world, Aboriginal people handed on to posterity few other memorials of their encounter with the harsh land they occupied. The absence of suitable seed-bearing plants and animals suitable for domestication probably were the main causes of this apparent changelessness, though their cosmology also contributed to it.

At the time of white settlement there was a continental average of one person to 25 square kilometres. However, the density of local populations varied a great deal. Probably less than 20,000 people wandered in the 770,000 square kilometre track of dry limestone plain and salt bush desert between the Great Australian Bight and the Tropic of Capricorn. In some areas of Australia, some of the inland tribes exchanged goods, flint axes, baler shell ornaments, lumps of ochre for body painting and other commodities along trade routes as long as 1600 kilometres. On the coast where there was more food and a higher rainfall the land could support more people. The Australians divided themselves in tribes; they had no notion of private property but they were intensely territorial. As many as 500 to 900 tribes existed at the time of white invasion (Hughes 1988:9). A tribe was linked together by a common religion, by language and by an intricate web of family relationships. It had no writing but instead a complex structure of spoken and sung myth which was passed gradually on by elders to younger generations.

Whilst appearing unchanged during that time, the Aborigines were definitely not loathe to change and appear to have been quick to accept changes they perceived as advantageous. The most obvious was the acceptance and domestication of the dingo some 4,000 years ago (Kimber 1976) and the European dog in the 18th century in Tasmania (Jones 1970). Aborigines had ample contact with agricultural people. Agriculture was being practised in the New Guinea Highlands 9,000 years ago yet none of the agricultural developments were adopted by the Aborigines (Flood 1983, Chappell and Thom 1977). Aborigines have also had substantial contact with Indonesia over the last 1,000 years (MacKnight 1972). When Flinders circumnavigated Australia in 1803 he was stunned to find more than 1,000 Indonesians working the Arnhem Land coastline. From these fishermen the Aborigines learned Indonesian words for

place names and personal names; they adopted songs and myths and aspects of technology and material culture such as iron, sails, dugout canoes, detachable harpoon heads and cloth. Smoking was adopted as was alcohol. Aborigines readily accepted cultural changes from these people - but accepted nothing which changed their subsistence base. The subsistence economy maintained by Aborigines was fairly leisurely and allowed ample time for religion, artistic and social pursuits. Furthermore, the common property rules, which spread the rewards from the efforts of one person amongst many people, greatly reduce the incentive for production and trade. In the desert the reasons were even more fundamental. Here there was simply not enough water to support a sedentary agricultural population. The nomadic existence was the most efficient subsistence strategy for this environment. Even today, with modern technological and agricultural facilities, Europeans have not been able to settle the core desert region of Australia. (Cane & Stanley, 1985).

The Aborigines lived by a harsh code, but it enabled them to survive for millennia without either extending their technology or depleting their resources. It still worked as of January 1788 although it had not the slightest chance of surviving white invasion. The most puzzling question for the whites however, was why these people should display such a marked sense of territory while having no apparent cult of private property. They had few of the external signs of religious beliefs. The Aborigines carried their conception of the sacred, of mythic time and ancestral origins with them as they walked. These were embodied in the landscape; every hill and valley, each kind of animal and tree had its place in a systematic but unwritten whole. Take away this territory and they were deprived not of property (an abstract idea that could be satisfied with another piece of land) but of their embodied history, their locus of myth, their 'dreaming'. There was no possible way the accumulated tissue of symbolic and spiritual usage represented by tribal territory could be gathered up and conferred on another tract of land by an act of will. To deprive the Aborigines of their territory, therefore, was to condemn them to spiritual death - a destruction of their past, their future and their opportunities of transcendence; but none of them could have imagined this as they had never before been invaded. And so they stood, initially in curiosity and apprehension but without real fear, watching as the new settlers moved in on their land and their water-holes (Hughes 1988: 11-18). The initial curiosity quickly converted to resistance.

### **5.1.1 Aboriginal Lifestyle - Water in the Desert**

Water has always been of paramount importance to Aborigines living in the desert region of Australia. Unlike other arid regions in the world which are dissected by permanent river systems, there are no permanent rivers at all in the Central and Western Deserts. In fact, in the Western Desert there are not even any rivers - simply short, ephemeral creeks. Rainfall was thus of prime importance. Its fall determined the distribution and availability of plant and animal food and its abundance determined the size and extent of the seasonal subsistence round and ceremonial gatherings. Traditionally, if rainfall was great people travelled great distances to fertile areas to attend large ceremonial gatherings. Conversely, in times of drought small groups of people were isolated from each other by massive expanses of waterless country, on foraging 'islands' around reliable water-holes. In the old days, the high evaporation rate of surface water forced people across the landscape sequentially from the most ephemeral to the most reliable water-holes. Firstly swamps dried up, then claypans, small rock holes and soaks until by the end of the dry season only the largest, best shaded rock holes in the hills and rare springs were left, such as Ilpili, Kutjuntari, Tjukula and Putarti Spring (see Gould 1969, Peterson 1978, Cane 1985). These permanent waters are found most frequently in deep soakages in the sand hill country, often in association with tea-tree scrub (Long 1971). Water was of critical economic



importance and was the weakest link in the desert subsistence strategy. Water continues to be just as important today to Aborigines living in the desert and without it sedentary settlement of the desert region is still impossible. Hence the Aborigines stress that water is the 'number one thing' and constantly emphasise the need to get hand pumps and windmills.

### ***Traditional Water Sources***

There are five kinds of desert water sources. They are ranked below in terms of importance (Peterson 1978).

- ***Ephemeral sources***

These range from shallow claypans to hollows in trees, water bearing roots, such as those of *Hakea lucoptera* (Cleland 1966, Strehlow 1965), water bearing frogs (Cleland 1966) and even dew. In some areas dams were constructed (Tindale 1974, Davis & Kirke 1991:72) mainly, it seems, to prolong high moisture levels in the soil, so that increased supplies of grass seeds from *Panicum* and other species could be obtained.

- ***Rock holes***

These are found in most rock outcrops and throughout the ranges, but are rarely large. Strehlow estimates that the average capacity is between 360-450 litres. In most cases, they are directly open to the sun's rays which can evaporate water at a rate of over 3.7m per year. To combat the evaporation, stone slabs were frequently placed over the rock holes (Strehlow 1965).

- ***Waterholes***

Although few and far between, there are major and long lasting bodies of free standing water. They are found in creek beds, where scouring has created pools up to nine metres deep which can hold water for a number of years, provided there is some supplementary rain.

- ***Soakages***

These wells are found in sandy areas or along watercourses. When dry they are often dug to 3 - 4.5m below the surface, and angled away from the direct fall of the sun's rays. Although their storage capacity may often be quite small, they are the most important water sources under all but the worst conditions. They make possible the use of country without surface water. They require regular seasonal maintenance to ensure their availability the following year.

- ***Permanent waters and springs***

These are found either in the ranges themselves or at the foot of the hills. Springs are not so well documented, but a major Walpiri spring at Pikilyi was estimated to hold 14,774,000 litres in the associated pool, and to discharge over 130,000 litres every 24 hours (Simpson 1946, Reece n.d.).

### **5.1.2. Torres Strait Islander Lifestyle**

The Race Discrimination Commissioner recognises the distinct character and culture of the people of the Torres Strait Islands. There are over one hundred islands, islets and cays making up the Torres Strait Islands, which lie at the northern tip of Cape York Peninsula and to the south of Papua New Guinea (PNG). A map over the page details the area.

The traditional inhabitants of the Islands are of Melanesian descent, being closely related to the people of PNG. Many islanders also claim to have ancestors from Polynesia or Asia. Despite their proximity to the Australian mainland, Torres Strait Islanders appear unrelated to their neighbours, the Cape York Aborigines.

According to early ethnographic works and later anthropological research, the peoples of the Torres Strait Islands were neither politically united nor culturally homogenous. Despite the variations, however, the communities maintained definite links through raiding, ritual and trade.

Traditional life throughout the area had a number of common characteristics: the region consisted of autonomous communities, each having direct dealings with neighbours and mediated dealings with others more distant. Individual communities lacked centralised authority, being integrated through cross-cutting ties of ritual, economic and military collaboration. Communities were made up of a number of patrilineal groups; people generally lived in exogamous totemic patri-clans - that is, a group of families ritually defined through a particular totem, descended through the male line and marrying outside the clan or regional grouping. Religious activities were often ritual attempts to tap supernatural sources of power.

An elaborate technology, incorporating the double outrigger canoe, had been developed for exploiting marine foods such as shellfish, crustaceans, fish, crabs, turtle and dugong; and trade was carried out between the islands, Papua and Cape York. Torres Strait Islanders were often the link in the trade of canoe hulls and other items between Papua and Cape York. There was a complex division of labour which induced people to refrain from producing goods which they could have produced, but which were more readily importable.

### **Map of Torres Strait**

Other characteristics of pre-contact life indicate the type of cultural diversity which existed:

- fighting and raiding between neighbouring groups was prevalent although controlled, and was usually initiated in response to a group's need for marriageable women. There are no reports of territory being annexed
- there was limited intermarriage between Torres Strait Islanders and Aborigines of Cape York
- some communities, particularly in the eastern group, cultivated gardens, using Papuan techniques of shifting agriculture. There was less interest in horticulture in the western group, where marine resources were especially prolific. Banana and coconut crops gained some acceptance since, once planted, they required little attention and quickly assumed the status of wild food
- items of material culture varied also, for while the double-outrigger canoe was used throughout the area, it tended to be of greater length in the northern and eastern areas, when compared to the south-western canoes.

## 5.2 White Settlement in Australia

*Supply anchored in the north of the bay on Friday January 18, 1788. Phillip and some officers, including Lieutenant Philip Gidley King, hoisted out the boats in the afternoon and went looking for water. They made tentative contact with the Aborigines giving them beads and mirrors.(Hughes 1988:85).*

And so began what was to become a history of conflict. Much of that conflict revolved around competition for basic life elements that extended itself across the nation of Australia (Clark 1981:32). In all instances it was the competition for food, exploitation of resource, for mining or for water which led to the inevitable conflict and the maintenance of the racial tensions that began with the convict era in Australia's settlement in 1788.

Aboriginal people were either compromised or driven from the areas of settlement. These were areas of water and food for both parties although the intricate knowledge of the whole land allowed Aboriginal survival in the marginal areas of the unsettled land to which they retreated.

The complete ignorance of the inseparable nature of Aboriginal use of land as an economic resource and of their spiritual attachment to it was always evident in the European settlers. To the Aborigines, the idea of land alienation and establishment of fixed rights to areas defined by man-made boundaries was incomprehensible. Initially they saw Europeans as 'like themselves', moving from place to place (Reynolds 1981:53). By the time they realised their error, dispossession had already occurred. Although they might be able to continue hunting or gathering bush tucker, and could still maintain their ceremonies associated with places of particular significance, conflict inevitably arose over resource usage - for example, access to favourite camping sites or soakages and wells (Young 1988:105).

The opening up of Australia for 'settlement' and 'economic development' saw the beginning of a conflict over water which continues today. Two hundred years ago Aboriginal resistance was crushed by whites seeking river frontages and isolated water-holes. Today the same people are drawn into protracted negotiations to gain living area excisions adjacent to water supplies or to improve water supply and sanitation infrastructure in existing remote communities.

As explorers set forth into the continent from the early establishment sites such as Sydney and Melbourne encounter with Aborigines was immediate and ongoing - as it had been since settlement.

*Water for the horses had to be found each day. Towards sundown they would pretend to make camp on the water. They hobbled the horses and turned them loose, boiled the billy, had a meal. After dark, to fool any watching Aborigines, they quietly packed up, re-saddled the horses and rode on for an hour or so before sleeping. It was never a relaxed life. They had to be as wary as any animals at water (Rolls 1981:75).*

The battles that occurred between explorers and Aborigines over water were numerous and varied. Famous in Western Australia's history is the Weld Spring Battle of 1874 during John Forrest's Murchison/Western Desert/Central Australia expedition where he was reputedly 'attacked by fifty armed natives'.

*Moving further to the northeast, on 2 June they found the Pierre Springs, which Forrest renamed the Weld Springs after their return. There was an abundance of water, feed and*

wildlife, 'a paradise in the desert'. But all around them as far as the eye could see was a vast ocean of gently undulating spinifex. They rested at the springs for a week, making several unsuccessful sorties eastwards in search of water. Then, on 13 June, four of them, including John Forrest, were twice attacked by a party of spear throwing natives; at least two of the attackers were wounded by rifle shots. Notwithstanding their superiority in weapons, the explorers were in great danger of being overrun by force of numbers, and for extra safety they hurriedly built a small stone hut, which they pugged and thatched, and in which they bivouacked until they had found a supply of drinking water further to the east (Crowley 1971:68).

Thirty years after Forrest's exploits water was still the 'critical issue in all the calculations for Canning's expedition and in all discussion about the feasibility of a stock route'. The tragedy that befell Wells and Jones in 1896 on the Calvert Expedition was to bear significance on methods employed for opening the route:

*Rudall was the leader of the party which went in search of Wells and Jones east of Nullagine. He informed the Royal Commission that there had been no consideration given to using Aborigines for the expedition but in their desperation to find the missing men, one of whom was the cousin of the leader, they decided the Aborigines were essential. Rudall made no apologies for the fact that he did not consider using any means beyond brute force to acquire the Aborigines cooperation in finding water. His methods would have been very similar to any stockman:*

*1550. How did you intend to use the natives? - I intended to catch them.*

*1551. How? - Run them down.*

*1552. What do you mean by that? If you have a horse you follow the native, gallop round him and stop him....*

*Elsewhere Canning stated firmly that it was essential to have an Aborigine to locate water-bearing country (Gallagher 1990).*

The struggle soon developed from explorers into stockmen seeking to secure water for their sheep, cattle and personal supplies:

*Mitchell's experience illustrated the widespread conflict over water which arose in arid areas all over the continent and in well watered areas as well as during dry seasons. It often began as soon as the Europeans appeared. This was certainly the case in the desert where thirsty camel trains and horse teams consumed huge amounts of precious water in Aboriginal wells and springs and soaks. ....*

*.....Conflict was sharpened by the widespread belief among frontier squatters that 'niggers and cattle don't mix,' that the half-wild herds were unsettled by the mere sight or sound of Aborigines. As a result the blacks were repeatedly driven away from river frontages and lagoons. They were shot at or ridden down and stock-whipped. Relevant evidence for this is voluminous, coming from all parts of the continent. 'All the freshwater is surrounded by cattle', wrote Burketown's policemen in 1887, and if a black was unfortunate to be seen by the station hands he was 'hunted, whipped and severely maltreated'. Inspector Foelsche of the Northern Territory police noted how local squatters kept the blacks away from the inland lagoons and billabongs which were important both as meeting places and sources of food. (Reynolds 1981:157).*

Most spheres of activity associated with white intrusion into the continent impinged on the ability of Aboriginal people to maintain adequate water supplies. Initially exploration, stock and then development of towns competed for often scarce water, particularly in arid areas. Later other manifestations of Western society had a devastating effect on Aboriginals attempting to maintain viable lifestyles in remote, arid areas such as mining, construction of dams and bomb-testing. Testing of nuclear weapons was carried out in Australia during the 1950s and 1960s; the impact of these tests were immediate and far-reaching. On 4 November 1963 one incident was reported in the media as follows:

### *3 Die of Thirst and Starvation*

*PERTH, Sun. - An Aborigine, his wife and their 10-year old son have died from thirst and starvation in remote desert country. They died north of Rawlinna, near the South Australian border. Three other Aborigines survived a trek of more than 100 miles and are being cared for at Cundelee. They are the man's second wife, her three year old son and a 12 year old girl. Native Welfare commissioner Mr P.B. Gare said in Perth tonight a patrol from Kalgoorlie was searching for 11 other Aborigines (cited in McClelland 1985:368).*

The Royal Commission found on this incident:

*9.3.52 As instructed, the family unit moved off the Range. And, as instructed they walked along the road. To the white Patrol Officer the instructions no doubt made sense. But for the Aborigines the road, unlike Aboriginal routes, had no logic as a pathway between food and water. Without food and water, Darlene Stevens' mother, father and brother perished.*

The Maralinga Lands of South Australia were unfit for re-occupation by Aboriginals. Traditional soaks and water-holes in this desert country would have, of course, been contaminated or lost through lack of regular maintenance.

Water is a scarce resource in many parts of Australia and the means by which modern Australia has gone about securing water supplies has impacted upon Aboriginals in culturally destructive ways. Damming of the Ord River, for example, in the East Kimberley of Western Australia had the effect of eliminating forever the traditional lands of the Miriwong people as well as their sacred sites and objects.

Today the return to homelands by small Aboriginal family groups is dependent on the willingness of State and Federal agencies to provide water supply infrastructure at these chosen sites. The resumption of a traditional lifestyle relying on natural soaks and water-holes is no longer possible. Many have not been maintained for over 30 years, have silted up, dried up by cattle, sheep, camels and feral animals or have been contaminated by mining, radiation or urban development.

### **5.3 Contact and Development in the Torres Strait**

The Torres Strait and northern Cape York Peninsula area was known to European sailors from the early 17th century, from the voyages of Jansz (1605), Torres (1607) and Carstens & Meleoz (1623). After the establishment of the New South Wales colony, the Strait became a commonly used, if treacherous, seaway. The Torres Strait Islanders had regular though fleeting contact with European vessels from the end of the 18th century, which enabled them to obtain iron.

The arrival of British explorer and merchant ships during the 1700s brought with it a new wave of aggression. This series of violent incidents, causing death and massive destruction of the Torres Strait Islanders' food, shelter and transport, was part of a continuum that started with Torres and led well into the second half of the nineteenth century. By then, Islanders had been defeated militarily and lost faith in their cult heroes and traditional way of life (Wilson 1988:12).

In the 1860s, Europeans moved into the area to exploit its shell and trepang, laying the foundations for a commercial economy and consequently undermining the existing subsistence economies. Islanders soon joined the ranks of a labour force recruited from the Pacific Islands and Asia. In 1871, the London Missionary Society landed its first teachers, often accompanied by converted Pacific Islanders (especially from Samoa) on the Islands. These were soon followed by Anglican missionaries and by 1890 the Christian church had won not only the Islanders' allegiance, but a political ascendancy over them.

However, the changes to the traditional economies were uneven. The cultivating peoples of the eastern islands and Saibai committed themselves to the marine industries less wholeheartedly than did the Central and Western Islanders. The people living around Cape York suffered further from a drastic decline in numbers, and through their proximity to the Thursday Island settlement.

The colony of Queensland was granted jurisdiction over all the islands of the Torres Strait south of Mabuiag and Yam Islands in letters patent of 30 May 1872. In 1879, Boigu, Saibai, Dauan and all the other islands not previously annexed to Queensland were annexed by the Queensland Coast Islands Act 1879.

By the end of the 19th century, there existed a fairly well-defined and ordered relationship between Torres Strait Islanders and Europeans. The traditional bases for authority and prestige were crumbling and the church offered a new status, hierarchy and authority. The approach of the Torres Strait Islanders to European civilisation was, however, selective and usually not negative or antagonistic. Historically, the populations of the islands have been changed not only by the influx of Europeans, Pacific Islanders and Asians, but also through voluntary and forced migration between islands.

#### **5.4 Official Attitudes towards Aborigines**

Successive State, Territory and Federal Governments in Australia have adopted a range of policies over time for the administration of Aboriginal and Torres Strait Islander Affairs (rarely differentiating between the two prior to the formation of ATSIC). Policies have reflected changed attitudes, new responses and new definitions of the 'problem'. These policies have all directly or indirectly affected the provision and management of water.

Throughout the 19th century, the production of wool became increasingly important to the Colony's economy and the pastoralists required larger tracts of land over which to graze their sheep. Hence in the second part of the century the dispossession of Aboriginal people continued westward into NSW and north into Queensland. As European expansion continued, clashes with the Aborigines increased and there was a hardening of attitudes about the practicality of the policy of 'amity and kindness' which had been in place since the arrival of the First Fleet.

While the official policy towards Aborigines was that they should be afforded the protection of the Colonial Government, in reality Aborigines were dispossessed, decimated and reduced to

remnant pockets of population on the outskirts of European settlements (Evans et al 1975:33-46). Although official policy protected some Aborigines from the excesses of the Europeans, the effects of dispossession itself were not considered. Secure in their belief in the innate superiority of European capitalism, the colonialists expected the Aborigines to embrace agricultural pursuits, settled living and the 'benefits' of Christianity. Policies developed in the 19th century for Aborigines reflected this view as well as the short-term (Reid 1991:385).

From the late 19th century, legislation was introduced to establish Aboriginal Reserves in states with large Aboriginal populations. Government authorities were empowered to remove Aborigines to reserves and to detain them against their will. On these reserves, which were administered by state governments or missionaries, every aspect of Aboriginal life was controlled by Europeans including the right to marriage, the guardianship of children, the granting of permission to work outside reserves and the management of assets. Protectionist legislation empowered most states to remove Aboriginal children from their families and place them in institutions (HREOC 1991:43). One of the lasting effects of the reserves has been the dependence of Aboriginal people on the wider Australian society for the most basic of human needs. The institutionalisation of Aborigines in the period from 1850 to the early 1930s had a number of consequences, not the least of which being the deleterious effect on their health (Reid 1991:385). In addition, there was widespread social segregation which lasted at least until the 1960s.

By the 1920s it was evident throughout Australia that Aborigines were not dying out and that their numbers were on the increase. It was therefore necessary for the Governments to move away from policies of protection. The direction taken attempted to incorporate them into the wider Australian society

Under the assimilation policy, the extensive Aboriginal Reserves were gradually revoked without compensation to Aboriginal people and other overt vestiges of the segregation of the past were dismantled. However, the proclamation that 'Aborigines will live in a similar manner to other Australians' did not take into account the fact that many of those other Australians were unwilling to admit Aborigines into their society (Reid 1991:388).

## **5.5 Legislative Changes**

From 1955 to 1970 discriminatory legislation which had denied Aborigines their basic human rights was gradually removed.

Anti-discrimination legislation was adopted by some States and by the Commonwealth (*Racial Discrimination Act 1975*). The removal of legal barriers, however, was easier than ending institutional racism which remained entrenched in Australia society. In the 1960s, public pressure mounted for the Federal Government to amend sections 51 and 127 of the Constitution which denied the Commonwealth power to pass laws dealing with Aborigines and denied them equal rights with other Australians. On 27 May 1967 the amendments to the Constitution were overwhelmingly endorsed by the non-Aboriginal electorate. The Referendum gave the Commonwealth powers to legislate for Aborigines in the States, recognized Aboriginal people as Australian citizens with full voting entitlements and laid down that they should be included in the Census (HREOC 1991:45).

A combination of international and internal pressures lead to an announcement of the policy of integration in 1965. This purported to allow for the participation of ethnic minorities in the wider

Australian community but with the retention of their traditional cultures if this was desired. The difference between assimilation and integration seemed inconsequential but the policy proved a bridge to what would become a more liberal stance purporting to recognize the right of ethnic minorities to participate and direct their futures in this country. The policy of integration and the 1967 Referendum was a necessary pre-requisite for the development of progressive policies in Aboriginal Affairs.

The 1970s saw a dramatic change in Aboriginal Affairs policy. The Commonwealth Office of Aboriginal Affairs (subsequently the Department of Aboriginal Affairs) established following the election of the Whitlam Government in 1972 was charged with implementing the Government's policy of self-determination for Aborigines. The increased expenditure which came with the Whitlam era slightly decreased as the Fraser Government took over, although in the first year of office spending was cut by 14%. Despite these cuts, an emphasis on self-management rather than self-determination and an attempt to hand some responsibilities back to the States, Aboriginal Affairs policy remained surprisingly bipartisan throughout the Fraser Government's period in office. Aboriginal Affairs policies laid down by the Whitlam Government with some changes to program priorities essentially remained the basis for the current Labor Government Policy.

Three significant events since 1990 have re-positioned the Government's policy on Aboriginal Affairs. The National Report of the Royal Commission into Aboriginal Deaths in Custody and the process of reconciliation recommended in that report now provide the framework to redress in a comprehensive fashion the Aboriginal and Torres Strait Islander disadvantage in the lead up to the centenary of Australian Federation in 2001. Additionally, an amendment to the HREOC Act saw the appointment of an Aboriginal and Torres Strait Islander Social Justice Commissioner whose function is broadly to monitor, both nationally and internationally, Australia's human rights performance in relation to indigenous peoples.

The Royal Commission endorsed the process of reconciliation as the fundamental backdrop to reform and change by Aboriginal and Torres Strait Islander people. It commented that reconciliation of the Aboriginal and non-Aboriginal communities must be an essential commitment of all sides if change is to be genuine and long-term. The purpose of the process of reconciliation is threefold:

- To tackle the general lack of awareness of Aboriginal and Torres Strait Islander issues among non-Aboriginal people in Australia, the process principally will aim to create a better understanding in the general community of Aboriginal and Torres Strait Islander history, cultures, dispossession, continuing disadvantage and the need to address that disadvantage.
- In recognition of the fact that there can be no reconciliation without justice, the process will build a national commitment from Governments at all levels to co-operate and co-ordinate with ATSIC to address progressively Aboriginal and Torres Strait Islander disadvantage and aspirations in relation to land, housing, law and justice, cultural heritage, education, employment, health, community infrastructure and economic development.
- To consider whether reconciliation between Aboriginal and Torres Strait Islander people and non-Aboriginal people would be advanced by a formal document or documents.



The process of reconciliation aims to transform relations between Aboriginal and Torres Strait Islander people and non-Aboriginal people. It is based on a recognition of the essential dignity of human kind, elimination of racism, recognition of Aboriginal and Torres Strait Islander people as Australia's indigenous peoples and the commitment to a 'fair go' for the most disadvantaged Australians. The process of reconciliation will play an important role in determining Australia's national identity and its place in the international community in the lead up to 2001 and beyond.

## **5.6 Aboriginal and Torres Strait Islander Commission (ATSIC)**

The Aboriginal and Torres Strait Islander Commission (ATSIC) is the centre piece of the Federal Government's policy of greater self-management and self-determination for Aboriginal and Torres Strait Islander people. Through ATSIC's sixty elected regional councils and its board of twenty commissioners, Aboriginal and Torres Strait Islander people now have an unprecedented role in Commonwealth programs which affect their lives. ATSIC is a statutory commission, not an advisory body: its elected representatives develop policies and make funding decisions. The Commission was established on 5 March 1990 and replaced the Department of Aboriginal Affairs and the Aboriginal Development Commission. The objects of the *Aboriginal and Torres Strait Islander Commission Act 1989* are:

- To ensure maximum participation of Aboriginal and Torres Strait Islander people in the formulation and implementation of Government policies that affect them
- To promote the development of self-management and self-sufficiency among Aboriginal and Torres Strait Islander people
- To further the economic, social and cultural development of Aboriginal and Torres Strait Islander people
- To ensure co-ordination in the formulation and implementation of policies affecting Aboriginal and Torres Strait Islander peoples by the Commonwealth, State, Territory and Local Governments without detracting from the responsibilities of State, Territory and Local Governments to provide services to Aboriginal and Torres Strait Islander residents.

ATSIC adds a new dimension to Government. It provides the effectiveness with which culturally appropriate programs and services are delivered to Aboriginal and Torres Strait Islander people. Through regional plans prepared by the Regional Councils, all levels of Government and their agencies can now better respond to Aboriginal and Torres Strait Islander people and their communities.

## **5.7 Program Initiatives**

A number of significant reports have led to program initiatives over the last five to seven years. The following section briefly summarizes a number of these programs, particularly where they have relevance to water.

### ***Aboriginal Employment Development Program Policy (AEDP)***

The most significant Aboriginal and Torres Strait Islander employment programs have been administered under the umbrella of AEDP which was introduced by the Government in 1987 in response to the 1985 Miller Report of the Committee of Review of Aboriginal Employment and

Training Programs (Commonwealth of Australia 1985). Among other things this review identified the different nature of remote Aboriginal communities and the needs created by people living in those communities. The AEDP emphasises the integration of Aboriginal and Torres Strait Islander employment, training, education and enterprise programs and the co-ordination of the effort of all agencies involved. Its objectives are to raise the number of Aboriginal and Torres Strait Islander people participating in employment and raise income levels to those of the Australian community generally. Under the AEDP there are a number of strategies employed to achieve the objectives. Among these are the provision of management, technical and operational advisory services in relation to development of business plans and staff training needs of Aboriginal and Torres Strait Islander businesses.

Also included is the opportunity to participate in Community Development Employment Projects (CDEP), thereby giving Aboriginal and Torres Strait Islander communities in more remote areas or areas where there are limited or no other employment prospects the opportunity to create employment based on community development. The AEDP also provides for grants and concessional loans and guarantees to individuals, partnerships or organisations for the acquisition or development of commercial businesses.

### ***Community Development Employment Projects***

ATSIC's single largest program involves the CDEP Scheme. In an increasing number of Aboriginal and Torres Strait Islander communities, Aboriginal and Torres Strait Islander people themselves have taken the initiative to redress their disadvantage by converting social welfare benefits to community employment payments. Following the release of the AEDP in 1987, CDEP was revised and expanded. Since 1987-88 it has been extended to non-remote and non-autonomous communities whereas previously only discrete townships and communities in remote areas had been involved.

A number of training programs offered by the Department of Employment, Education and Training (DEET) and ATSIC extend the scope of training beyond that provided by mainstream departmental programs of labour market assistance under the Department of Employment, Education and Training. Strategies employed include the provision of wage subsidies to private and public sector employees, schools training, work experience, work preparation and a range of support to assist communities and individuals to establish viable business enterprises.

### ***Aboriginal Education Policy***

In 1988 the Government established an Aboriginal Education Policy Task Force to examine the Aboriginal and Torres Strait Islander education situation. It drew together the main findings of several major reports on Aboriginal education over the past decade and made a series of recommendations to Government. It reinforced the finding that Aboriginal people are the most educationally disadvantaged group in Australia and recommended action to address the issues be taken in the context of establishing a comprehensive and national long-term approach to Aboriginal education policy. This encompassed strategic planning of educational objectives and triennial funding of initiatives.

### ***The National Aboriginal Health Strategy***

The National Aboriginal Health Strategy (NAHS) is the agreed outcome of a long period of negotiations between the Commonwealth, States and Territories (NAHSWP 1989). Based on a review of Aboriginal health, the strategy marks the first time that the Commonwealth, State and Territory Governments and Aboriginal and Torres Strait Islander communities have joined forces on a national level to develop and target health services for Aboriginal and Torres Strait Islander

people. In December 1990, the Minister for Aboriginal Affairs and the Minister for Community Services and Health announced that the Commonwealth would provide up to \$232 million over five years, in addition to existing substantial health funding. Among other things, the funds would be used to address urgent needs in Aboriginal and Torres Strait Islander communities such as housing, water, sewerage, electricity, communications and roads. The NAHS include strategies which assist in formalising Aboriginal and Torres Strait Islander health workers as a professional grouping as well as increasing the employment opportunities for Aboriginal and Torres Strait Islander people in health care institutions and health related occupations.

In addition, emphasis would be placed on maximising Aboriginal and Torres Strait Islander education, training and employment opportunities in infrastructure related areas and by encouraging local contractors to employ Aboriginal and Torres Strait Islander people.

### ***Other Reports and Reviews***

Numerous other reports have contributed to the establishment or fine tuning of policy in a number of areas.

Recent work on national housing strategies have resulted in an issues paper on Aboriginal housing strategies. Significant resources have been allocated to improve the provision of housing and community infrastructure for Aboriginal and Torres Strait Islander people. Other reports which have shaped thinking and responses have been commissioned by the House of Representatives Standing Committee on Aboriginal Affairs, including *Our Future Our Selves*, along with reports examining the economic situation of out-stations and the viability and future potential for out-stations and homelands communities. Each of these has managed to identify specific areas for attention.

A consistent failure of reports is their analysis of the problem in purely sectoral terms. There is little evidence of any mechanism to allow for local Aboriginal and Torres Strait Islander response to the problems raised. The responses have largely been Government initiatives, resulting in revised or new Government programs. Rarely do the responses require the establishment of small local initiatives that respond to the directions indicated by the reports. The reports all identify national programs and policies and rarely place emphasis on community level or regional level responses. The most significant and comprehensive report to date has been the RCADIC Report which provides both an integrated overview and specific investigations.

## **5.8 The Royal Commission into Aboriginal Deaths in Custody**

The Royal Commission into Aboriginal Deaths in Custody (RCADIC) was the first to examine the outcomes of the specific history and sectoral reports inquiry represented by the health, housing, education and employment interests. It was the first comprehensive examination of outcomes of peoples and programs in an integrated framework. It identified many of the elements of all the program activities and began to identify the net effect or impact of those programs and some of the gaps left by the impact of those programs.

The RCADIC attempted to establish underlying causes leading to the individual deaths: that is, it stressed a holistic approach. Close examination by the RCADIC revealed that the programs and policies currently used were, in reality, assimilationist in their outcomes. The Commission concluded 'every step of the way is based upon an assumption of superiority and every new step is a further entrenchment in that assumption' (RCADIC 1991:9).

Non-Aboriginal Australia has developed on the racist assumption of an ingrained sense of superiority and that it knows what is best for Aboriginal people.

The RCADIC was largely concerned with demonstrating the existence of the inequity and disadvantage in many aspects of social life and the social situation of Aboriginal people. The report examined the position of Aboriginal people in relation to health, housing, education, employment and income. It discussed the land needs of Aboriginal people; it showed how the attitudes of the dominant non-Aboriginal society and racism (overt, covert and institutional) adversely affected Aboriginal people. It showed how some laws bear unequally upon Aboriginal people (RCADIC 1991:15).

Many of the points raised by the RCADIC are known to Aboriginal people or those working in support agencies and organisations. The RCADIC report was in this respect a significant compendium of events and circumstances that affect the lives of Aboriginal people. The central theme of the Royal Commission findings will provide the framework for Aboriginal development into the future: consequently, it is important that the Water Report identifies the main findings in order that its recommendations are consistent and build or add to the established directions. It is important that this Report also be considered because the overlap of issues and the interplay between issues is both complex and subtle. The fact is that all too often issues have been made the subject of policies without a proper appreciation of the linkage between these issues and other issues (RCADIC 1991:xlvii).

The RCADIC identified three essential pre-requisites to the empowerment of Aboriginal society and to Aboriginal people having control over their lives and their communities:

- ***The will to renewal and to self-determination***

Only the Aboriginal people can in the final analysis assure their own future. First and most crucial is the desire and capacity of Aboriginal people to put an end to their disadvantaged situation and to take control of their own lives.

- ***The role of the broader society***

The second pre-requisite is assistance from the broader society and this basically means assistance from Governments with support of the electorate or at least without its opposition. Support is necessary because the economic base of Aboriginal people was completely destroyed through dispossession. Their treatment since then has been such that, except to a limited extent in recent times, it has been quite impossible for them to achieve any economic base (RCADIC 1991:17).

- ***The policy of self-determination***

The third pre-requisite to the empowerment of Aboriginal people in their communities is having in place an established method, a procedure, whereby the broader society can supply the assistance referred to and the Aboriginal society can receive it whilst at the same time maintaining its independent status and without a welfare dependant position being established between the two groups.

The perception of many Aboriginal people is that too often policies are proposed, programs put forward, and assistance offered in a form which is largely pre-determined in the bureaucracies of the government departments concerned. Ultimately, self-determination is basically about people having the right to make decisions concerning their own lives, their own communities and the right to retain their culture and to develop it (RCADIC 1991:22).

The continuing theme of the RCADIC was the limited amount of control that Aboriginal people have over the forces that determine how they live. One of the deepest legacies of history for Aboriginal people, and one that has contributed to deaths in custody, is that their lives have been controlled and in many cases still are controlled, by people who shared neither their culture nor their perspectives, because they have not shared their history. Self-determination is therefore a key underlying issue considered by the Commission.

It is clear that in many instances self-management is the interpreted and practiced form of self-determination. There is still scope for improvement in practices which truly provide opportunities for self-determination. Largely this position has come about because of the centralised funding of activity in Aboriginal communities and the need to acquit grants from the tax-payers' pocket to the general public. The Commission goes to some length to attempt to change this method of accountability in order to create the circumstances which could re-build Aboriginal self-esteem and confidence through their own decision-making without reporting back to the general population.

## **5.9 Conclusion**

Central to the issue of self-determination is the issue of the importance of non-Aboriginal society demonstrating to Aboriginal people its willingness to recognise the unpalatable facts of the past and to take positive steps to redress the effects of this history. While there is much that non-Aboriginal people can do to reduce the burdens under which they labour, it is clear that in this context Aboriginal people must be permitted to find their own solutions and be supported to the upmost extent in doing so. The issue in giving back to Aboriginal people the power to control their own lives is therefore central to any strategies which are designed to address these underlying issues.

The policies adopted by governments during the history of relations with Aboriginal and Torres Strait Islander people in Australia have all impacted on the question of water. The early period of colonisation saw direct conflict over natural resources including water. Dispossession meant separation from traditional lands and water. The policies of protection and segregation consolidated the separation from traditional sources. More recent policies of assimilation implied that there need not be any special consideration of the relationship between indigenous people and the natural environment. The current espousal of self-determination at least implies greater Aboriginal control over resources and the modes of service delivery. Similarly, specific policies and programs within ATSIC such as CDEP, AEDP and the NAHS all have a potential impact on the manner in which water might be supplied to communities. Thus questions relating to water management and supply need to also address the direct and indirect effects of broader policy issues.

## **Chapter 6 - INTERNATIONAL EXPERIENCE**

### **6.1 The International Context**

#### **6.1.1 Development Paradigms**

A review of the provision of water supply and infrastructure generally in developing countries reveals many experiences relevant to Aboriginal and Torres Strait Islander people. Whilst there is considerable literature on development theory and the economics of development, it is only recently that debate over the various models used in development projects has been the subject of review.

A considerable body of literature<sup>11</sup> details the limitations of providing infrastructure using project aid mechanisms which rely on central control and planned outcomes. These approaches are compared and contrasted with the adaptive processes involved in creating sustainable people-centred responses. Positioned between these two poles of the development continuum are the actions of government, non-government organisations, service agencies, community support groups or organisations and local community structures. Positions on the continuum determine the level of technology, training and motivation for the various players in the infrastructure provision game.

It is clear from readings in development practice (Porter 1991:197, AIDAB 1988:i) that a complex activity such as provision of water and sanitation is jeopardised if players in the game lose sight of the human outcomes of the activity. For example, it is unlikely that a provision can be established under a controlled approach with the expectation that local community structures will sustain the provision on a recurrent basis if the local community were not central to the process from the start. Conversely, it is unlikely that an initiative commenced using local community responses, values, resources etc can be picked up by a government service agency without significant adjustment which then undermines community confidence.

Control-oriented and pluralist-oriented approaches to development both attempt to manipulate present resources to reach desired futures. But while a control-orientation tends to vest power with increasingly distant, higher authorities, from project managers to cabinet ministers, a pluralist-orientation relocates judgements about risk, uncertainty and options in the hands of the people most likely to bear the unforeseen consequences of such decisions. Where the former approach increases uncertainty and non-sustainability, the latter more closely imitates the diverse ways in which poor rural people reduce uncertainty and increase sustainability (Porter 1991:202).

It appears much could be gained from a greater awareness by all parties of the development paradigms within which community water supplies are established. Such an understanding would provide a good starting point for the re-evaluation of development goals and a more realistic understanding of why certain initiatives are unlikely to succeed or sustain irrespective of the technical merit of the project.

Water supply and sanitation is but one element in this development debate.

#### **6.1.2 Community Water Supplies**

The situation of water supply to remote Aboriginal and Torres Strait Islander communities in Australia can be located within the broader context of the international crisis in the supply of

clean drinking water and adequate sanitation, particularly to remote and rural communities. It is also part of a pattern of conflict in water usage and supply which exists between indigenous peoples and non-indigenous governments across the globe.

While it is acknowledged that the Australian context is unique and must be examined in terms of the particular political systems, cultural backgrounds, community attitudes, climatic and geographical conditions and history, the responses to the problem at an international level and the experiences of other indigenous peoples provide many potentially useful insights in developing principles and strategies in the Australian context.

### **6.1.3 International Drinking Water Supply and Sanitation Decade**

The World Health Organisation Global Survey on Community Water Supply and Waste Disposal in Developing Countries (WHO 1976) disclosed some astonishing and disturbing facts. Among them it revealed that in 1970 three out of five persons in the developing countries did not have access to safe drinking water; only about one in four had any kind of sanitary facility. The urban areas were better served, with 75% of the populations having some form of water supply through house connections or standpipes and 53% having 'adequate' sanitation. In rural areas only 29% had equivalent water supply and 13% had sanitation (WHO 1981).

The work done by WHO in the decade 1970-1980 led the Director-General to propose two vital health targets 'to improve the quality of life in human settlements'. The first was an assurance that all people would have access to 'decent' health care by the end of the decade 1980-1990; the second, the provision of access to safe drinking water and hygienic disposal of wastes for all people by the end of the century. The first led to the Alma Ata Conference on Primary Health Care and the declaration *Health For All by the Year 2000*<sup>12</sup>; the second to the creation of the International Drinking Water Supply and Sanitation Decade (IDWSSD) at the Water Conference in Mar del Plata in 1977 and its endorsement by the United Nations (UN) General Assembly in November 1980.

Early work during the IDWSSD indicated immense difficulties in meeting the target of 100% safe water and proper sanitation by 1990. The target for rural water supply and sanitation was reduced to 50%, while the urban target for water supply remained at 100% and for sanitation dropped to 80%.

At the end of 1990 after ten years of intensive global effort, water and sanitation coverage in developing countries in 1990 was as follows: urban water 82%; rural water 63%; urban sanitation 72% and rural sanitation 49%. However, the increasing population sizes in the developing countries still meant that at the beginning of the 1990s there were an estimated 1.23 billion people without access to adequate and safe water supplies and 1.74 billion without access to appropriate sanitation.

The most dramatic improvements related to rural water supplies where the number of people with facilities increased by 240%. The number of rural inhabitants with new sanitation facilities also increased, though less spectacularly, by 150%. Increases in the number of people provided with facilities in 1990, relative to 1980, were 150% each for urban drinking water supply and for sanitation. In the face of a rapidly increasing urban population, however, these increases in the number of inhabitants provided with adequate services did not necessarily translate into equally significant increases in the proportion of people with services, relative to the population. Only in rural water supplies was there a doubling of the proportion served between 1980 and 1990.<sup>13</sup>

These results are tempered by observations of the functionality of supplies a couple of years after the completion of new water supply installations.

Despite its inability to achieve 100% coverage in water supply and sanitation by 1990, the IDWSSD did succeed in introducing low cost technologies and focussed attention on the user communities as active participants in the developmental process rather than their being merely passive recipients as before. The experience of the IDWSSD and, in particular, programs developed for rural water supply provide a number of insights into the creation of sustainable water supplies.

## **6.2 Experience of the IDWSSD**

In the enthusiasm and intense planning stages at the start of the IDWSSD there was a tendency to adopt the conventional knowledge and technology of developed countries concerning water supply, storage and treatment. There was a firm belief espoused initially by the Director-General of WHO that the solutions depended more on political will to act rather than technology. In many quarters the long term impact of conventional water supply hardware was overlooked in the pursuit of the IDWSSD's targets and the exhibition of the political will to support the IDWSSD.

The available technology at the IDWSSD's outset was suited more to use in high density urban populations. Rural systems tended to receive scaled-down versions of these solutions. Consequently, there was an early movement towards the provision of rural water supplies which would totally substitute for traditional sources. This brought with it a heavy emphasis on equipment, machinery and training which commenced the technological hardware push which still continues in most programs.

However, it rapidly became clear that the rural sector posed special technical and logistic difficulties in view of the vast and remote areas, scattered populations, poor socio-economic conditions and the inability of many rural populations to pay for the proposed technological interventions. Subsequent mid-Decade reviews and commentaries suggested the need for a re-thinking of strategies to address the problem. Furthermore, evidence from end-of-Decade reviews indicates that the technologies introduced in the attempt to increase the availability and access to water have not been sustainable and that in certain areas there has been a subsequent decline in the initial provision of safe water through such technologies.

Four of the major lessons which can be gleaned from the programs implemented as part of the IDWSSD are discussed below.

### **6.2.1 Importance of Community Attitudes and Practices and the Role of Women**

In the majority of projects to date, there has been a gross underestimation of the importance of the thought and behaviour patterns of rural villagers, both individually and collectively, and the differences in the priorities around water supply between communities with different water situations. Krishna (1985) comments that poor men and women the world over do not see their own better health and environmental improvements in the community as a means to improve their own productive and earning capacity. In an acutely water-scarce situation, a convenient supply is important not just for drinking and domestic purposes but also for stock and irrigation. However, when some water is available (regardless of quality) other priorities - employment or



land, more food for the family, a durable house - are more important. When sheer survival is the first priority everything else, including health, comes second.

Before a water supply or sanitation engineer enters the scene with a new set of priorities, villagers already have their own sophisticated and dynamic system of priorities which varies with seasons and economic circumstances, and may differ markedly to that of the visitor. Their primary goal will always be survival, with the net improvement of lifestyle being secondary. Their synergetic approach harnessing all available human, technical, social and economic resources and crossing sectoral boundaries often differs markedly to the sectoral planning adopted by Western technologists. Thus a conflict arises both in terms of the priorities and the approaches adopted in meeting those priorities.

This observation is borne out by the experience that the most successful water supply and sanitation schemes appear to be those which conceive of water supply and sanitation as two inputs to an overall strategy of life style improvement, and not isolated interventions. A second crucial element in the success of the project is that it works developmentally, with the changes taking place through a set of community processes and the community willingly adopting, using and maintaining the new water supply. Such community involvement is especially important as it appears that the bulk of the costs will fall upon the direct beneficiaries, who are often already very poor.

As the traditional water carriers, managers and distributors of water within the domestic sphere, women have had the major responsibility for decisions about the collection, use and storage of water. Women make these decisions on the basis of their criteria of access, time, effort and water quality and quantity, which they have inherited from their mothers and past generations (White et al 1972:239). Consequently, it appears that women play a powerful role in this situation, having a major input into the decisions. It is women who make the choices between traditional water sources or introduced supplies, between accepting, continuing to use and being willing to maintain introduced supplies, and in assessing whether the benefits gained are worth the expenses associated with introduced technologies. Projects have seldom been designed to take into account or make use of women's key role in their ultimate success and development impact.

### **6.2.2 Failure of Introduced Technologies (Hardware) To Produce Sustainable Results**

The physical start to the IDWSSD was signified by the infusion of technological hardware, this being seen as the quickest way to achieve the initial changes and hopefully meet the project goals. This largely involved the transfer of pumps, motors and treatment techniques from developed to developing countries, and generally showed phase one results (that is, water began to appear). However, it quickly became apparent that the mismatch in technologies, particularly in rural areas, was a significant obstacle. In the 1982 WHO review, the IDWSSD's original goals were altered to increase the focus on urban supply (to a 100% coverage goal), and decrease that on rural supply (with the revised target reduced to 50% coverage). This allowed donors to be involved immediately with existing hardware in the urban sector, rather than confronting the more challenging prospects of devising appropriate and effective approaches for village level supplies, including operation and maintenance.

Thus, ironically, although the most urgent environmental problems in the third world are related to lack of rural sanitation (which affects one third of the world's population) with rural water supply being the second greatest problem and urban water supply being the least urgent (already

75% cover at the time of the IDWSSD), the IDWSSD developed its priorities in the reverse order (Diamant 1985).

Overall, there has been a tendency to transfer the values of the technologies of donor (developed) countries onto the third world context, with little attention paid to the contextual differences and the `software' or `process' requirements. In the style of western engineering science, the international aid agencies invested the bulk of funding and energy into the research and evaluation of pumps and other technologies, rather than allocating resources to raise the awareness, co-operation, participation and education of the local people. Correlatively, technologists designed interventions which would provide a total solution, rather than working co-operatively with the pre-existing local strategies.

Furthermore, there has often been a failure to recognise the notions of sustain-ability of introduced technologies within the context of the recipient economy. For example, while the costs of the early investment in heavy and sophisticated western machinery for deep well programs were initially borne by donor countries, the sustainability of these water supplies depends on maintenance of the equipment, the costs of which generally fall to the recipient country. In a situation where the economic resources of the recipient country are already depleted, it has become evident that the water supplies are largely only as good as the long-term involvement and backing of the donor. The problem is compounded by the general response proposing western models of preventative maintenance, without looking at the real issue which is the ability of the recipient to make or acquire the necessary spare parts for maintenance, and the fuel for operation and associated management capacity. Few communities are motivated to engage in preventive maintenance when failure is only a matter of time determined by the drop-off in the provision of spare parts by the donor with no local capacity to provide similar spares.

### **6.2.3 Emphasis on the Technical and Centralised Solution at the Expense of the Social and Local One**

As touched upon above, many projects and solutions have been technical in nature, operating through technical institutions and departments, and focusing on the provision of hardware, expertise and training. This has resulted in the build up of institutional support and infrastructure and the development of a high level of intellectual and professional thought and motivation in the donor country and in the technical personnel of the recipient government in centralised national institutions.

One outcome of this has been a widening of the gap between village people and those planning and making decisions about projects. The former become further removed from, and more disempowered with respect to, the effective control of their water resources. Centralised, highly trained decision-makers face the conflicting interests of planning according to their technical capacity and desires, and planning according to the actual social reality concerned, and the feasibility of carrying out their plans in a developing country.

Technical planners are often out of touch with, or do not understand, the significance of the behaviour patterns of rural people. From the planner's perspective such an understanding is rarely a priority. As the power becomes increasingly centralised and the possibility of the villagers and the `experts' speaking the same language diminishes, the information collected on a project tends to have a technical bias and neglects the social dimension.

This approach raises two concerns. First of all, it serves to disempower the local people, and is certainly contrary to any notion of self-determination. Secondly, and more pragmatically, it often means the ultimate failure of the project. Whereas in wealthy and heavily industrialised economies where governments are able to guarantee the provision of water this approach may work (in terms of providing water), in third world countries this is not always the case.

#### **6.2.4 Water and Improved Health**

The fourth area of experience from the IDWSSD has been an evident lack of correlation between the provision of water and improved health. It is now generally believed that the major source of contamination and infection may be the household itself. Thus, the provision of good quality water, while necessary, will not be sufficient to improve health. In other words, it has now become apparent that further key sources of contamination occur after the delivery of improved water. The approach is now a more integrated one, focussing on all aspects of water supply as well as using sanitation, public health programs, and health education to improve personal hygiene. It is evident in the literature that researchers now give far greater weight to the range of other factors which contribute to increased health status in human settlements. These factors include level of income, housing, increased nutritional levels, general education, hygiene education and transport. The interest in prevention programs has also broadened.

In some cases it has been difficult to discern health improvements from improved water supplies. For example, water-washed diseases on the body surface and skin area are experienced as less troublesome to some people and may remain chronic but unreported in health statistics.

Ironically, the increase in water-based and water-related diseases may in fact increase with new supply if waste is not properly disposed of, because the increased water supply and the introduction of reticulation results in increased water wastage. Thus, there is now a growing awareness that the provision of water at source is only a starting point in a total water management model at the village level which must encompass supply, storage, reticulation, distribution, usage and disposal.

### **6.3 Beyond the IDWSSD**

It is clear from the discussion that there are implications for donors and recipients which will endure long after the IDWSSD ended. What has occurred is the start of a development process which will continue, as and when funds are available, to push for initial supply, then maintenance of supply, reticulation and improved access, distribution at neighbourhood and then household level and ultimately in improved disposal techniques as usage increases. The pressure caused by increased usage resulting from this process will call into question the original design criteria for quantity of water required. There will be a point in time when the planned 30 Litres/person/day will be inadequate and water supply systems will have to be re-worked.

The quandary for government is to know at what point such systems will be self-sustaining. From the recipients' point of view, the systems installed will not receive their full support until the villagers themselves feel capable of sustaining the supply.

The problems of fuel supply in most developing countries will logically lead to a push for rural electrification and this will impact on their water management system. In some situations, piped gravity flow schemes have been seen to be the cheapest, most sustainable option for

governments. They are also the most time demanding for villagers who generally have to dig the trenches and run the pipes over many kilometres of country.

The major implication for a considerable period of time is that rural people for a variety of reasons, including the uncertainty of things in the past, are unlikely to totally forsake traditional water sources and supply technologies. By so doing they will also fail to maximise the potential health impact of new supply methods for a considerable period of time.

#### **6.4. Experience of Other Indigenous People**

Indigenous people of other countries have faced similar problems to Aboriginal and Torres Strait Islander people in relation to water supply and sanitation. It is fully acknowledged that the political systems, cultural backgrounds, community attitudes, climatic conditions and processes involved in the provision of services may differ from country to country. However, there are similarities which provide some insight to the derivation of principles or guidelines for future planning in Aboriginal and Torres Strait Islander development.

##### **6.4.1 First Nations Peoples (Canada)**

According to the Indian and Northern Affairs Canada (INAC) records, there were 374,200 registered First Nations Peoples in Canada in 1986, constituting 1.5% of the total Canadian population (Lithwick 1986). INAC is responsible for providing water to indigenous people and they work closely with Health and Welfare Canada (HWC). About one third of the First Nations peoples live in urban areas and the rest on rural areas, with about a quarter being in remote or special access zones.

The size of these communities ranges from 40 to 2,000, with many reserve populations being between 500 and 1,200. There are 750 reserves and settlements occupying 2.5 million hectares. Out of 676 water supply systems reviewed, 273 ground water sources, 254 surface sources and 91 purchased sources were observed (Lithwick 1986). There were 60 communities served by individual water systems. Of all the systems, 327 neither required nor received treatment, (many being ground water sources); all received disinfection; 16 were treated by filtration and 67 were provided with full treatment. About 403 systems had reticulated distribution systems; 23 had a watering point for supply and 120 were served by trucked supply.

With respect to bacteriological quality, 376 systems passed all biological testing while 101 systems failed; the remaining systems being unknown due to lack of data. Of the 101 systems not meeting the biological quality, 40% had operational problems, 10 had design problems and the remaining 51 were without treatment.

Three hundred and ninety one systems (391) met water quality standards while 85 did not meet the standards and the remaining systems did not have satisfactory results. Of the 85 which failed to meet standards, 10 had operational problems, 9 were inadequate because of design and the remaining 66 suffered a lack of treatment facilities to remove the chemicals which exceeded the limits. The most common problems were high salinity, sulphates and high turbidity.

Considering the bacteriological and chemical test results combined, 314 systems met the standards while 148 (32%) did not comply. To overcome this problem the Canadian government was considering four strategies: simple, adequate water system design; appropriate operational staff and adequate recurrent funds; adequate initial and follow-up operator training; and water system user education. Better operation and maintenance of facilities was anticipated if all these

factors were observed. The Government was also investigating better and more simplified technologies.

#### **6.4.2 Native American Water Rights**

Burton (1991) has presented a comprehensive review of Native American Water Rights in the United States. Whilst the basis of Native American rights to land and water differ to the rights of Aboriginal people to the same elements, there are a number of insights and disturbing trends which are evident in Burton's work which may be applicable to the Australian situation.

Whilst Burton's case studies and analysis were about water, similar issues over trading-off rights during negotiations are relevant to Aboriginal and Torres Strait Islander approaches to land and mining. Developments in the United States are also reflected in the Australian Industry Commission Issues Paper on Water Resources, particularly in the shift of values with water becoming an economic commodity of exchange. Burton describes the last two centuries in America as a period during which state governments and some federal elected officials generally did what they could to divest indigenous peoples of their natural resource heritage, whereas, until quite recently, federal judges generally did what they could to preserve the heritage for the tribe's use and enjoyment. Burton's account describes a doctrine fashioned and enforced by the federal courts for the preservation of Native American water resources set against state water laws under which most of the waters of the west were already allocated to non-indigenous interests. One of the core findings of Burton's work is that in the hands of federal judges, the law has proved to be the salvation of the Native American water resource heritage. However, he suggests they are approaching the limits of what the law is able to do on behalf of Native Americans in the pursuit of just and durable dispute resolution (Burton 1991:62).

There are many similarities between the original conquest of the resources in America and in Australia. The Dutch purchase of Manhattan Island from its native inhabitants is an example of land paid for with beads and trinkets. This transaction no doubt had vastly different meanings for the parties involved. It is likely that, with this transaction, the native people probably thought they were conveying a limited use right, just as they were accustomed to doing with neighbouring native nations as an outcome either of trading with the friendly ones or warring with the others. In the European mind, what had been acquired was exclusive and perpetual possession of the land itself and all that was on it: a bundle of rights including the unfettered power to develop and alter the land and its resources at will to use it for any purpose; to divide it among individuals within the title holding group and to sell it to any buyer of the owner's choosing. This event became the first recorded instance of the combined use of European legal instruments and symbolic wealth (beads and trinkets) with - eventually - military force to divest indigenous North American peoples of their natural resources. From that day to this, Native American people in the United States have been under continuous legal and economic pressure to relinquish claims to and control over those resources.

For most of the nation's history, the struggle was over land; however, the most severe and most protracted conflicts today concern water. At the heart of the legal controversy over indigenous water rights is the fact that those rights were granted to Native Americans in treaties and federal court decisions of the late 19th and early 20th Centuries. They were rights that the federal government (as trustee of all tribal resources) was bound to uphold and protect. Instead, the US government more often acquiesced in the allocation of surface water rights to non-indigenous interests, using state water rights doctrines. Most of the west's water has now been allocated to non-indigenous people who believe they have acquired clear title to their water rights under state

law. However, the courts have begun to point out that the Native Americans' reserved water rights, as a matter of federal treaty obligations, are in most cases legally superior to non-indigenous rights granted by the states.

America appears to have similar conflicts to Australia where the federal judiciary upholds issues of policy but at state level the operational and regulatory activities can modify or nullify that policy. Burton concludes that Native American policy has not been made in a vacuum: in many instances, it has been a by-product of government efforts to achieve other purposes altogether. Given that Native American policy has often been a convenient rubric for attaining other governmental ends, there are three generalisations about the legal history of Native American resources which hold true:

- From the 1908 *Winters decision*<sup>14</sup> through to the 1960s, the Federal Courts for the most part have tended steadfastly to uphold indigenous water rights as pre-emptive federal obligations, while Congress and the Executive - because of the Native Americans' relative lack of political clout - have tended either to ignore the indigenous right or to subvert it indirectly by facilitating non-indigenous water appropriation under state law.
- At times when Congress has been most deferential to the states and private developers regarding access to federally protected natural resources, diminution of the Native American resource base has been the greatest.
- A strong parallel exists between negotiations over the creation of Native American reservations in the 19th century and the current negotiations over the development of indigenous water resources. In both instances, Native Americans have been urged to relinquish resource rights which the federal judiciary had afforded strong constitutional protections, in return for congressional and executive promises of assistance in economic development of a much smaller resource base, which may grow even smaller once the original right had been bargained away. Burton (1991:33) sees this as a total whittling away of Native American water rights.

There is a similar parallel in Australia in the diminishing of both land rights and other rights of access for Aboriginal people.

The essential theme of the *Winters doctrine* is that from the time the Native American reservation was declared, enough previously unappropriated water was also reserved to fulfil the purposes for which the reservation was created. The original decision held that indigenous water rights should not be quantitative, thereby enabling the entitlement to expand with tribal needs. Since the general purposes stated in creating nearly all Native American reservations included assistance to the people in learning the 'arts of civilisation' and otherwise becoming economically self-sustaining, analysts for minerals developers have concluded that the courts will probably construe activities such as silviculture and logging, energy resource extraction and processing, and recreation among the legitimate uses to which Native Americans can devote water resources acquired under the *Winters doctrine*. But efficiency of use is still a concern in the West and controversy over what technologies Native Americans use to apply their water will doubtlessly continue, since methods of use affect quantities needed (Burton 1991:42).

Commonly the most heated controversy over the use of reserve waters concerns the Native Americans' ability to lease their water to non-indigenous people outside their reservation borders. Advocates of tribal sovereignty argue that the Native American nations should be

allowed to do the same as large urban water providers who supply excess to their suburban neighbours. However, even though water marketing in the West is being vigorously advocated as a way of improving efficiency of use, the ability of Native Americans to do so is being just as vigorously opposed by most non-indigenous water rights holders (Burton 1991:43).

The question of sovereignty in fact looms large over every aspect of tribal water rights. Some values attendant on a culture's relationship with water are simply not subject to categorisation, calibration and the vagaries of market forces - in short, to the relatively narrow perspective European-American society has traditionally brought to bear on water resource decision-making. To the extent that a tribe values its water in ways that are at variance with the dominant culture, it is reasonable to expect that variance expressed in the ways the tribe seeks to manage its water (Burton 1991:45).

In June 1982, an extensive survey of disputes over Native American Water Rights was conducted. Investigators learned that about fifty major disputes were either in progress at the time or had just reached tentative settlement. Since the 1908 Winters decision, the western state governments, municipalities, agricultural and conservation districts, land developers and other major water rights holders opposing Native Americans in court, have also been opposing them with equal vigour in Congress. Perceiving in the Winters doctrine a real threat to the rights they have established, (sometimes at great expense), under state prior appropriation doctrines, they have brought Native Americans to a stand-still legislatively every time some proposal was put forward which in some way would have curtailed prior indigenous rights. As a result, a routine has developed in Congress whereby supporters of the Native American cause submit fairly generous legislation for indigenous water right settlement; this is blocked or deflected by a coalition of western congressmen, who in turn have submitted their measures for adjudication or condemnation of Native American reservation rights; which, in turn, the civil rights coalition and others then reject as inherently unfair. The result has been a legislative stalemate over the comprehensive recognition and fulfilment of Native American water right claims.

Parallels can be seen between issues of mining development and land use in Aboriginal communities and the role of third parties, such as conservation and heritage groups or the mining lobby, in leading to stalemates and protracted litigation (Burton 1991:59).

Beset by a wavering court on one side and a dead-locked Congress on the other, nearly everyone now seems to be either guardedly or enthusiastically urging negotiation as the preferred method of settling Native American water disputes: everyone, that is, except the Native Americans themselves (Burton 1991:59). Each time they negotiate they lose a further piece of their resource.

Burton summarises the situation by suggesting that the Winters doctrine may sound just and honourable in the abstract, but because of earlier Congressional and Executive tension, the cost of its implementation is now substantial. Justice and honour are most easily identified and ardently embraced when their cost is not high. As it became apparent that Native American water rights might have to be perfected at the partial expense of non-indigenous rights and that Native American water projects might have to be developed at the partial expense of non-indigenous projects, the congressional sense of justice on the subject of Native American water rights was heavily off-set by financial and political considerations. The nation has enjoyed the moral satisfaction of just decisions without the social and fiscal inconvenience of having to implement them (Burton 1991:61).

Again there are strong similarities being between the recommendations that are made in the United States in relation to water rights and the recommendations which have come from the Royal Commission into Aboriginal Deaths in Custody. The inability to meet the immense cost of implementing some of these recommendations may well mean that, federally, Australia has enjoyed the moral satisfaction of resolving the issue without being able to respond in the implementation of some of the recommendations.

There are risks involved in negotiated settlements and, certainly, they tend to favour the more powerful. Negotiation risks the chance that future administrations will backtrack on their undertakings or that promises will not be maintained as the tribal resource base steadily diminishes. Burton (1991:138) argues for the formation of a Native American Water Rights Commission to act as an intermediary in this negotiating process. He also argues for the establishment of trust funds, such that funds are invested up-front at the point of decision and are not lost because of broken promises at a later date as governments fail to complete projects. It is claimed that the proposed water rights commission would overcome some of the problems of inequity caused by the haphazard dispute settlement techniques which are currently used. Concepts such as 'water banking' as a means of financing this water commission have been discussed.

The pertinent lesson relates to the potential cost to societies who ignore for many years the rights of indigenous populations and then, as a result of a court decision, have retrospectively to recover or compensate in some way for those rights. It is notable in this American version that it is not only a matter of compensation in financial terms: there are some retrospective capital works that also have taken place to reclaim water in certain instances and these have been quite expensive.

It is noted that the public has grown weary of financing losses in the desert every year and water management bureaucrats are beginning to pay more attention to increasing the efficiency of systems than to the planning, funding and building of new ones. Perhaps the same attention will in some future time be devoted to the way that disputes over the management of water are conducted. If this does happen, it will probably be for the same reason: efficiency. The current interest in non-litigated settlements of disputes reflected in some of the literature discussed in Burton's study is, to a certain extent, predicated on the belief that de-legalising American dispute settlement will lead to similar outcomes at lower costs. However, arguments of efficiency are most convincing when the debate is between parties with similar economic perspectives. Most Native Americans do not care much about efficient dispute settlement, but they care a lot about water (Burton 1991:140).

Burton concludes that given the deadlock on the comprehensive resolution of claims and the Supreme Court's increasing hostility to the Native American position, tribal willingness to take a more active interest in negotiation is understandable. The Native American nations may indeed be experiencing the limits of the law (Burton 1991:62).



## Chapter 7 - HUMAN RIGHTS

### 7.1 Overview of the Nature of Australia's International Obligations

A central question for the Race Discrimination Commissioner as a member of the Human Rights and Equal Opportunities Commission is whether the provision of water and water-related services meet the standards of human rights set out in the various treaties and laws.

Australia's international obligation to observe human rights and standards of treatment arises from its being party to a number of international treaties and conventions. These instruments assert the existence of rights and standards by which contributing States acknowledge themselves to be bound. Their formal ratification renders them binding under international law and places an obligation on contributing States to undertake such measures as are necessary to meet the specified standards.

Australia has played a key role in the development of international human rights instruments. However, international treaties are not necessarily self-executing and generally give rights to members of the Australian community when their provisions are given effect by statute within Australia - a process referred to as 'domestic implementation' (*Koowarta v Bjelke Peterson* (1982) 56 ALJR 625 : 635).

The fundamental principle in relation to honouring treaty obligations is *pacta sunt servanda*: that is, treaties are binding on parties and must be performed in good faith. Any failure to diligently observe and translate the promise of full human rights and proper standards of treatment articulated in treaties into effective enjoyment calls into question whether the country is in fact willing to act in good faith.

International accountability is partially maintained by obligations on state parties to make regular public reports to the United Nations Human Rights Committee detailing measures they have adopted regarding their compliance. For example, Article 9 of CERD requires state parties to report every two years regarding legislative, judicial, administrative and other measures adopted to give effect to the provisions of the Convention, and Article 40 of the ICCPR requires state parties to report every five years.

However, there is no effective machinery to deal with breaches of international treaties or to compel state parties to comply with them. A country's failure to honour its treaty obligations may at worst lead to international criticism or condemnation and censure on the world stage.

Australia's accession to the First Optional Protocol to the ICCPR on 25 September 1990 has added a new dimension to its international accountability. Under the Optional Protocol, it is now possible for an individual to approach the UN Human Rights Committee directly to complain about violations of the rights recognised in the ICCPR by any level of government in Australia. In order to lodge a complaint with the Committee, the individual must have exhausted all available domestic remedies. Should the UN find that a breach had in fact occurred, the possible remedies are once again limited, as its decisions are not legally enforceable in Australian courts. They do, however, carry a strong moral authority, and represent an authoritative indication of a country's legal obligations under the ICCPR, which if not complied with would be damaging to the country's international reputation on human rights.

### 7.2 The Process of Domestic Implementation

Domestic implementation of international instruments requires specific legislative action. However, the political structure in Australia which divides government administration into three levels (Federal, State and Local), each with different areas of legislative responsibility, is problematic for the effective implementation of treaties. Many matters referred to in treaties and the management of many programs which are relevant to the implementation of human rights standards fall within the jurisdiction of the States and Territories. The Commonwealth Executive is competent to enter into international agreements, and in practice consults with State and Territory governments before the Commonwealth becomes party to a Treaty.

The domestic implementation of international human rights obligations is the concern of the Human Rights and Equal Opportunity Commission. NSW, Victoria, Queensland, South Australia, Western Australia, the ACT and the Northern Territory each have State equal opportunity legislation and an administrative body which administers their respective acts and works in parallel with the federal system. For the present purposes, the relevant pieces of federal legislation administered by the Commission are the *Racial Discrimination Act 1975*, the *Sex Discrimination Act 1984*, and the *Human Rights and Equal Opportunity Commission Act 1986*.

### **7.3 Relevant Human Rights Instruments and Legislation**

Australia's human rights obligations operate at two levels - internationally, where it has ratified a treaty or is party to a declaration, and domestically where it has enacted legislation to give effect to the terms of treaties. Thus, in looking at the range of international instruments to which Australia is party, it is necessary to ask whether they have been subject to domestic implementation, and if so, within which jurisdictions.

There are a range of international instruments which specify rights relevant to the present context. These include the International Covenant on Civil and Political Rights (ICCPR), the International Convention on the Elimination of All Forms of Racial Discrimination (CERD), the Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW), the International Covenant on Economic, Social and Cultural Rights (ICESCR) and the Universal Declaration of Human Rights. However, whilst the ICESCR was formally ratified by Australia in December 1975 and the Universal Declaration assented to in 1948, the latter two have not been given legislative force, and thus for the formal purposes of the Human Rights and Equal Opportunity Commission are not relevant international instruments. The ICCPR, CERD and CEDAW have been directly subject to domestic implementation and are scheduled to the HREOCA, the RDA and the SDA respectively.

While no instrument directly dealing with the rights of indigenous people has yet been completed, it is worth noting that since 1983 Aboriginal and Torres Strait Islander people and their representative organisations, together with Australian Government delegations, have taken part in the proceedings of the United Nations Working Group on Indigenous Populations (WGIP). The WGIP is presently formulating the draft declaration on the Rights of Indigenous Peoples. The declaration would:

- Set international standards for the treatment of indigenous peoples.
- Provide for the protection of certain rights for indigenous peoples (e.g. the right to maintain indigenous languages, the right to the protection of heritage and enjoyment and

maintenance of traditional cultures, and the right to traditional medicines and health practices).

- provide a statement of the rights of indigenous peoples in their relationships with Governments and the wider community (e.g. the right to consultations and negotiations on relevant decisions effecting indigenous peoples; the right to determine and develop all health, housing and other social and economic programs affecting them; and the right to special measures for the immediate and effective improvement of health, housing and sanitation).

The Australian Government will continue to play a key role in the deliberations of the Working Group.

#### **7.4 Relevant Rights**

In the present context, a number of rights and grounds of discrimination can be considered relevant, including the specific right to adequate and safe water, the rights to health and a decent standard of living, the rights of people in remote and rural areas and cultural rights, as well as the broader question of racial discrimination. While all of these areas form an interconnected background to the provision of water to Aboriginal and Torres Strait Islander communities, the following sections will locate where in the international treaties and domestic legislation each of them is specified and protected.

It is worth noting that the right to an adequate and safe water supply arises by necessary implication from the abovementioned treaties and legislation which deal with issues of health and improvements of living conditions. As well as the specific provision in CEDAW referring directly to issues of water supply, there are those which do so by virtue of water's importance as a precondition of life and its fundamental role in achieving and maintaining good health and an adequate standard of living. Furthermore, as satisfactory health is a precondition of the full enjoyment of almost all human rights and fundamental freedoms, water is crucial in a chain of factors affecting the fulfilment of other human rights, and the right to water is implied throughout many of the more wide ranging provisions of the various instruments.

Unfortunately, while the major instruments clearly articulate life, good health and adequate standards of living as basic human rights, the areas of quality, quantity, access to and control of these factors are less clearly defined, and it is in the interpretation of these that abuse can occur. The difficulty of interpreting these concepts, and the issue of cultural relativity will be taken up more fully in later sections of the Report.

The Universal Declaration on Human Rights in 1948 recognised everyone's right to life, to an adequate standard of living and of access to the conditions necessary to achieve this. With regard to the latter, Article 25.1 states:

*Everyone has the right to a standard of living adequate for the health and well being of himself and of his family including food, clothing, housing and medical care and necessary social services, and the right to security in the event of unemployment sickness, disability, widowhood, old age or other lack of livelihood in circumstances beyond his control.*

In principle, some of these standards have been reflected in the ICESCR, which states:

- *The State Parties to the present Covenant recognise the right of everyone to an adequate standard of living for himself and his family, including adequate food, clothing and housing and to the continuous improvement of living conditions. The state parties shall take appropriate steps to ensure the realisation of this right, recognising to this effect the essential importance of international cooperation based on free consent (Article 11.1).*
- *The State Parties to the present covenant recognise the right of everyone to the enjoyment of the highest attainable standard of physical and mental health (Article 12).*
- *The steps to be taken by the State Parties to the present Covenant to achieve the full realisation of this right include those necessary for..... the improvement of all aspects of environmental and industrial hygiene (Article 12).*

CEDAW refers to the right to enjoy protection of health in the working environment and specifying the rights of people in rural areas. This is directly relevant to the focus of this Report where it affects rural and remote communities. Article 14(1) of the Convention provides that:

*State Parties shall take into account the particular problems faced by rural women and the significant roles played by rural women in the economic survival of their families, including work in the non-monetised sectors of the economy, and shall take all appropriate measures to ensure the application of the present Covenant to women in rural areas.*

Article 14(2)(h) further provides that rural women are to be ensured the right:

*to enjoy adequate living conditions, particularly in relation to housing, sanitation, electricity and water supply, transport and communications.*

CERD sets out a number of particular rights to be enjoyed without distinction as to race, colour, descent or national or ethnic origin. Amongst these Article 5(e)(iv) specifies the 'Right to public health, medical care, social security and social services'. CERD provides that disadvantaged groups may be assisted to overcome the effect of past discrimination by the provision of services which would allow them to enjoy all human rights on an equal footing with other groups. Article 2.2 provides that:

*State Parties shall, when the circumstances so warrant, take, in the social, economic, cultural and other fields, special and concrete measures to ensure the adequate development and protection of certain racial groups or individuals belonging to them, for the purposes of guaranteeing them the full and equal enjoyment of human rights and fundamental freedoms. These measures shall in no case entail as a consequence the maintenance of unequal or separate rights for different racial groups after the objectives for which they were taken have been achieved.*

This is incorporated in the Racial Discrimination Act in Section 8(1).<sup>15</sup>

#### **7.4.1 Cultural Rights and Self-Determination**

The issue of non-discriminatory provision of services (that is, services which comply with section 13) raises the question of cultural appropriateness and a group's right to the enjoyment of

its own culture. The ICCPR recognises the right of ethnic minorities to enjoy their own culture and specifies that:

*In those States in which ethnic, religious or linguistic minorities exist, persons belonging to such minorities shall not be denied the right, in community with other members of their group, to enjoy their own culture, to profess and practice their own religion, or to use their own language. (Article 27)*

Interference with a group's culture can take many forms. In particular, mechanisms for the provision of water which required removal of a group from their lands to a better source of water, to live in houses, or in close proximity with others, where this is unacceptable to that group, could all constitute interference with culture. Similarly, mechanisms which place a group at risk of disintegration or which modify or interfere with the group's self-management or internal organisation could also breach this article. It could thus be argued that the imposition of services which interfere with the culture or social order of an Aboriginal or Torres Strait Islander community constitutes a violation of this class of rights. A necessary condition for upholding the above provision in relation to the provision of water-related services would then be that interventions be acceptable to the communities affected, and that they not interfere with their cultural system or practices.

Implicit in the notion of cultural rights is the principle of self-determination. The culture of a group is the property of its members, and in asserting the right to the preservation of a group's culture, it is the group itself which must define how this is to be achieved and what would constitute interference. Clearly, the process of negotiating acceptable interventions which do not conflict with Aboriginal and Torres Strait Islander cultural rights is critical to an interpretation of violations of article 27.

There is some degree of variation in the recognition and definition of self-determination in international and domestic law and official government policy. At its highest it is concerned with the political status, and economic, social and cultural development of a particular people, as set out on Article 1 of the ICCPR:

*All peoples have the right of self-determination. By virtue of that right they freely determine their political status and freely pursue their economic, social and cultural development.*

The right to self-determination is a strengthening of a group's right to the enjoyment of its own culture, and is seen by many Aboriginal and Torres Strait Islander people as a central component in the process of achieving the full recognition of their human rights.

The ambiguous status of self-determination is currently subject to extensive debate both internationally within the WGIP; and domestically within Parliament and indigenous groups. Self-determination remains a contentious issue in Aboriginal policy development.

Article 1 of the ICCPR is variously identified and interpreted in the *Aboriginal and Torres Strait Islander Commission Act 1989* and the subsequent corporate plan of the Commission. It is also discussed at some length in the national report of the Royal Commission into Aboriginal Deaths in Custody. The objects of the ATSIC Act refer only to *the development of self management and self sufficiency.....to further the economic, social and cultural development of Aboriginal and*

*Torres Strait Islander persons.* Neither the right to self-determination nor the right, by virtue of the former right, to freely determine political status have been provided in the Act.

The goal of ATSIC stated in its corporate plan is:

*to secure the empowerment of Aboriginal and Torres Strait Islander peoples so that , through self-determination, they can make the decisions that affect their lives and share in Australia's land, wealth and resources, contributing equitably to the nations economic, social and political life, with full recognition of their indigenous cultural heritage as the First Australians.*

ATSIC's corporate goal recognises an involvement with political life but stops short of claiming the right to freely determine political status within Australia, despite the fact that it is a right recognised in schedule 2 of the *Human Rights and Equal Opportunity Commission Act 1986*.

The RCADIC reviews in detail the development of the concept of self-determination and the various consultative methods embraced as a means of providing for self-determination. The report outlines, both historically and with a view to the future, the path to self-determination but does not link the process directly with the provisions of the ICCPR. The Royal Commission noted:

*It is remarkable how a concept which is so widely recognised as being central to the achievement of the profound change which is required in the area of Aboriginal affairs remains so ephemeral and so difficult to define. Governments can genuinely believe that their policies give practical recognition to self-determination, and yet in the eyes of Aboriginal people the policies not only fail to do so but, at times, are regarded as being founded on the concept of assimilation - the very anti-thesis of self-determination (RCADIC 1991:503).*

The RCADIC reviewed the report of the House of Representatives Standing Committee on Aboriginal Affairs (1990), *Our Future Ourselves*, on the issue of self-determination; and a submission by the National Aboriginal and Islanders Legal Services Secretariat (NAILSS) which draws on the draft declaration of the Rights of Indigenous Peoples and the ICCPR. The RCADIC noted that, despite differences, there were three areas of common ground identified.

1. That Aboriginal people have control over the decision-making process as well as control over the ultimate decision about a wide range of matters including political status, and economic, social and cultural development.
2. That for Aboriginal people, an economic base is provided to the indigenous self determining people; that is, having the resources and capacity to control the future of their own communities.
3. Both groups agree that Aboriginal people have the right to make the choice between the spectrum of possibilities including political status. The variance in views centres on whether the ambit of this decision-making capacity should occur within the legal structure common to all Australians or from options falling outside the legal structure common to all Australians (RCADIC 1991:(2) 508).

The RCADIC did not enter the debate over the extent or nature of political status. Rather, it highlighted the extent to which arguments were limited by different values and practices between Aboriginal and Torres Strait Islander people and non-indigenous people. It also noted the pervasive nature of the goods and services available to Aboriginal and Torres Strait Islander people from western economic and cultural systems.

While the Race Discrimination Commissioner does not propose to use this present Report to outline a definitive position on the question of self-determination, it must be considered as a crucial factor in the background to the provision of water to Aboriginal and Torres Strait Islander communities. Failure to come to an agreed interpretation and usage of the term will lead to further conflict and frustration. Further, in determining how the provision of water-related services fully upholds the human rights and fundamental freedoms of those communities, the question of self-determination will be relevant. Clearly much more consideration than has previously occurred needs to be given to the impact of technologies on Aboriginal communities and on their ability to control and determine their culture and lifestyle.

### **7.5 Implications for Technology Choice**

There are a range of issues which emerge from the discussion of the relationship between human rights and technology. The following questions need to be addressed when decisions are being made about particular technologies:

- Does the service or program provide adequate standards in relation to quality of life and sufficient to support the enjoyment of the range of fundamental human rights and fundamental freedoms?
- Does it meet adequate health standards?
- Does the service or program achieve an outcome compatible with that of non-Aboriginal communities?
- Does the service or program interfere with the cultural integrity of the community concerned?
- Has the program been chosen by Aboriginal people themselves and does it respect the community's right to self-determination?

It is thus apparent that the initial question in fact masks a number of sub-issues, and an apparently singular reference to 'human rights' implies several classes of rights and instruments, some of which may appear to be in contradiction of each other. For example, a community may wish to choose a technology which appears to be culturally appropriate, but which fails to yield water at the standards acknowledged in the NH&MRC guidelines. However, the community may have sound reasons for rejecting the NH&MRC guidelines in that particular circumstance and could argue that it is their right to make such a choice.

The current national water quality guidelines are regarded as the acceptable Australian standards in the provision of water because of the status of the NH&MRC, predicted on Western regard for excellence in medical science and technology. This acceptance, however, fails to take into consideration notions of cultural integrity as required by the ICCPR. It would be contentious to attempt a definitive statement on which rights should prevail where a conflict arises, but there is

an argument for giving far more emphasis to the place of cultural rights and self-determination, and the binding nature of international law regarding these rights, than has previously been the case.

The issues of cultural respect, self-determination and the provisions of the international covenants must have a central position in assessing the provision of services. Many of the fundamental assumptions which have previously directed the level and type of infrastructure and technologies used in Aboriginal communities must be questioned. The principle of self-determination requires that service providers conceive of their objectives, and the appropriate processes employed to achieve such objectives, in very different ways to what has previously occurred. The principle of self-determination raises the profile of consultation and negotiation with communities from being an optional and minor part of the process to being the fundamental starting point and lynch pin for entire programs. This shift in emphasis also implies a necessary rethink of the skills and methods required to conduct such negotiations.



## Chapter 8 - CASE STUDY ANALYSIS

### 8.1 Case Study Themes and Issues

This Report analyses a series of ten case studies, not only to understand why there are problems with water and sanitation services in a range of different living conditions, but also in order to raise some of the issues which affect the rights of Aboriginal and Torres Strait Islander people. The Race Discrimination Commissioner is committed to the principles of self-determination and reconciliation, being the two key elements in any sustainable response to Aboriginal and Torres Strait Islander problems.

Ten communities took part in the preparation of case studies and many conclusions can be drawn from the detail which community members were prepared to offer. The full case studies appear later in this Report and provide a comprehensive context from which the brief summaries presented below are drawn. The following points are indicative of the themes and issues addressed in each case study and demonstrate the range of problems facing Aboriginal and Torres Strait Islander people.

**Punmu:** This remote community is situated in the Western Desert of WA and is the most traditional community involved in the project. The case study demonstrates the value of water (including salty water) to Aboriginal people as a means of sustaining life. Brackish and salty water was highly regarded, valued and protected for its medicinal and ceremonial purposes. The people of Punmu articulated a need for water across their country, not just in their village. Their movement patterns and practice of culture is hindered by a lack of access to water along their new movement tracks, dictated by the pattern of roads rather than traditional walking tracks. Their ability to respond to these changing aspects of their life and culture is hindered by the processes and procedures of water provision which focus on house and settlement, rather than a large tract of country.

**Coonana:** This community is situated just south of the East-West railway line, 200 km from Kalgoorlie in WA. The people of Coonana were enticed to move from Cundelee (a mission north of the railway line) to obtain a better water supply, better job prospects for young people and a cattle station. Planning documentation for the move describes an elaborate system of ground tanks and roaded catchments as a secure water supply. However, only a fraction of the planned works were completed and the water supply has not greatly improved over that of Cundelee.

People at Coonana were the first of a number of case studies to demonstrate they had their own strategies for ensuring water supply irrespective of the formal water supply system.

**Yalata:** This community is situated on the south coast of SA at the top of the Great Australian Bight. It is equipped with three large reverse osmosis water treatment (desalination) units.<sup>16</sup> The water supply at Yalata represents the most technologically sophisticated water supply in the case studies. The study also demonstrates the dominance of technology over community choices. The provision of elaborate technology and resultant treated water do not automatically contribute to improved quality of life or improved health. Many people from Yalata are attempting to move back inland to communities with less adequate water supplies than those at Yalata. Many Aboriginal people complained that they get sick from the treated supply and therefore rely on rainwater. This leads to social problems in times of reduced rainfall as they attempt to obtain water from other people's rainwater tanks. Rainwater tanks are predominantly located at houses,

the majority of which are occupied by non-Aboriginal people. These intrusions work against healthy relationships at Yalata.

**Oak Valley/Maralinga:** The people of Maralinga are a relatively mobile community group who move in an area north of the Trans-Australia Railway in South Australia. These people are moving back into their traditional lands from Yalata. They have initially chosen a level of service which is very different to other locations. Having adopted a lifestyle which has them moving from place to place, they selected a water supply system which followed them (mobile tanker) or collected water while they are absent from a site (rainwater harvesting). The study represents a solution generated by people in support of their lifestyle and requires the application of standards, values and engineering skills relevant to that lifestyle. It also presents many headaches for service providers who are set up to provide services sedentary lifestyles rather than for people who are mobile.

**Dareton:** Dareton is a small town on the Murray River in NSW. The main group of people live on a small reserve 3km outside Dareton with another small out camp 8km from Dareton. The study demonstrates the effect of a large infrastructure program on the social and organisational capacity of the community. The expectation that voluntary people can co-ordinate all the inputs for a million dollar project is questioned. The ability of Aboriginal people to maximise their control and involvement in these circumstances is critical to the ongoing success or sustainability of the investment in infrastructure. The case study shows there is little planning for long-term sustainability in this type of 'catch up' infrastructure program.

**Tingha:** Near Inverell in the northern tablelands of NSW, Tingha is not an Aboriginal community but a small town with a significant Aboriginal population within it and around it. The study examines the types of consultation processes and decisions taken by engineers and State and Local Government officers in the planning of a water supply network. The study also demonstrates a local water supply strategy and looks at the ability of residents to pay for and cope with an improved level of service as proposed in documentation following a mainstream consultation process.

**Doomadgee:** A DOGIT (Deed of Grant of Land in Trust) community in the Queensland gulf country north of Mt Isa, Doomadgee is the largest community studied in the case studies and has experienced a degree of social trauma in the past. The case study examines the anomalies of a policy of Aboriginal control and self-management in a large grouping of people. The level of service and support required to maintain water and sanitation infrastructure in a community of this size is shown to work directly against goals of Aboriginal self-determination and self-management. Increasing portions of community budgets have to be devoted to maintaining higher levels of service with subsequent loss in other areas of community activity.

**Mpweringe - Arnapipe:** This case study documents the activities of an Aboriginal association representing a group of families wishing to settle on a strip of land between 46km and 75km north of Alice Springs in the Northern Territory. The case study presents a situation that is different to those where Aboriginal people settle on large tracts of land. It emphasises that Aboriginal rights may not be protected if one applies the same mechanisms and processes to achieve the provision of water and sanitation as have been used in the broader Aboriginal land rights debate. The case study argues that when seen as a totality, the subtle and singular minor delays and petty bureaucratic stands add up to a significant interruption in the ability of Aboriginal people to pursue their economic and cultural development. The case study examines

the outcomes, current and potential, of a protracted negotiation process and the relationship of decisions taken along the way in relation to water and the final outcomes.

### *Torres Strait*

The two islands studied demonstrate the dramatic differences in culture between Torres Strait Islanders and Aborigines. Whilst conditions on the islands are generally less desirable in water and sewerage services, there appear to be fewer complaints. There are also fewer non-Torres Strait Islanders living in communities than for equivalent sized Aboriginal communities. This apparent correlation bears some investigation.

The study also outlines the application of different technical standards for water supply on Boigu Island and Coconut Island. Both use ground tanks and rainwater harvesting but the design of the systems are very different.

**Boigu Island:** This 'mud' island is only 4km from Papua New Guinea (PNG). The case study demonstrates the different culture of Islanders and their need for separate consideration in technical decisions, particularly where people have very little land available for settlement and where their foreshores are subject to tidal surge and inundation by salt water. A lack of water supply options, combined with technical responses which dismiss rainwater as a real option, have limited development options for Boigu.

**Coconut Island:** This island is in the central eastern group of islands beside the main shipping route through the Torres Strait. The people on Coconut Island presented very clearly their dependence on sea water for the maintenance of their culture. Their interpretation of water rights included access to marine waters: without which their culture dies. The other pertinent issue raised at Coconut Island was the limiting effect of Aboriginal affairs policy on Islanders. The case study demonstrates a need to consider the nature of future appropriate policies once programs designed to redress disadvantage have achieved their purpose. That is, if special measures are invoked to redress disadvantage in a cross-cultural situation, the shift to mainstream policies may not adequately support the maintenance of a separate cultural identity which expresses itself through different values and practices, once that disadvantage has been redressed. In addition to the philosophical problems, there were practical ones such as the Coconut Island residents experiencing periodic episodes of sickness related to the method of night soil disposal in the sea.

## **8.2. A Framework for Analysis**

In attempting to analyse the mass of information generated by the study, it was necessary to assume a framework that reflected as closely as possible the interests of Aboriginal and Torres Strait Islander people and the duties of the Race Discrimination Commissioner in upholding the RDA both in the letter and the spirit. The framework had therefore to be holistic and focus on the inter-connection of issues, within the spirit of the various human rights instruments.

The analysis had to make allowance for the rights and feelings of individuals, as well as those of the community as a whole. In relation to water, individual and community rights are provided for in a number of international human rights covenants. Three significant groupings or sub-sets of rights are evident:

- Adequate living conditions, adequate standards of living and satisfactory health

- Full and equal enjoyment of rights with race not being a distinguishing feature of choice
- Self-determination and the ability to freely determine and freely pursue their development and enjoy of their own culture.

The first grouping covers the standards of living and living conditions of people and the relationship between these conditions and satisfactory health. The second grouping is largely covered by concepts espoused in the Racial Discrimination Act and addresses the basic concept of equality. The third grouping encapsulates the concept of self-determination and empowerment. The concepts are all central to an understanding of individual and community rights.

Most grievances felt by people relate initially to one of these three groupings. For example, aspects of equality were the principal issues for the complaints leading to the Toomelah Report (HREOC 1989), but the specific incidents within that general feeling of inequality in the community could be broken down to a number of sectoral issues, including water. Experience thus far suggests that solutions to the specific issues are not the problem. Misunderstanding regarding the implications of different cultures and values in the interpretation of broader issues of standards, equality, self-determination and empowerment provide significant barriers to the provision of services.

Many of the specific issues raised in this brief summary of case study outcomes are concerns shared by numerous communities and are part of an interaction of factors which individually may not be of great importance, but when taken in concert do provide significant distortions of the rights of Aboriginal and Torres Strait Islander people. These common difficulties were reinforced at the National Water Forum in April 1993.

In order to make useful and sustainable judgments in the future, the Race Discrimination Commissioner in this Report has presented findings from the case studies within the three basic categories outlined above. However, this is done with the full knowledge that each of these factors interact and overlap to further complicate the basis of people's attitudes towards water.

## **Chapter 9 - STANDARDS OF LIVING, LIVING CONDITIONS AND SATISFACTORY HEALTH**

### **9.1. Standards and Quality of Life**

It is relatively easy for issues in communities to become distorted when they are initiated by moves to improve the standard of living. Improved standards of living are assumed to be universally good for people, but the concept may be one that is itself culturally bound (and bound to a western, developed nation culture). A standard of living is a concept which reflects growth. It has been used extensively as a benchmark for development, particularly following industrialisation and the introduction of both secondary and tertiary industry, including the development of viable market economies. In attempting to improve standards of living of certain groups - with standards being discrete entities such as houses, piped water, electricity, refrigeration etc. - the 'improvers' who are outside of that culture may run the risk of 'not seeing the woods for the trees'. That is, the pursuit of individual entities which can be nominated as standards may compromise other aspects of the community culture which are very important to the community members. These cultural aspects can include quality of life issues which are not obvious to outsiders as well as important questions like self-determination.

This may be illustrated by example. In Doomadgee, one of the case study communities, there were water supply problems which were exacerbated by the large number of people living in the community. The answer to the water problem (which was the problem the experts were addressing) was to upgrade and augment the water supply. The option was technically feasible and funding was available. Significant media attention had also focused on the need for positive action. Accordingly, a relatively sophisticated water supply strategy, including construction of a weir and (package) water treatment plant, was adopted. The focus on an improved standard of living demanded a response to the chronic water shortages.

The township also suffered social unrest, attributable in part to the large numbers at Doomadgee, and this could ultimately have led to the adoption of a different solution to their water supply problem. Some people were moving to outstations to avoid the social trauma associated with the larger community: this was one way chosen by some members to address the size problems of the community. Fewer numbers in the remaining community of Doomadgee would have resulted in less demand on the water system. However, it was not possible (because of the confined brief which was made available to the water supply engineers), to become involved with non-technical issues which would or could have significantly affected the response to the water shortage problem. A community response to a broader problem may have avoided an over-designed and operationally expensive water supply. The point to highlight is that there was not a mechanism whereby the related issues of water shortage, population size and social trauma could be brought together. Nor was there any possibility of the community utilising the funding made available to improve the water supply in order to establish a series of outstations as a solution to the water supply problem brought on by the size of the community itself.

The concept of quality of life requires equal attention. This is a people-centred concept based on enjoyment and fulfilment, feelings of security and well-being. It is the principal measure used by people to assess their life. It is important to understand the difference which exists between funding agencies or government departments who tend to reflect reductionist thinking in their specialised dissection of problems, and the clients or receivers of services who generally have a holistic outlook and make generalised assessments based on feelings of happiness and safety. The program foci of those undertaking service delivery is to promote an improved standard of

living in a particular sphere. Health, education and water supply are areas where specific standards may be applied. The value of an initiative undertaken to improve a standard of living is judged by the recipient in relation to a much wider sphere of actions which only the person living in the community or culture can assess. In other words, the assessment by a client of an initiative to improve a standard of living or a living condition is often not made on the same basis as the decision to introduce the program or service in the first instance. Therefore, in cases of community programs, it is important to know who initiates an action and whether that action relates to the holistic goals of community members.

It is important that decision-makers do not assume that people in undeveloped communities warrant lesser standards of living or lesser services than those in developed countries or communities. There is a world of difference between consciously giving someone sub-standard treatment and allowing people the opportunity to set their own standards relevant to the outcomes that they wish to achieve within their own communities. It is analogous to the argument presented already within this Report: that the emphasis should be on equity of outcome rather than literal equality of input.

It is often much easier to mount a case for an improvement in standards in particular areas (like water supply, housing or health care) than to work through time-consuming community processes to determine what is required to achieve an increase in the quality of life. Western research methodology in specific disciplines such as medicine, hydrology or building materials, to take but three examples, has made it possible to substantiate calls for specific measures to improve living conditions and raise standards. It appears easier to attract funding using this type of research base as there is a reasonable guarantee of 'success' (that is, a report that stands up to scrutiny by peers) and an understanding in the wider community of the type of outcomes to be expected. Invariably there is a good objective measure or performance indicator for the improved standard. This same tendency to dissect issues can also lead to oversimplification of problems and zealous promotion of 'magic bullet' solutions which are, in the longer term, counterproductive.

It is far more difficult to justify programs which relate to feelings of well-being, security and enjoyment, particularly when little research is conducted into reliable indicators for specific cultural settings. It is easier for government departments and technologists to identify predefined standards and regulations. Therefore, while a focus on improving a standard of living is convenient and defensible from a western point of view, such a concentration on this approach may well be counterproductive in attempting to maximise the quality of life of non-western communities.

This concept could be exemplified by the image of a spoked wheel with each spoke representing a sphere of knowledge or sector of social life. The length of the spoke represents the level of development of a sector of social life; concentration on one area or one discipline (say health) can be likened to a very long spoke. The difficulty is that if the spoke is not matched by equivalent effort in other areas (for example, housing) the wheel does not run freely on a surface. The smooth movement of the wheel may be likened to the quality of life: the smoother the motion, the greater the quality of life. Without balanced growth in all sectors of the community, things do not move freely. Therefore, while standards of living may be high in some areas, the overall quality of life may be quite poor. The goal of a process of development is to ensure that growth occurs evenly in all areas of social and economic life and not in isolated sectors.

## 9.2 Adequacy of Standards

A key word in the qualification of standards of living and the description of living conditions is 'adequate'. Any determination of adequacy is dependant on the values of the person doing the living in a particular place; not necessarily those of an outside specialist. While it may be argued that the broader community has a prerogative to impose such standards as are likely to improve the general standard of living, it is not a position which, in its individual interpretation, can be sustained in the long term. It is also a paternalistic position.

Consider the case study community of Punmu, where several saline water sources in relatively close proximity to the community have significance which is both ceremonial and medicinal. A judgment could be made by people outside the community that the saline water has a lesser value than potable water. Under an application of public health guidelines, it could be argued that the standard of public health would be improved by doing away with the open pooling of these saline water sources, thereby eliminating breeding grounds for mosquitoes, etc. In this instance, it would also eliminate both the ceremonial and medicinal functions of the water. Clearly such an action would be intolerable to the people at Punmu, yet such an action could easily be recommended by an outside professional group acting upon its own set of standards and applying the values that underlie the disciplines in which the group members are qualified.

In any estimation of Aboriginal or Torres Strait Islander living conditions and the relevant standards which may apply to those conditions, it is imperative that the indicators and measures reflect and build on the values of the local population concerned rather than the national or technical guidelines or professional code of practice. This is not necessarily a reason to provide any different standard to that applied elsewhere in Australia, provided relevant consultation and negotiation protocols are observed. It is, however, a compelling reason for the development of acknowledged consultation and negotiation protocols between technical people and communities.

This argument is tempered by consideration of how people may make their assessment of adequacy. There are two aspects to such an assessment. One is to determine what is desirable. This is usually a statement that reflects the experience or world view of the group. It may be as limited as requesting a service that exists in the neighbouring community or it may be a call for research into unknown or alternative options. The second stage to the assessment is the determination of feasibility. This is generally an economic decision but should also reflect issues of available skills, social and cultural implications and available technologies.

The decision-making processes and funding mechanisms available to Aboriginal and Torres Strait Islander people make it difficult to apply their own feasibility criteria to the assessment of needs and thereby to the adequacy of particular measures. Adequacy is determined by comparing desirability with feasibility at a point in time. If the standard of living proposed is not relevant to the current lifestyle it has little chance of being sustained. This in turn reinforces a negative reaction from the community upon whom the new facilities or measures are thrust; and increases the chances of outsiders viewing the community in a negative or stereotyped way as uncooperative or primitive.

The western assessment of a standard of living is built up around specific disciplines and relies on a common cultural history to provide enough subliminal cross-linkages between needs and values to enable a reasonable quality of life to be experienced by people. It has been argued that

where these linkages are poor or non-existent, anxiety caused by the imbalance in people's lives is reflected in violence, crime and premature death (Wilson 1982:64, RCADIC 1991).

The concept of efficiency is tied to the notion of a standard of living and is often lost on people who do not share the same cultural traditions. There were numerous examples in the case studies where state water authorities were attempting to improve efficiencies of water supply systems. The installation at Coonana had telemetry links back to Kalgoorlie where information was transmitted without the community necessarily being aware of this process. Whilst technologically these systems are feasible, and no doubt more efficient than sending out officers on un-required field trips, such interventions disenfranchise the local community from greater involvement in the water and sanitation systems.

A similar situation was observed in the Coconut Island case study, where the solar power water supply unit installed as a pilot project sent data through a satellite link back to the consultant's offices in Brisbane. Local people had little idea of what was happening. Their ability to make decisions on site to vary water usage was constrained by a lack of ownership of the performance data of the power unit. In turn, they were unable to seek independent advice on the unit because they did not hold the data.

There are many other issues relating to fully automated service delivery which could be explored at greater length. These include local employment opportunities, community control and ownership, the creation of a pool of local knowledge and responses to changes in system functioning. Suffice it to say at this point that there are demonstrably differing goals and responses to a concept such as efficiency.

### **9.3 Applications (and Misapplications) of Standards**

Another outcome of the application of a standards argument is the concentration on a narrow range of alternatives, usually derived from urban experience. The case study of the Punmu people reveals not only a need for water to be reticulated to houses, but also for reliable water supplies across their land to sustain them as they move from one location to another. Although standards can be applied to the house-based water service, the non-house-based service delivery does not sit comfortably with conventional water supply models - and therefore has not been considered to date.

In making their case for this alternative model to be explored, the Punmu community was not indicating that it required a similar level of service at each location, as might be expected if one applied a standard of living approach. Different water supplies have varying values and uses: a level of service is desired which will allow the Punmu people to utilise and enjoy their land and their culture in a fairly traditional way. Whilst many may argue that it is economically impractical to undertake such a broad provision of water, it is important that such a right is acknowledged: and it should be acknowledged in a way that recognises that the definition of 'adequate' in Punmu terms is vastly different to the definition of 'adequate' usually determined by a technician or a non-Aboriginal service provider. Such acknowledgements at least provide the community with a base from which they can negotiate more equitable and adequate outcomes than those currently available.

Another barrier to the achievement of quality of life outcomes through the application of standard of living logic is that service delivery mechanisms are established along sectoral lines. The service delivery models and technologies available to Aboriginal communities are designed



and installed for sedentary, place-centred applications. A commendable response to this problem is contained in the South Australian Health Commission Report on the water requirements of the community at Oak Valley. There, rain water structures were constructed within an area used by a fairly mobile population of people. Small portable trailers were also available to each camp site. Notably, this innovative response was by the health sector, not the engineering or water supply experts.

The lack of appropriate options is a feature of the provision of water. Within the technological options available to improve 'standards of living' there are a few favoured responses; generally because of their purported health benefits. Piped water supplies and water-flushed sanitation (preferably sewerage) options are the two most common (and preferred) options. Among the reasons for their selection is the fact they present the greater challenge to technical service providers. It is also the case that they involve a greater range of technologies and are generally more expensive projects. There is a natural tendency to recommend the more elaborate projects because of the higher consulting fees they attract (as a percentage of the total cost of the work). While this may be viewed by some as a cynical interpretation, there is not a great deal of money in either consultation or service provision when people dig pits for their own dry latrines. Consequently, few professionals would recommend this option. Few consultants live in or near the communities they service and few have to deal with the longer-term ramifications of their recommendations.

Recommendations and assessments of proposed solutions are based on performance of the technology in a newly installed condition. Rarely is consideration given to the performance characteristics of technologies if certain maintenance regimes are not in place. The health benefit of a poorly functioning water-flush toilet compared to a flyless, odourless, Ventilated Improved Pit (VIP) latrine becomes a matter of debate some twelve months to two years after the flush toilet is installed.

It has been demonstrated by some communities that there is greater employment potential and budget saving for Aboriginal and Torres Strait Islander communities who are prepared to adopt alternative options which utilise local skills, resources and lifestyle practices. However, using an improved standard of living argument, it is easy to undermine these options with 'good' technical and health reasons why such options are not viable or recommended. The narrow focus of concerns which result from an emphasis on standards makes it acceptable not to be involved in developing more widespread responses to problems which consider other factors impinging on people living in remote communities. The provision of water and sanitation in communities has obviously suffered from such an approach.

Training at all levels of the water industry is biased towards options which optimise the use of specialist skills and treatment technologies to achieve often marginal benefits, particularly when long term sustainability and maintenance costs are taken into account. Rarely in the case study consultations was there evidence of consultants recommending options based on increased capacity for local involvement, control and maintenance.

Another aspect which is not accounted for in the push to improve living conditions is the changing nature of development. There is an overwhelming feeling in the files and reports reviewed at each case study community that proposed solutions would suffice forever and a day. Rarely was reference made to likely on-going maintenance costs or to ultimate replacement costs. None of the consultancies reviewed in these reports conducted skills and resource audits in the community. Likewise, because of their briefs, few could suggest staged developments for

phased upgrading which took account of other developments in the community. It could be logically concluded that work was undertaken because there was a sum of money available to solve a problem and a recommendation was documented for the funding purpose, rather than for the long-term benefit and involvement of the community. Very little evidence of community input was recorded when establishing the required adequacy of the proposed improvement in conditions. Most solutions reflected imposed values. There was little attempt to plan the developments sequentially over a number of years, although to be fair to the consultants and state government authorities involved, the funding arrangements do not encourage such developments. Reference to the forward projection of development is usually not included in planning briefs.

An example of activities not being considered in an overall development context is found in the Boigu Island case study. Infrastructure development plans were described in an extensive brief which, on this occasion, **did** provide for future projections. The reports were comprehensive in terms of the data presented and fully examined all aspects of the brief. As a number of residents pointed out, however, the consultants had proposed the expenditure of some \$4 million in infrastructure, but nobody had addressed the issue of the loss of the sea wall and foreshore with each monsoon season. As Boigu Island has a vertical relief of only a couple of metres, stabilisation of the foreshore is almost a pre-requisite for all other development, but it was outside the brief.

The direct imposition of standards and conditions not related to the development context of a community could be seen as a denial of rights. People are entitled to determine and enjoy an adequate standard of living, particularly in relation to the provision of adequate living conditions that allow them to optimise their quality of life. One interpretation of these case study findings is that an activity designed solely for the purpose of applying standards and regulating a service, without taking cognisance of the circumstances of Aboriginal and Torres Strait Islander people (including local participation and the broader development context), may be seen to be working in contradiction to the rights preserved in Article 14.2 of CEDAW, Article 11.1 of the ICESCR and, ultimately, against the spirit of Articles 1.1 and 2.1 of the ICCPR.

#### **9.4. Self-fulfilment through Satisfactory Health**

The insistence of the international instruments on adequate standards and conditions is primarily to ensure that people enjoy a satisfactory level of health, which in turn provides an opportunity to optimise fulfilment of other basic human rights.

As noted earlier, the level of self-fulfilment desired is both personal and subject to community norms. Clearly there is sometimes a discrepancy between what is desired and what is achieved. There are also aspects of culture and religion which affect the level of self-fulfilment which people desire. Here again the selection of appropriate indicators is a problem. For example, using medical indicators of health and focusing on statistics such as infant mortality figures or the number of people with leprosy, improvement over time can be measured and noted. But a broader range of sociomedical indicators might show an entirely different story. The continued poor health characteristics of Aboriginal and Torres Strait Islander people remain because the indicators of overall health have merely shifted to reflect an increase in lifestyle diseases (cardiovascular, respiratory and infectious diseases), sub-clinical disorders and social pathologies - the most significant being substance abuse.

So although medical intervention and medical technology may have eliminated some diseases and improved the prognosis in others, it may not have done much to improve the overall quality of Aboriginal and Islander life. It is important to link the health aspects to the standards of living discussed earlier, as one is always used as justification for the other and both are used as justification for water and sanitation projects.

In the provision of water and other services, it is possible to respond with different levels of service. At one extreme, outside experts could provide a highly sophisticated water service anywhere in Australia if expense was no object and the experts were prepared to service such a system indefinitely. At the other extreme is the option of no water supply system at all (but no outside intervention). Between the two extremes are a number of more feasible options, and the decision about which option is best ultimately has to be made by the community concerned. However, different levels of service have certain pre-requisites for effective operation and a number of factors relating to water supply are based on urban requirements and standards. An analysis of locational disadvantage of remote communities indicates the benefits of the city are often only sustainable through the adoption of urban lifestyles. To attempt to re-create the conditions which confer these benefits on small communities has the consequence of undermining the rights and abilities of residents in these communities to establish their own priorities and standards. Such action, whilst appearing desirable in the short term, ultimately promotes and extends dependency.

The focus of Aboriginal and Torres Strait Islander people on an urban dreamtime<sup>17</sup> has caused many groups to overlook a number of other important issues which could enhance the living conditions of people in Aboriginal and Torres Strait Islander communities. Examples may be drawn from almost any of the communities in the case studies, but Coonana and Tingha will suffice.

At Coonana, an extensive roaded catchment and ground water tank was in place. Chlorination was applied before water was pumped to an overhead tank, then reticulated to the community. When residents were interviewed they indicated that nobody drank the water but all made extensive use of the rain water tanks attached to each house. This experience was common in almost all communities visited. Whilst extensive sampling and developmental work had been conducted on the surface water catchment tank, nothing had been done in relation to rain water harvesting apart from installing household tanks. It had not been seen as a viable option in the reviews despite the fact that people had used it for years and had managed supplies so as not to run out. Even people in bush camps around the houses in Coonana drew water from particular houses. There was little recorded evidence of rain water tank cleaning or inspection or installation of foul flush mechanisms despite the fact that this supply would have the greatest and most immediate impact on health. There was no specified rainwater strategy for the community. There are no technical standards (apart from extension manuals) which apply to rain water tanks and because they do not form part of a network they fall outside the brief of a Water Authority. This further reinforces the point that authorities are conversant only with urban technologies and models that sometimes do not easily translate to the lifestyle of Aboriginal people.

At Tingha, an extensive piped water supply system was being considered because the chemical quality of surface water catchments around the town were not satisfactory. Again, rain water tanks were common. In many cases people were pumping water from the nearby cuts<sup>18</sup> to several storage tanks at their houses. This water was used for washing and watering. The reasons given in favour of the proposed piped potable water supply system over other proposals

(including a dual supply using cut water and rainwater tanks) were the expense of dual supplies and the danger of children accidentally drinking water from the cuts, despite the fact that they occasionally swam in them. (Some people regarded the access of cattle to the water in the town common to be more of a health risk than the chemical quality of the water in the cuts). In situations like this, the focus on drinking water quality guidelines and the plans to build a water system that would supply water of high quality has prevented action being taken about existing supplies. This is despite the fact that people still use rain water and cut water in their own ad hoc dual systems - with no apparent accidental usage by children. From a health point of view, access to more water may have facilitated improved health characteristics, rather than postponing action because of marginal water quality problems.

This analysis of factors affecting decisions about adequacy of standards of living, living conditions and satisfactory health indicates there is great scope for improvements in service delivery. In many situations, a lack of acknowledgement of the role of values in determining appropriate levels of service has created inappropriate responses or no response; and has led to judgements which protect the position (legally, politically and professionally) of non-Aboriginal service providers.

Equally, Aboriginal and Torres Strait Islander keenness to adopt the physical attributes and display the symbols of urban settlements without question has led to requests for the provision of inappropriate and inadequate levels of service and initiated problems which have exacerbated some of the social problems in remote communities. The persistent use of non-Aboriginal and Torres Strait Islander values and technical standards has mitigated against successful involvement and development of Aboriginal initiative and response to problems. The methods of establishing comparative standards of living and evaluation of living conditions are inadequate and further confuse and debilitate Aboriginal development of lifestyles which suit them. They are constrained by the available models and limited by the expertise which is available to them.

## Chapter 10 - EQUALITY

### 10.1 Processes and Outcomes

The perception of equality among non-Aboriginal Australians seems to be based on the western concept of 'fair play'. As the Royal Commission into Aboriginal Deaths in Custody noted, action in the past and present is predicated on the view that western people, their thinking and their law are right. Therefore, by extension, equality implies a reflection of western ideology. It is interesting to note that this definition has similar characteristics to those used in the discredited assimilation policy.

This western perception of the notion of equality, when combined with a control-oriented focus driven by moves to improve standards of living among Aboriginal people, appears to be a basis of conflicting interpretations of what constitutes racial discrimination and what actions would and would not contravene the intent of CERD and the RDA.

CERD requires that, in certain circumstances, special measures<sup>19</sup> be undertaken to overcome disadvantage and ensure the adequate development or protection of certain racial groups. The outcome of both of these requirements is 'the equal enjoyment of Human Rights and Fundamental Freedoms'. These special measures are required to cease once equality is obtained and disadvantage is redressed. Difficulties have arisen in the public interpretation and implementation of these provisions.

It is felt by some (Brennan J 1985:516) that article 1(4) of CERD requires that it is the outcomes of such special measures that should be equal, not the method of implementation of these measures. That is, the Convention does not impose formal equality of treatment, but aims at actual equality as an outcome. It has become common practice for both Aboriginal and non-Aboriginal people in Australia to concentrate on the inputs (similar standards, levels of access etc,) and claim denial of rights because inputs have not been the same, rather than referring to the difference in outcomes. This is hardly surprising given there are no mechanisms established to allow Aboriginal and Torres Strait Islander people to define what an adequate outcome might be in their particular situation. It appears that policy makers and service delivery officers in Aboriginal organisations or government assume that equivalence of services with that provided in urban or rural towns determines equality. Whilst CERD and the RDA provide for a much broader interpretation, the common perception coming through the case studies is that a more restrictive outlook pervades. The findings from the case studies is that the most common view among people working with Aboriginal and Torres Strait Islander communities is that equality entitles people to the same services.

The broader view of equality takes account of the specific attributes that characterise the culture and lifestyle of a particular race. In effect, the broader view supports the recognition of difference. If equality is assessed on outcomes (not the inputs or stages leading to the outcome), useful options are created for the consideration of water supply. It is now possible to ask whether the desirable outcome is going to be a reticulated water supply which delivers water that meets the NHMRC drinking water guidelines; or whether it is that people have free and unimpeded access to a water supply which they can afford and over which they are able to exercise control to the extent of adjusting the system to suit their changing circumstances. The debate is about how outcomes are assessed: that is, whose values and goals hold sway). The international Human Rights Conventions say nothing of quantity, quality or access to water; however, they reflect a general recognition of the right to water of whatever quality, quantity or level of service

exists. In the past, these rights have been assessed against those levels of service provided to the majority of Australians. The question is whether these levels of service are appropriate in remote regions and under programs of self-determination. The debate is further fuelled by different expectations, values, living conditions and resources.

The argument does not imply that Aboriginal people do not require or desire a certain level or type of service. Rather the point is that in the context of the total lifestyle of Aboriginal and Islander people, an improved quality of life and a greater degree of self-determination may be achieved through applying a different process. The creation of circumstances (health regulations, local government by-laws, etc) which pressure people directly and indirectly to adopt inappropriate processes is to limit their enjoyment of their rights. This is an example where special interventions, implemented by institutions which do not share a common value system and do not necessarily reflect Aboriginal lifestyle and culture, can be as disadvantageous to people as discrimination rendered through denial or withdrawal of rights. The achievement of equitable outcomes depends on the ability of Aboriginal people to overcome conditioning imposed by a wider service delivery system. Continuing dependence on external resources and support without effective mechanisms of control limits the freedom of expression of indigenous rights.

The concept that radically different approaches can result in equitable outcomes and that the desired goal can be achieved in unconventional ways can be difficult to grasp. It may be best explained by means of an illustration. Consider an example of a remote Aboriginal community where the unemployment rate is high, skills are not specialised and back-up services are both remote from the community and expensive. The community council has consciously decided that it wishes to have its own people involved in as many projects as possible. Funding is available to improve the water security in the community through the provision of water tanks to store rain water harvested from roofs. For technical reasons related to climatic conditions, it is recommended that concrete tanks be constructed. A supplier exists in a town 300 km away and that company is prepared to construct the tanks and freight them to the community at a reasonable and competitive price.

The council believes there should be an opportunity for its people to be involved and therefore, as a result of consultation, agrees with the supplier that the tanks can be made on site and that the supplier will employ three local people to work with him. The quotation is modified to reflect the additional time, the travel and the delay in production. When the time arrives for the construction, the supplier arrives with the metal framework, the concrete truck and the concrete spray pump to start work.

The three local people are recruited and introduced, they spend a day or two tying the mesh together before the cement is sprayed on. The tanks are sprayed up in a day, with the mixer and the concrete pump doing the heavy work and the supplier doing the specialised spraying. The local recruits are invited to clean up the tools, wash down the cement truck and pump and do some elaborate art work in the wet cement to convey local input. Following the completion of the work, the supplier and his equipment return to the town 300 km away.

A second alternative could arise if, after the community discussion on the need to supply local jobs, a young man on the council volunteered the information that he had seen ferro-cement water tanks being made by people in villages in the South Pacific when he was on a study tour. The tanks were all hand-made without machines by local people; materials and some wages were provided. The council decided that this was worth doing because it meant more of their

own people could be involved and they could build the tanks when they liked in their own time. In attempting to gain approval from the funding body to undertake this activity, they had to employ a consultant to advise them. The consultant had read somewhere that he thought people in the third world built tanks by hand, but it was hard work and sometimes they leaked because the quality of the cement was not to the required standard. The funding body was concerned that the considerable investment in water tanks would be at risk, particularly if the tanks did leak. The community would have no comeback for restoration of the work and no insurance cover. The consultant was also reluctant to recommend the technique because, under the terms of his contract with the community (which was supervised by the funding body), he had to ensure that the technology would work.

The community wanted to approach the Department of Employment, Education and Training for support to find somebody who could refresh the memory of the young man who had seen the Pacific Island tanks so that he could then show the others how to do the ferro-cement work. Unfortunately, this technique was not taught in engineering or trade schools in Australia so an expert in mud brick making was recruited as the nearest thing to the ferro-cement tank maker. The funding agency insisted that because of the need to acquire the grant, the community should quote to undertake the work through a formal tender. When the quotes were done the community figure was much higher than the supplier in the nearby town, so considerable pressure was applied to ensure that the tender price would be an equivalent to commercial supply.

At this point, nobody had thought of writing a specification which encompassed more than the water tank project. Such a project specification could have included an element of employment generation and confidence in the community in order to justify the higher expenditure. Eventually the community decided to do the work under CDEP. When specifications were drawn up nobody could find the relevant engineering code for the tanks. Therefore, the safe option was to apply the Australian Concrete Code in its entirety. The mud brick expert had not used this before and had considerable difficulty understanding some of the terms. Nevertheless, the activity was finally undertaken and employed twenty people over a period of three months constructing the tanks. Several tanks have since been constructed at out stations away from the main community.

The lesson from this example is that there are two ways, at the very least, of achieving the desired outcome of putting rain water tanks at houses. One method moves easily through the processes established by both funding bodies and technical controls; the other is much more problematic. The first method very comfortably satisfies one notion of equality. It is the normal process which people would use in most rural communities: that is, to employ a specialist supplier. It would also fit the sense of justice of most Aboriginal people who would see that physically they are receiving a service in the same way as any other non-Aboriginal person. If they were advocating a similar lifestyle this could be determined as equality of outcome.

However, the community council had articulated its goals to maximise local control and involvement. Under these criteria, the first option was less in keeping with community control and self-determination, while the second option met these criteria. This option was hindered by the difficulty involved in obtaining approvals for non-standard or unconventional approaches. It is argued that these barriers can amount to an impairment of opportunity to attain equal enjoyment of fundamental rights if they preclude the desired outcome. While the example chosen may trivialise many of the smaller issues which arise when unconventional options are pursued, it is easy to see how people could become discouraged and yield to conventional

options. Conversely, it is easy to see that individual barriers are often quite small, their individual effects easily denied, and their overall outcome not understood. It is only when the total effect of these small barriers is analysed that it is possible to observe the impairment of rights.

The clash of standards and values used to define equality of outcomes in Aboriginal and Torres Strait Islander development is such that it is impossible to make any determination in relation to human rights without being thoroughly subjective. Under the conditions laid down by the community council in the example above, the first option could be interpreted as conflicting with the Aboriginal aspirations to self-determination. It was evident in many of the case studies that the implementation of a program aimed at redressing disadvantage and creating equality (in terms of the provision of town-quality water) directly negated the intention of the measure in many instances.

This contradiction could be seen in the case study community of Dareton, where a \$2 million program to update water sanitation and housing was undertaken. The Aboriginal involvement consisted of a co-ordination committee comprised of three rival factions with little or no apparent input beyond information sharing and approval of recommendations. The final outcome worked against the best intentions of the various policies being implemented by ATSIC, particularly self-determination and the AEDP. This is not to assign blame to the community, as the case study indicates a number of circumstances outside its control which caused the situation. It does, however, indicate the huge gap between the rhetoric and the reality of policy, and the purpose of special measures and their intended outcomes. Policies and procedures appear to be inadequately informed by reality.

The Race Discrimination Commissioner does not conclude from the case studies that funding should not be directed towards goals of equality or that aspirations towards such goals are spurious. However, should would argue that unless there is a freeing up of the rigid systems within which outcomes may be achieved, then indigenous people are being denied their rights - particularly in relation to self-determination.

The concept of mainstreaming in technical service delivery further compounds the confusion over equality. Mainstreaming policies are laden with non-indigenous values and expectations and are therefore unlikely to serve Aboriginal and Torres Strait Islander people well. Experience from the case studies indicates that in implementation of policies in Aboriginal and Torres Strait Islander communities, the values of the people responsible for service delivery, the professional associations which provide the norms against which they work and the technical standards which govern their work, generally reflect non-indigenous lifestyle, culture and values. In these circumstances, mainstreaming can inhibit Aboriginal and Torres Strait Islander people in their ability to freely determine their own destiny. Thus what is viewed by one individual as a perfectly legitimate use of a piece of technology is viewed by a person with different values as a wasteful action. This lack of understanding of the basis of actions, feelings and attitudes caused by different values and experiences sows the seeds of discrimination. It is likely that a policy of mainstreaming of technical services applied to Aboriginal and Torres Strait Islander communities will in time contribute to institutional racism.

The application of inappropriate or misunderstood values in different cultural contexts has led to differential outcomes and failed expectations which in turn appear to have engendered elements of institutional racism. These differential outcomes further promote the disadvantage



of Aboriginal and Torres Strait Islander people. In practice, therefore, mainstreaming fails to recognise the unique position of Aboriginal and Torres Strait Islander people in Australia.

Implicit within programs designed to take on the aspect of a special measure is the thought that they do not necessarily guarantee rights or equality in perpetuity. At the present time in Australia, the only way Aboriginal and Torres Strait Islander people are able to secure special or culturally appropriate services (what the courts might determine as special measures), is to prove they are worse off than other Australians. This is a very negative framework in which to operate and presupposes a development path. If the argument for equality of outcomes rather than equal inputs is accepted, then it must be acknowledged that differential outcomes will result from the application of the same inputs in different cultural and environmental contexts. While two groups of people may deem themselves to have equality, the physical expression of this equality and the process of achieving equality may be very different. Under these circumstances it is difficult for the RDA to cope because the technical standards it relies on to make judgments carry ethnocentric biases.

## **10.2 Limitations of CERD and the RDA**

The 'special measures' provisions of the RDA are limited inasmuch as they must cease once the inequality or disadvantage for which they were invoked has been redressed. However, indigenous people may argue that they want a different type of service provision in perpetuity in order to fulfil a different set of needs and values.

The complexities of this argument can be illustrated by the case study community of Coconut Island in the Torres Strait, where a number of people took issue with their CDEP project. They were not convinced that they needed CDEP on the Island, although it had been introduced in order to provide employment and community development as in mainstream society. However, many Islanders felt it to be a hindrance or limitation because they could make more money fishing for trochus and crayfish. Their view was that the system was not responsive to their requirements: they needed more enterprise assistance rather than welfare support. They believed their potential was limited by the amount of fishing they were permitted to undertake, because of regulations that restrict the seas around the Island to traditional fishing techniques only. These regulations take no account of the Islanders' original unfettered use of their maritime resources or the potential of those resources had a broader fishing industry not come into being.

An important difference between this situation and the water rights of Native Americans is apparent. Within the Australian system, indigenous people are restricted to traditional practices and methods. They are prohibited from making use of the resource to pursue another type of development and in so doing, perhaps establishing a degree of economic independence. In the American situation, there appears to be a capacity to negotiate rights to traditional land and water in such a way that recognises that with the progress of time, people might conceivably want to use the resource in a different way. For example, water rights could take account of the fact that traditionally, indigenous people used water to clean and wash fish caught in traps in a particular stream. Today, however, they may be running a fish processing co-operative which requires treatment using water. Access to the new quantities of water required in this latter situation would still be viewed as part of their water rights.

The people of Coconut Island are caught in the struggle for the resolution of the question: how can policies be structured for a cultural group who are independent and wish to preserve their culture? Are the laws and functions of Government sufficient to preserve this culture or are there

hitherto unthought of changes which need to occur? How can people be wound down or weaned off the welfare cycle without being simply overwhelmed by mainstream policies and options which are based on high density urban living and a different set of shared values?

There has been positive discrimination to enable people to reassert control and maintain their culture. Having achieved some visible evidence of equality, this case study raises the issue as to whether the Constitution and the policy framework of Federal and State Governments are adequate to maintain and preserve a people and culture which has been supported to date by the special policies of Aboriginal and Torres Strait Islander affairs aimed at redressing disadvantage. Clearly there is some question as to their adequacy to guarantee water rights for fish processing, as discussed in the above example in relation to Native Americans. It is problematic whether the existing legislation can protect the maintenance of an independent culture without resorting to special measures provisions which - by their very definition - should not support separate rights for different racial groups after the objectives for which they were taken have been achieved.

The RDA has little scope to promote a positive development framework for the application of what might be deemed 'special measures' as a basis for sustainable development in Aboriginal and Torres Strait Islander communities. As a complaints-based Act, the RDA tends to adjudicate on sameness rather than difference despite its broader interpretation. It appears to have little capacity to tackle the wider and emerging issues confronting Aboriginal and Torres Strait Islander people and even less capacity to sustain an Aboriginal and Torres Strait Islander response to these issues. For these reasons it would appear that the best guarantee of Aboriginal and Torres Strait Islander rights is contained in the Australian constitutional amendments of 1967. While this is more positive than reliance on the human rights instruments, it is still a limitation of indigenous rights as all entitlements are subject to the generosity of Federal and State governments.

In international law, it is recognised that there are two categories of different treatment for minority groups: (a) Those which are an appropriate form of recognition of minority practices, to protect and preserve characteristics which distinguish the group from the majority of the population; and, (b) those which are necessary for the advancement of certain disadvantaged groups, such as programs of affirmative action. The latter implies a specified objective within a more or less definite time.

It should be noted that where allowance of differential treatment falls within the second category - that is, special measures for ensuring advancement to equality - they assume a model of assimilation. However, as Nettheim argues:

*... the goal of assimilation is not the goal sought by most indigenous peoples. Individuals may want and need the benefit of such provisions, but a people who seek recognition of their cultural distinctness and of their proper claim to land will not be interested in a point at which these claims will cease (Nettheim 1985:299).*

The question of differential treatment must be read with the issue of the principle of equality. That is, in the context of the general wish for equality of treatment, it needs to be recognised that some measure of differential treatment may be necessary to preserve difference. It is this latter point which appears to be not well recognised or practiced in Australia. At the present time there does not appear to be a legislative response that protects the preservation of difference.

### 10.3 The Link between Technology and Racism

The historical review of both Australian and American colonisation highlights the way indigenous peoples were bought off initially with gifts and items representing 'higher civilisation' (Hughes 1988:85, Burton 1991:2). The early foundations of racism began when the people bestowing these gifts reacted to finding the gifts abandoned. The recipients, in their view, had no apparent appreciation of their worth. In time this led to derision and ultimately physical exchanges (Hughes 1988:95, HREOC 1991:38).

The physical signs of change in Aboriginal and Torres Strait Islander communities are largely technological. In this sense, the visible signs of change in Australian colonial history relate to the number and size of the 'gifts of higher civilisation'. One of the contentions of this Report is that western attitudes towards Aboriginal and Torres Strait Islander people are shaped by indigenous responses to the introduced technologies. Poor understanding by non-indigenous people of the process of technology transfer, together with misinterpretation of the symptoms of problems, forms the basis for intolerance and sows the seeds of racism. Racism in this context arises from frustration, fear and persistent misunderstanding created by differing expectations and values attributed to material goods and services when introduced to Aboriginal and Torres Strait Islander communities.

In the context of equality of opportunity, control of technology is therefore a significant factor - possibly the major factor - which limits Aboriginal self-determination. It is certainly a major factor in the process of reconciliation of values and attitudes which are conveyed and enshrined in pieces of technology and goods and services which transfer between cultural groups.

Technology is not neutral. It is supported by values and skills which have a social origin. Conflict arises when another set of values comes into play. Again, this abstract concept can be illustrated with a very concrete example.

Problems with flush toilets were noted in many of the case study communities. In many cases, the ceramic toilet bowls were apparently smashed, a situation interpreted by many people as the result of vandalism. A technical response, one that is logical if the vandalism explanation is accepted, is to construct unbreakable stainless steel bowls. However, the subsequent clogging and malfunctioning of stainless steel toilet bowls indicated the existence of a more complex problem which cannot be explained away by vandalism. In many of the communities visited during the course of the current investigation, old clothes have been found around toilet bowls. These materials are used for anal cleaning and are incompatible with a water flush toilet system. They cause blockages and the ceramic toilets bowls were smashed accidentally as a result of attempts to clear the blockages with whatever equipment was at hand. With the new stainless steel toilet bowls, the blockages and malfunctioning continued. Whilst some may argue that education is the answer in this situation, the economic circumstances of the family involved must also be considered: the use of toilet paper presupposes adequate income and a source of supply. Unless the use of toilet paper can be guaranteed in all cases, the provision of a water flush toilet will do little to improve the health of the household.

In this situation, what appears to one observer as vandalism is to another an indication that the wrong technology has been used, given the economic and social circumstances of the user. Intolerance and misunderstanding of the reason people use technologies differently leads in time to racial stereotyping and sows the seeds of racism. This lack of awareness and reluctance to acknowledge the links between different values and technologies leads to a blind push to employ

even more sophisticated technological solutions. This is one of the most significant issues facing Aboriginal and Torres Strait Islander people. Uncontrolled technical 'fixes' have the capacity to hold people in dependent relationships and maintain poverty and disadvantage. To date, the push to use or introduce the latest technical systems and technological advances has been driven by arguments surrounding health, equity and social justice. Here again, the ideal is not in question, but the worth of such arguments is based on non-Aboriginal values and the implementation has invariably been by non-Aboriginal people.

The technological choices which are available to people are generally limited to existing off-the-shelf items because very few centres are funded to research and develop technologies which are enhanced by Aboriginal and Torres Strait Islander values and are capable of supporting their aspirations. Technologies selected or designed to enhance Aboriginal and Torres Strait Islander involvement and control are generally less dependant on external support and control. However, the introduction of new technologies designed to increase local indigenous involvement can threaten established mainstream service networks and skills. The opposite is also the case. Aboriginal and Torres Strait Islander communities can also be seen as test beds for hitherto untried technologies. In many situations, the local community suffers the inconvenience caused by unforeseen circumstances.

On Coconut Island there was a research project on solar power sponsored by both government and industry. The solar power panels and batteries were mounted near the water catchment tanks and were monitored by electronic sensors. Information was relayed by satellite to Brisbane. When the research project was completed, the community had to rely on local suppliers to provide information, spare parts and service for their community power supply. They had great difficulty attracting support or personnel who understood the technology. Ultimately, they reached the stage where they ran the back-up diesel generator all night and they were waiting for the solar system to be replaced by a diesel system.

The tendency in most communities is inevitably to increase the level of infrastructure via capital grants from the Federal Government. Operational money comes from State and Territory Governments and the local community. The implications of using technologies which have a high initial capital cost (due in part to the relative ease in attracting capital as opposed to recurrent funds) are now being reflected in some of the recurrent and replacement budgets observed in the case studies communities. Greater portions of community budgets are now devoted to the operation and maintenance of technologies which confer 'physical equality' in the community. Communities have little choice in the matter once they are committed to the technology. Unless overall allocations are increased, less money is available to pursue some of the social and cultural goals of the community. As Burton indicates in his Native American water rights review, governments are able to show that morally they are doing the right thing by providing the same capital improvements as are available elsewhere, without actually having to review the outcomes (improved sustainable services) or evaluate whether they have achieved a moral outcome (Burton 1991:61).

Calculations of recurrent costs likely to accrue from proposed water supply upgrades and sewerage schemes in the Boigu and Coconut Islands case studies indicate increases in the order of \$100,000 per annum as a result of installing new infrastructure. If a stage is reached in future where Government cannot maintain the level of service, there will be an even greater outcry about rights, inequity and justice. It should be noted that Burton has already alluded to this situation with Native Americans where there have been significant failures of Government to

honour the undertakings earlier agreed in negotiation processes and the indigenous people have had to bear the cost (Burton 1991:82).

A significant area of concern in relation to technology is the involvement of Aboriginal and Torres Strait Islander people in the process of making decisions about technical issues. A lot of information transmitted in technical discussions is either irrelevant or meaningless to people whose science and technology is based on a different cultural and historical experience. Despite this, it is expected that councils (usually with the benefit of a consultation lasting not more than a day or two) are asked to make decisions on million dollar projects. One response to this has been to hire consultants to advise on options.

The case studies showed many instances where people either expressed dismay at the consultation process or failed to understand that there were a number of options in addition to the ones which had been presented to them. In general, it could be said that the process of considering hypothetical situations and alternative options is not well appreciated by many Aboriginal and Torres Strait Islander people. However, without recourse to these options people are limited in what they can achieve.

The Torres Strait Islands infrastructure reports referred to in the case studies had no section which set out community goals or cultural perspectives. It certainly was not in the consultant's brief, and the Island Coordinating Council (ICC) would quite rightly argue that it is their prerogative to do this analysis. The short-coming of this approach is that by not asking the consultant to go through the process of enquiry, they are not provided with opportunities to identify other options which can be discussed with the ICC or the community. The result is a repetition of some of the less successful initiatives of the past.

For example, the recommended use of automatic chlorinators was included in the infrastructure reports despite experience which showed the existing chlorinators had not worked for years in some communities. The two communities which the Race Discrimination Commissioner's project team visited were chlorinating by hand, but the reports carried no discussion about how this technique could be improved. It appears there had been no investigation of what people actively did themselves.

Engineering consultants in these situations do not have a lot to go on. In cases where no precedent for changed approaches or consultation techniques exist, they are forced to operate within professional codes of conduct which are tested and work well in the rest of Australia. Arising from discussion of this Report, the Race Discrimination Commissioner would urge the drafting of a protocol for professional technologists and community consultants to embrace in their consultations with Aboriginal and Torres Strait Islander people. Such a protocol could include ethical considerations involving the use of data gained and observations made in the course of doing business with a community.

Too often because of the relationships and understandings which may exist between consultants or technical representatives of government and shires, information by-passes the people in the community. This situation is usually tolerated by the community because they do not really need more meetings and there is nothing to complain about or respond to until a final product emerges. For example, while a community can agree to the idea of a deep sewerage scheme, practical problems such as the positioning of pipes, the noise it will make and the proximity of the red flashing pump operating light would not enter their mind at the time of decision making; nor in all probability would it enter the minds of most consultants to explain where these things

would be. Indeed, because they do not have to live in the community, the consultants may be unaware of these factors as potential problems. So the quality of the decisions taken depends as much on the personality and outlook of the consultant as his or her technical proficiency. There appears to be a much better chance of a successful relationship with the consultant if the consultant has gone through a thorough assessment with the community and is employed directly by the community rather than a funding agency.

The case studies also revealed evidence of a degree of institutional control of technological information, resources and skills which maintain an effective dependency relationship. Consider the Tingha case study where a large piped water supply was being considered. Some people were concerned that they could not pay for the increased cost following the commissioning of the scheme. Being a community scheme run by the local shire, the consultation process had occurred through a series of community meetings. Only two Aboriginal people attended these meetings and they received very little technical information. They had no direct representation on the local Shire Council where the decision had to be taken. A local councillor lived in Tingha, but despite some attempts to canvass views, people did not appear to have confidence in this process because of other events in the past. A household survey undertaken during the Race Discrimination Commissioner's study indicated there may have been considerable difficulty meeting payments under the proposed scheme. It also indicated people had a well-structured, albeit arduous, water strategy which had not been considered in the consultation process largely because the community was not represented at the meetings. Without an understanding of the information behind the scheme, access to the detail of what the scheme would cost and an understanding of it in terms of their broader livelihood, it was difficult for people to be involved at all. In addition, the implications of an increased level of service in water and sanitation at Tingha would have a tremendous impact on the housing situation which had long been a problem. Certainly there were no provisions made in housing programs to compensate or to compliment any improvement in water supply. There was no assessment of this flow-on impact in the water study for the Tingha proposal.

The Coonana case study presents another side of the consultation process where after an extensive period of discussion and planning, people agreed to move to a new location from Cundalee. Because they were principally dealing with the State Government, the community did not have a contractual agreement which detailed the scope of works envisaged and agreed to as a basis for the move. Over the passage of time, the scope of those works was gradually reduced from a network of some five roaded catchment dams to one roaded catchment and another dam upgrade with an inter-connecting pipe. Only a fraction of the proposed budget was spent in the relocation. The Coonana people have no recourse despite the fact that they are left with a situation not markedly different to the one they were enticed away from.

Examples can be found of institutional racism in the water service delivery area. In some situations, technical reasons were contrived to explain inaction or alternative actions to those agreed upon in consultation. The Mpweringe-Arnapipe case study depicts a total contempt for the condition of people while political, legal and technical discussion took place over a mechanism for land tenure and the subsequent provision of water to people on that land. The result of the protracted negotiations has been access to small parcels of land on pastoral leases or on vacant crown land on the old stock route reserves. In the long term, confusion between political, legal and technical detail diminished the claims to small parcels of marginal land. In time the residents of these communities may be forced to move from non-viable plots and move to settle on larger parcels of land or in Alice Springs itself. The principal threat to the viability of

these communities is the water supply and the smaller size of the land areas where they have been attempting to settle.

As technologies are used for purposes for they were not designed in order to achieve a range of benefits, people with conflicting expectations of the technology will become frustrated and aggravated by the outcomes. This expectation applies equally to Aborigines and Torres Strait Islanders who despair of the way non-indigenous people treat certain landscapes. This frustration and the uncertainty of how technologies will be used reinforces hard line responses. An uncontrolled push towards more and better technology without substantial emphasis on the ability of Aboriginal and Torres Strait Islander people to sustain the technology will only serve to promote and sustain dependent relationships and racist tendencies.

#### **10.4 Consultation and Negotiation**

The case studies revealed a number of problems with the consultation processes between community and Government and community and consultants.

There are a number of fundamental flaws in the way consultative processes operate. In general, discussions occur between a Government department which has a statutory responsibility to provide certain services in a just manner, and a community which expects to receive certain things from Government as a right available to all Australians. In this type of relationship there is very little opportunity to negotiate alternative options.

Government departments are reluctant to initiate alternative responses which may be interpreted as offering a lesser level of service. Peak Aboriginal and Islander organisations would no doubt be similarly reluctant to seek outcomes that appear to lessen Government obligation or commitment to community support. In both situations, the inability to move is created by a desire not to be seen denying or nullifying rights to equality among all Australians.

There is a growing need in Australia, as demonstrated overseas, for a neutral negotiator to intercede between the community and Government. Such a role promotes the exploration of appropriate options without threatening the political or technical position of either party. Very often consultations fail because one party or another has no interest or no capacity to move in the negotiation. Government usually has such a tight framework in which to operate that a viable combination of actions cannot be obtained. For example, a department may have a brief for housing although acquittal procedures may not allow money from a housing project to be spent on temporary accommodation or any other alternative people may wish to negotiate. The Australian Construction Services attempted the role of independent negotiator in the Dareton case study, but they were constrained in what they could achieve because they were still linked with Government processes and Government timeframes for action.

People's rights may be better protected through the involvement of independent negotiators to assist in the process of making sure that Aborigines and Torres Strait Islanders are involved in, and aware of, the implications of technical decisions. Further, they could be involved in helping to shape briefs for technical consultants in order that a wider range of options are canvassed. Whilst this is often seen as the function of the consultant, there appears to be a need to detach the role in provision of advice from the role of implementation of agreed options in a project. This detachment lets people know that the advice is not tied to options that are professionally challenging or financially rewarding to the consultant.

Another role of a neutral negotiator would be to highlight the significant differences and characteristics of remote Aboriginal and Torres Strait Islander communities to consultants less familiar with their circumstances. Among those unique issues which affect technology choice are a lack of specialisation, high mobility, environmentally harsh conditions (particularly the impact on materials), different range of skills, the lack of spare parts and equipment to modify the built environment and a lack of money in many areas of the community, particularly for recurrent activities.

The case studies reveal that many of these issues are swept under the carpet and not considered as real components in decision-making. Whilst such a limited view of equality is used as the sole argument to justify the installation in Aboriginal and Torres Strait Islander communities of the same level of service that exists in nearby towns, very little advance is likely to occur where Aboriginal and Torres Strait Islander people are to be the main beneficiaries.

As mentioned, the seeds of racism may be sown by the introduction of inappropriate technologies. The consequent frustration among Aboriginal and Torres Strait Islander people is heightened by the lack of control they have over the many systems installed in their communities. Changing the basis of this control begins with the exploration and definition of the problem and the receipt of unbiased information and advice. It should not be inferred from this comment that there is a deliberate attempt to withhold information; rather, that circumstances often require different approaches and a level of cultural perception which are not part of a standard consulting activity. Such skills are not encouraged because consultancies are rarely funded to enable extensive consultation and explanation with individuals and communities. The cheapest tender will invariably minimise the consultation process.



## Chapter 11 - SELF-DETERMINATION

### 11.1 The Debate about Self-Determination

The empowerment of Aboriginal society, and with it the associated right of self-determination, is central to policy development in Aboriginal and Torres Strait Islander affairs. Earlier sections of this Report have outlined the RCADIC, ATSIC and international views regarding self-determination. The Race Discrimination Commissioner's concern is about how the process of self-determination might occur with specific reference to water. It is important, therefore, to deal with specific problems and limitations which stand in the way of realising self-determination even within the existing domestic and international definitions of the concept.

While it is not proposed that the present inquiry reach a definitive position on the question of self-determination, it must be considered as a crucial factor in the background to the provision of water to Aboriginal and Torres Strait Islander communities. Failure to come to an agreed interpretation and usage of the term will lead to further conflict and frustration. In determining how the provision of water-related services fully upholds the human rights and fundamental freedoms of those communities, the question of self-determination will be relevant. Clearly much more consideration needs to be given to the impact of technologies on Aboriginal communities and on their ability to control and determine their culture and lifestyle.

In the context of the various views of self-determination it is necessary to determine what level of self-determination is required to ensure sustainable provision of water and sanitation. Wilson outlines one view:

*Supply of water, sanitation and shelter are the most important hygiene factors. But progress will only be made when the nature and pace of new facilities and procedures are in black not white hands. The quantity and quality of such services are now dictated by whites, who tend to see the provision of housing, sewerage and water supplies on Aboriginal reserves as a cost. This attitude contrasts markedly with the provision of basic infrastructure in cities and country towns - such expenditure is generally seen as an investment (Wilson 1982:106).*

If this be so, it is necessary to identify the factors which inhibit the practice of self-determination. This will then lead to a consideration of the possibility of providing assistance in a way which does not exacerbate feelings of dependency and in a way which promotes decision-making by Aboriginal and Torres Strait Islander people in relation to their own individual and community lives.

For a very long time, non-indigenous Australia seemed to work under the premise that Aboriginal and Torres Strait Islander people were inferior, were unable to make decisions affecting themselves and that 'white' people - being better educated - knew what was best for Aboriginal and Torres Strait Islander people and therefore had to make the decisions affecting them. It is still relatively easy to maintain this approach in matters of science and technology. The view that tax-payers' money is funding an extravagant range of programs directed at redressing disadvantage in Aboriginal and Torres Strait Islander communities is matched by an expectation that outcomes should conform with non-Aboriginal perceptions.

This is the ultimate dilemma for Aboriginal development. For years, internationally and nationally, the moral high ground has been taken. Policy statements based on self-determination

have been both sound and general. Politically, it is always possible to show that self-determination is the corner stone of work in Aboriginal and Torres Strait Islander Affairs and that it is receiving top priority. The issue can be generalised to such an extent that most people remote from the issues become convinced that things are happening.

Aboriginal and Torres Strait Islander people have little opportunity to provide a sustained rebuttal of the shortcomings of this approach. Putting self-determination into practice has been a little thought-out and largely unrecognised process, particularly where technical decisions have been implemented. This process has provided, in the main, marginal results and has often resulted in further hardship and disadvantage for Aboriginal and Torres Strait Islander people. The portrayal of Aboriginal and Torres Strait Islander issues in the media often serves to reinforce a stereotype based on non-Aboriginal expectations and provides little understanding or opportunity to convey indigenous perspectives on issues.

There remains the problem of understanding the break-down that can occur between reality and rhetoric: between policy and implementation; and the further problem of achieving representative political structures:

*[The] policy on self-determination and self-management has led in practice to the establishment of white bureaucratic and organisational structures with Aborigines filling the positions, in some cases, instead of whites and making decisions on behalf of other black people (Wilson 1982:98).*

The Councils and Commissions established in Aboriginal and Torres Strait Islander Affairs are constructs which provide for an interface between cultures to the extent that no representative models have made it through from a bottom-up direction. That is, the structure of the councils are copied from western models and no truly indigenous models have taken over. The Community Councils represent a compromise, as do the Land Councils who seem to have a larger negotiating role because they have an asset base to negotiate with. Nevertheless, it is clear that in most situations, the closest one can get to representativeness in service provision is to work at a community level. Despite this, it was clear that the community council at Doomadgee was experiencing some difficulty in communicating with people living at one end of the community, away from the administrative centre. So even with community involvement, self-determination can still not be achieved unless relevant models for negotiation and reconciliation are also adopted and protocols put in place. Progress towards the empowerment of Aboriginal and Torres Strait Islander people may be impeded because, politically and legally, most of the avenues which are already in place have been established through non-indigenous processes and are not familiar to (or have been found useless by) many Aboriginal and Torres Strait Islander people.

Even more daunting is the fact that, despite the rhetoric of self-determination, governments and non-government organisations alike have found it difficult to hand over to indigenous people real control in the most obvious areas, except for superficial measures. Following the detailed observations of difficulties and issues highlighted in the case studies, it is difficult to imagine how some of the more subtle issues which relate to water technologies may be addressed.

As noted earlier, there is general agreement that living conditions are appalling in some locations; but disagreement and inaction over how (or even whether) to respond is perpetuating the intolerable circumstances. One of the most unhelpful comments which can be made in observing Aboriginal and Torres Strait Islander communities is to liken them to the Third World

problems. Such statements pass value judgments on what Aboriginal and Torres Strait Islander people have been able to achieve with or without limited resources, using their own initiative and skill. Additionally, such a definition of the problem triggers an 'aid' response: that is, to jump in and make it right. It conveys a vision which omits much of the human component of the problem. By reducing Aboriginal people 'to a drunken, brawling race .....it is much easier to treat them as inferior beings' (Wilson 1982:83).

De-humanisation (the elimination of human components of problems and the concentration on technical aspects) provides a basis for power and control, leading to the inexorable need for people outside Aboriginal culture to take over. The ethnocentric response generated from the best-intentioned departments and organisations very subtly limits the ability of Aboriginal and Torres Strait Islander people to freely determine many aspects of their development, including water and sanitation. Principally, these limiting factors revolve around money, science (problem solving), technology and skills.

The western response to a problem is generally to devise a project or program with targets and then set about the achievement of such outcomes as will change the nature of the original problem. These events are usually one-off inputs, subject to review or change at regular intervals. The approach is very heavily bound to the 'standard of living' philosophy discussed earlier and the action is conditioned by western understandings of money, science, technology and skills acquisition. One thing this approach does not do well is reflect the changing nature of development and the differing values of the recipients. Indeed, the use of the term 'recipients' conveys an inequality in the relationship and gives a measure of control to the donor group who can choose whether or not to give.

If people become bound to the standards debate they are likewise bound to external control. This is not a judgment which infers that such control is necessarily undesirable; rather, it is recognition that in the context of self-determination, it is important for Aboriginal and Torres Strait Islander people to have considered the implications of seeking the application of the same standards as other people. Without concurrent economic development on all fronts, the application of particular standards to certain problems will only serve to limit potential in remote Aboriginal and Torres Strait Islander communities and will ensure they will never 'catch up'. Instead, the dependency or 'poverty gap' will be maintained and possibly increased. This growth and development model driven by standards is not likely to provide equality in reality, although it provides a politically acceptable mechanism to make things look like they are happening. The main by-product of this approach is likely to be frustration and continuing racism.

The 'standard of living' argument does not recognise or provide for the same level of realisation of self-determination as does concentration on the determination of outcomes which ensure a balanced quality of life. The lesson is, therefore, to concentrate on the process of setting and achieving adequate outcomes. Time needs to be spent working out the components of this process, the protocols for the process and the mechanisms for providing indigenous people with the control of the process. In light of the discussion regarding the conditions required in standards of living and equality, it is useful to consider some of the issues which limit the potential for self-determination in its fullest or universal sense.

## 11.2 Limits to Self-Determination

### 11.2.1 Money

Concepts of money, finance and the value of material goods and services, along with the dependent nature of Aboriginal communities on finance from outside their own mini-economies, provides for great misunderstanding in the wider community. The well-cultivated notion that taxpayers' dollars fund a range of excesses in communities is quite damaging to any self-determination efforts. Recommendations have been made in numerous reports (the most recent being the Royal Commission into Aboriginal Deaths in Custody) to enter a system of block funding of communities over annual or triennial periods. Wilson (1982) has observed that when infrastructure projects are undertaken within Aboriginal and Torres Strait Islander communities, it is seen as 'taxpayer's money' being used; but in general national infrastructure projects the money is seen as a Government investment. The different views reflect different levels of ownership and paternalism.

The variety of sources of funding, and the tied allocation of funds to poorly formulated performance indicators, makes it almost impossible for Aboriginal and Torres Strait Islander people to achieve their own goals given that these are generally integrated and interlinked across a number of activities in the community. Government accountability procedures limit the ability of local people to recognise time-frames and work habits that meet their local needs. Invariably the easiest option is to contract work out in order to meet deadlines. Rowse (1992) presents a fundamental paradox as follows: accountability is based on management; management requires control; control is contrary to self-determination. Block funding of communities has been recommended to overcome many of these disadvantages but is difficult to implement.

For example, it was unlikely that under the existing system of grants, the Doomadgee community could have attracted a million dollars to establish a number of outstations linked by a road and communication network as a means of helping to solve the water crisis. However, under an untied block funded situation the community may well have taken such a decision. A number of case studies revealed that the heavy involvement of ATSIC and State Government authorities in service provision had created a view that the services belonged to the government and not the community. The view was on occasions reinforced by attitudes of government employees who showed concern only for those aspects of community which they had funded. The Race Discrimination Commissioner has been persuaded through the development of this project that untied block funding would assist communities to overcome a reluctance to 'own the service' (that is, to take responsibility for its development, implementation and maintenance).

Technical works are highly specifiable and neatly acquitted and they can provide structures which demonstrate to the public that useful things have been done with 'their' money. This approach, which conveys no measure of trust or confidence, will invariably win out unless there is strong advocacy of an alternative position. Money is allocated on the understanding that it will fix a problem: it does not recognise that one solution creates another perceived issue or problem in a developmental cycle. A commitment of money at one level of development is a de-facto commitment to the next stage of development, whatever that logical flow might be. For example, a number of the case study communities had septic toilet systems, but pressure was on the community to upgrade to sewer as the next step. Sewerage upgrades usually follow electrification in the development sequence.

### 11.2.2 Science

The trust which the broad Australian community places in science and technology, particularly medical science, is often a hindrance in the process of Aboriginal self-determination. It is often presumed that Aboriginal and Torres Strait Islander science and technology is primarily for museums and doesn't fit them at all for modern life. Yet there are aspects of social organisation and living skills - which can be included under a broad definition of science and technology - that are fundamental to survival, even today, in some of the harsh parts of Australia. Apart from some highly publicised examples of Aboriginal expertise and ingenuity in the areas of 'bush tucker' and 'bush medicine', indigenous scientific and technological skill is under-rated almost to the point of being unknown.

Science is a method of observing the external world, and forms a basis for people's problem-solving response. In taking away (by negative reinforcement) the problem-solving response from Aboriginal and Torres Strait Islander people, their science has been discredited. The significant constant in this Aboriginal and Torres Strait Islander science is the relationship between water, land and life.

*We have taken from native Australians not only their land and their traditional ways of relating to each other and to that land, but also their self-esteem and identity... In cities, communities, and on reserves, distinctive Aboriginal ways of acting and conceptualising the world still exist. Aboriginality exists not simply in language and dance, but flows quietly in the minds and dreams of those who live in the city and the outback (Wilson 1982:9).*

In many contexts, but particularly water and sanitation, technologists and scientists have presented a forceful optimistic and idealistic view of what can be achieved, largely because they have chosen to overlook the characteristics of the people who are the end users. Western civilisation is inordinately proud of technology and its limitations are rarely presented to the community. The community is left with the impression that technology is precise, comprehensive and value-free. Scientists and technologists have protected their professional status as possessors of special knowledge and have not been inclined to discuss the limitations of that knowledge with those outside the profession. Accordingly, and most notably in Aboriginal and Torres Strait Islander situations, there is a break-down in the social contract between the specialists and society. (The case study of the reverse osmosis process at Yalata highlights this problem).

In a recent discussion paper (Institution of Engineers, Australia 1990), the Institution of Engineers recognised that recent litigation had placed its members at risk as a result of their practices in technical decision-taking. The paper suggested a shift to a different role for engineers, becoming 'technical advisers' who put forward options for decision by the community. This means foregoing a certain amount of autonomy and status as technological decision-makers in favour of sharing the decisions in order to also share the responsibility if things go wrong (Beder 1991:36). Such a change would be well advised for people working in Aboriginal and Torres Strait Islander communities, although considerable thought is required about methods to ensure people are fully informed and understand the options presented. In current practice, there are few opportunities to explore the problem-solving techniques of Aboriginal people. What was observed in a number of the case studies was that the solutions which Aboriginal people thought were worth a try were far more modest than some of the solutions proposed and funded for capital works.

### 11.2.3 Technology

The statement that information is power and ignorance is powerlessness is most evident in the relationship between Aboriginal and Torres Strait Islander people and the technologies which impact on their life. The tendency to install the latest technology has been described earlier. Aboriginal and Torres Strait Islander people were at the forefront of the solar technology industry. Many funds from Aboriginal and Torres Strait Islander programs have been allocated to research-oriented projects to attempt to prove new products, or products that appear to be useful in remote situations. Research of this nature would be normally funded out of research allocations from industry rather than out of community allocations. Not all of this research has been technical or scientific in nature.

The problems experienced with the reverse osmosis units at Yalata are an example of this point. Correspondence on file at Yalata reveals an ongoing dialogue over a number of years with the manufacturers on the effectiveness of the reverse osmosis plant. Briefly, a unit which had worked well under research conditions had been installed in a remote community where the level of service back-up was reduced. The community became the innocent 'middle man', while others struggled to achieve optimal performance of the technology. A lack of skilled operators who knew enough about chemistry and mechanical systems was a significant factor in the constant failure of the machine. In the final analysis, the manufacturer was to concede that all technical responses had been carried out. The history of the operation was such that when the trained operator was away the system broke down. While it can be argued that the technology worked and the system is feasible in the context of readily available skills, budgets and back-up, in the Yalata situation, it could be judged an ineffective technology. The point to be made is that once the reverse osmosis technology was introduced, the people of Yalata were virtually cut out of the equation. The only measure of control they had was to complain. Accordingly, they were seen to be complaining about things which technical people could not explain except by blaming a lack of supervision. There is still a sensitivity about this whole process.

During the case study, requests were made to the relevant South Australian authority to conduct water quality analyses before and after treatment, together with a test of the reverse osmosis by-product. The results of the tests were not made public for a long period and then only reluctantly. Throughout a period of fluctuating water quantity and quality lasting some two years, no water quality samples were taken. Over the same period, intense effort was devoted to proving the technology. Subtle mechanisms which control technology and information reduced the self-determination of people at Yalata.

Very often the skills and specialised resources reside in the large towns and cities and this further exacerbates the dependence of remote communities on outside agents. There are other technological decisions which, by the nature of the technology, restrict the ability of people to practice their culture. Among these restrictions is the arbitrary size of a community deemed necessary before essential service provision can be considered. In the Northern Territory, communities of fifty or more people are entitled to receive Territory-funded basic services in water, sanitation and power. The cost and nature of the technologies determine the physical layout of the community, particularly the length of the reticulation networks, distances between houses etc. While it may well be the expectation of most communities that close living and the small size of serviced land plots is the compromise they make in return for services, it is disappointing that other options which could directly support their own cultural aspirations do not even get on the agenda, as they are outside the usual technological boundaries.

The case study community of Mpweringe-Arnapipe exemplifies the very problem outlined above. The community was settled on serviced blocks with conventional services supplied by the Northern Territory government, after a negotiation process which left the Aboriginal people with inappropriate parcels of land. These could, however, accommodate acceptable technologies. One explanation for the lack of action on the pastoral excisions could be that the land patterns did not fit with the available technologies and resources and were therefore overlooked. An interesting situation would have been created if the people had pursued their rights to self-determination and cultural development and sought services on significant land which was not suitable for the application of conventional water supply technologies. Alternatives could have been considered, such as a decision to have a number of rainwater tanks and a truck to cart water from a central bore to separate family areas (not unlike the model proposed by the Maralinga people at Oak Valley). This type of negotiation appears to have been successful in the resolution of Native American water rights.

What was missing in the case of the Mpweringe-Arnapipe people was a process of negotiation which allowed a range of options to be explored. There were no neutral parties with a mandate to canvass the options with both parties, without being locked into either the view of Government or an Aboriginal organisation. Under these circumstances - which unfortunately represent the majority of situations - innovative and untested propositions are difficult to explore.

#### **11.2.4 Training and Skills**

A view of the world that regards western technology and science as the only key to development carries with it an emphasis on training for skills transfer building on the same technology base. The functions around which western training models are organised, in general, reflect a level of specialisation and competence which emanates from high density urban industrial environments. An analysis of functions in Aboriginal and Torres Strait Islander communities provides a totally different background. Whilst Aborigines and Torres Strait Islanders might go to a larger centre for specialised training, the opportunities for employment in these fields in their own communities are minimal. In response to this they either drop out or move out; either way, the skills are lost to the community. On the other hand, there are many functions in Aboriginal communities currently neglected or performed by outside specialists that could be undertaken by community members, particularly if the specialised technologies were redesigned to equate more appropriately with the skills that already exist in the community. Unfortunately, training provision does not generally recognise the above distinction.

In only one case study community had an Aboriginal person (and then only one person) been trained to maintain the water supply. There had been a significant amount of money spent on training for case study community members, over many years, although the majority was in non-technical and service areas. Recent moves by DEET to support accredited training only further restrict training opportunities for many Aborigines and Torres Strait Islanders because of the lack of accredited technical courses that meet the broad technical skills base required to survive in a small remote location.

Today, community councils are nominally equipped with community management skills and resources. In reality, this allows them to decide little more than to which contractor they will allocate money. Within a community, the decisions to initiate programs are taken by the community council. However, through its lack of control over technology, the how and why of

the response is left to someone outside the community. There are no Aboriginal or Torres Strait Islander engineering students in Australia at present; nor indeed any technical expertise or involvement beyond trades proficiency. There is an urgent need for policy makers to address the significant relationship between technology and development (of which water and sanitation is one component) and the implications of this for the achievement of self-determination.

The concentration on non-technical training options and training models that do not reflect conditions in Aboriginal and Torres Strait Islander communities has served to restrict options for self-determination. The success of Aboriginal and Torres Strait Islander program strategies and the process of reconciliation depends to a large extent on the ability of Aboriginal and Torres Strait Islander people to control the technical aspects of their lives and to respond in their own time and their own way to the problems which confront them. Without this knowledge and control, dependency will persist.



## **Chapter 12 - STRATEGIES AND OPTIONS**

### **12.1 Time for Action**

One of the most important questions under discussion throughout this project is the value base for technical decision-making. Whilst many appropriate calculations may be made in the process of engineering a solution to a particular technical problem (such as the supply of water), decisions and assumptions are also being made about those who will use the end-product of the process. It is equally clear that technologies are not value free or benign objects; and it is also clear from examining the case studies in this Report that decisions taken by technologists are based on professional and scientific values which drive conventional engineering practice. There are very few entry points in this process for Aboriginal and Torres Strait Islander people to make 'meaningful' contributions or negotiate more appropriate options which would assist the maintenance of culture and sustain development with Aboriginal control. Until many of the issues raised in this analysis are resolved, the best possible solutions to specific aspects of water and sanitation in Aboriginal and Torres Strait Islander communities may not be found.

The Aboriginal and Torres Strait Islander people who attended the National Water Forum in April 1993 agreed it was time for action, not further analysis. To this end, the forum attempted to identify responses to a number of issues raised in this Report. The practical strategies which might assist and improve the provision of service relate to political processes and structures more than to technical issues.

### **12.2 Water Supply: A Problem or a Process**

Aboriginal and Torres Strait Islander people and non-indigenous Australians (including Governments) have been engaged in various sorts of conflict over resources for the past two centuries. Indigenous claims for land rights have been recognised in some quarters but the values and culture behind that claim is often not appreciated by non-indigenous people.

It has been said often enough that Aboriginal and Torres Strait Islander people per capita experience greater levels of poverty, are less well-housed, and suffer from many health conditions which would be not tolerated by non-indigenous people. In addition, they suffer reduced opportunity for employment and training and have limited options for the achievement of economic viability.

These tragic conditions manifest themselves through a range of social pathologies including substance abuse, high homicide rates, high incarceration rates and endemic unemployment, coupled with a shifting lifestyle. Poverty is said to sap them of their vitality and their dignity; it creates political instability among Aboriginal groups, exacerbates tension and contributes to irreversible social and cultural damage.

In response to 'the Aboriginal problem', a great deal of money and energy has been expended on education, health and housing programs, together with programs of land acquisition and cultural preservation. More recently, the RCADIC identified a complex web of factors which contribute to the current problems listed above; and again, more money was allocated for programs of amelioration. Despite this, it is still possible to see only minor benefits.

In part, the problem rests with the western scientific model through which some are conditioned to expect 'magic bullet' solutions - the big breakthroughs. Accordingly investment has been in

projects, policies and programs that affect national statistics rather than the many small advances made by individuals and small communities who have consistently applied themselves to their own goals, irrespective of policy variation. Indeed, it is argued by some authors (Smillie 1991, Porter 1991) that there are many who have something to lose if conditions were to improve.

The response to Aboriginal problems at a national level has been to invest in technological interventions. Budgetary appropriations have been allocated on the understanding that achievable physical targets and benefits will be obvious within the term of the Parliament or the project. In the absence of appropriate research and development activity, funding often appears directed to poorly and hastily researched projects using inappropriate goods and services. The link between these expenditures often has to be explained by equally expensive advertising campaigns, media releases, training programs or maintenance procedures.<sup>20</sup>

Therefore, before exploring strategies and options for the improved provision of water and sanitation, the question must be asked if a proposed response is merely attempting to solve a particular problem that has arisen or whether the strategy is facilitating a process of development. This question is fundamental to the resolution of water and sanitation problems in Aboriginal and Torres Strait Islander communities.

Two hundred years' experience and many millions of dollars would seem to indicate that the major initiatives have been focused on particular problems and technology-led responses. When these initiatives are evaluated against development and sustainability criteria, it is clear that not many real problems have been solved. Rapidly depreciating or dysfunctional equipment and structures may be in place but the local processes required to sustain them are not.<sup>21</sup>

If, on the other hand, it is argued that policy is facilitating a process, the question arises as to why support agencies and funding bodies are so driven by project statistics, technology and economic constraints. Investment funds, particularly in the last twenty years, has been directed into more houses, better water, electric power, sealed roads and improved communication networks. The measures of these investments are reputed to be better health outcomes, improved educational opportunity and employment. However, the results, particularly in non-urban contexts, do not appear to justify continued faith in the prevailing model. Statistics indicate only a marginal return on these investments. Taken in the context of asset depreciation and replacement, it is clear both from local experience (Nganampa Health Council 1987, Queensland Water Resources Commission 1992) and overseas that the pressure for maintenance and replacement of assets rapidly erodes the benefits of high capital investment in the provision of water supply in remote economically disadvantaged areas. In many overseas countries, the number of people served after the IDWSSD was less than before the special decade because of the breakdown of capital investments and the return to traditional water sources.

In Australia, there are questions being raised by some observers regarding the future of remote housing as a long-term sustainable option, given the high maintenance and replacement costs and rapid depreciation rate of housing stock and current housing designs. One outcome of such interpretations is anxiety and misunderstanding between Aboriginal and Torres Strait Islander communities and non-indigenous people. The product of such misunderstanding and low tolerance between cultures can manifest itself in episodes of racial vilification and institutional racism.

In order to explore strategies, it is necessary to bridge the opposing trends between the need for accountability (control of public money expended on projects) and the process of self-

determination (which attempts to devolve decision-making to the regional or local level). The control-oriented approach identifies physical targets and expenditure items. Self-determination may also do this but only as a secondary goal to establishing indicators of progress in the application of a process of self-determination and development. The process indicators are less tangible and are difficult to assess.

The principal concern, however, is to work within a development paradigm which holds self-determination and equality as dual goals. This is only possible where an outcomes-based evaluation of equality is adopted. The earlier analysis indicates that issues of equity are related to a problem-based focus while self-determination is a process-based activity. To achieve a sustainable response to issues such as water and sanitation provision, the Race Discrimination Commissioner suggests that emphasis has to be given to the process approach. This changed emphasis has been difficult to implement, even as a result of many enlightened reports.

A series of earlier reports, including that of the RCADIC, have recommended the need for long-term projects which extend beyond the life of parliaments or the policy directions of particular political parties. They also recommend the involvement of Aboriginal and Torres Strait Islander people. This Report outlines a number of structural impediments which make it next to impossible for the high ideals conveyed in these reports to be achieved without a significant mind shift in relation to thinking about equality and self-determination.

In the face of this evidence, it could be judged that continued intransigence by non-indigenous people, Federal and State Governments to change the framework of policy implementation - or more specifically, to devolve many responsibilities to Aboriginal people - has the effect of denying Aboriginal people the opportunity of self-determination and thereby works against the principles espoused by the International Covenants monitored by HREOC.

### **12.3 Development of Strategies**

A National Forum of Aboriginal and Torres Strait Islander people met in Alice Springs in April 1993. The forum involved people from the case study communities together with a number of peak Aboriginal organisations. They considered the analysis of the case study findings and worked towards the formulation of a number of strategies which could be adopted to address some of the expressed concerns. In order to adequately respond to the analysis, the forum had to determine:

- How to reconcile the different values, standards and expectations between Aboriginal and non-Aboriginal, Torres Strait Islander and non-Islander in order that adequate living conditions may be defined by Aboriginal and Torres Strait Islander people.
- How to define the expected outcomes resulting from programs such that equality might be assessed as well as the recognition of cultural difference.
- How to ascertain, rectify, or select water supply and sanitation options which provide control, management and self-determination for Aboriginal and Torres Strait Islander people.

As discussed earlier in the Report, it is not reasonable to itemise strategies under each category. These three categories should be seen as a test of the compliance of options to human rights principles. In the same way that people do not compartmentalise or live their lives on a project

basis, it is necessary to integrate all of these factors into strategies which carry elements of all three areas. This increases the likelihood of addressing factors which affect the quality of life of Aboriginal and Torres Strait Islander people.

The strategies discussed have the following common elements and may be discussed jointly or separately from one another.

- They are presented in order that Aboriginal and Torres Strait Islander people are provided with the task of determining the quality and the quantity of the service provision based on their assessment of what is desirable and feasible.
- Issues are defined through specific objectives or outcomes which are defined having regard to the economic, social, technical, political and cultural needs and aspirations of the particular community of people.
- They allow Aboriginal and Torres Strait Islander people to establish the outcomes or performance indicators which will apply irrespective of the process or processes employed to achieve them.

All the strategies identified encompass community control, negotiation protocols and sustainable development.

## **12.4 Community Control**

### **12.4.1 Water Supply as a Process**

Examination of past performance in Australia and overseas indicates that long-term sustainability of water and sanitation systems is jeopardised if a human resource base is not created at the same time as the physical infrastructure. The Race Discrimination Commissioner's project has demonstrated that the provision of water is a process of change and therefore requires process inputs as well as physical targets. It is important to define the difference between a project and a process. Water supply projects have defined time lines, targets, demand characteristics and physical signs of the project. They are amenable to quantitative analysis and are more often than not technical in nature and can be quantified in financial terms.

The process approach to water supply contains elements of the project approach, but sees water supply as a changing service as needs and aspirations change. It is heavily dependent on people and their participation; is less target-oriented and more milestone-oriented. It allows people to progressively move through a number of developmental phases at a pace they control. It takes account of social, political, economic and technical factors in decision making. It is also less bureaucratic in that it rarely conforms with budgetary cycles and has to incorporate the flexibility to resolve unforeseen circumstances from within a defined budget.

The process approach, in theory, provides a community with a greater measure of control in all aspects of the provision of water. The negative side is that it often takes longer, there is often less rigid or universal control of standards and because of these two factors it may well cost more than an equivalent project with the same physical output characteristics.

It is difficult and largely impractical to compare the economic efficiencies of both approaches and it is difficult to cost the non-technical inputs to the process and the benefit obtained in the

community. Viewing water supply as a process would allow communities to address new issues in their local context. For example, there are a number of developments in the water industry which demand attention because of their ability to impact on community control. There is increasing pressure on water authorities to corporatise and to operate commercially. This shift in emphasis creates problems for activities traditionally regarded as community service obligations as these activities are generally non-commercial and are forced on water authorities. Costs have to be met out of their operational funds which in turn reduces their economic viability. The nature of many Aboriginal communities places them in the community service obligation category, where for many years both state and federal governments have paid for the ongoing provision of water.

The shift towards corporatisation and commercial practice in the water industry has increased concentration on demand management. Otherwise referred to as 'user pays', this approach is heavily dependent on being able to identify and bill the user. Given systems of Aboriginal and Torres Strait Islander ownership of property, this is often a difficult task.

In many situations drawn to the Race Discrimination Commissioner's attention, Aboriginal and Torres Strait Islander people were in dispute with local authorities over rating practices. The nature of much Aboriginal and Torres Strait Islander land is that it is held in trust and cannot be sold. Effectively it has a different value to freehold land which can be traded. Therefore a rating system based on Unimproved Capital Value would appear inequitable. This example indicates that often structures in Aboriginal communities do not allow the application of mainstream concepts.

Recent moves to 'user pays' provisions for water supply in communities in the Northern Territory also highlight some problems. Whilst individual houses may be metered, the larger family circles and mobility between houses will make it difficult for individuals to accept responsibility for usage. This, combined with the relative ease and safety of illegally tapping into household supplies for adjacent camps, will make 'user pays' a very difficult system to implement. In the social context of Aboriginal and Torres Strait Islander communities, a 'pay as you go' system is preferable to a retrospective 'user pays' system.

#### **12.4.2 Local Community Water Authorities**

One strategy available to remote Aboriginal and Torres Strait Islander communities is to form local community water authorities. Such a strategy provides for local determination of relevant standards, charges, levels of service and provides for an increased measure of self-determination. Such localised authorities would not limit the formation of co-operative ventures where a number of community water authorities might combine in a service agreement as a regional authority in order to achieve a more efficient level of service which they could control. They may choose to contract the task out to existing service providers.

Whilst local authorities may be guided by national standards they would also have the flexibility to interpret these in the context of their local environment and economic circumstances to allow them to give emphasis or priority to issues which were of local concern. These authorities individually or collectively could establish their own resource units to provide technical, commercial and training inputs. Local authorities would not necessarily have to adopt all the functions of a water authority: there would be options to use private contractors, consultants, or local councils to provide services.

Community water authorities would be block-funded to ensure not only that services were provided but also that training in service provision was undertaken from school onwards within the community. Funding should also include an amount which could be directed towards research and development to increase the options available to people in remote situations. This research and development component could be used by local water authorities to contract relevant work when required.

A recent recommendation of an Inquiry into Service and Resource Provision to Remote Aboriginal Communities in Western Australia recommends that

*funds provided to local authorities by the local government grants commission to service Aboriginal communities to be pooled with funds provided by ATSIC and the AAPA for similar purposes. Such funds to be given directly as block grants to Aboriginal communities to allow the delivery of the municipal services which communities desire (Alexander 1991).*

The report stopped short of recommending regional or local service authorities but went on to suggest that alternative service delivery arrangements within the mainstream framework need to be instituted.

In many situations, 'normal' relationships do not exist between water authorities and Aboriginal communities because the services are privately owned by the community (ATSIC funded) and run at a cost to the Aboriginal communities. The WA Water Authority concluded that under these circumstances, there was little scope for introducing 'user pays' and, by implication, many of the trends in the water industry would not adequately serve Aboriginal communities.

Whilst much effort is directed at the provision of water through cross-subsidies by larger water authorities, it may be more appropriate to strike a formula which requires larger authorities to allocate a dividend or equivalent of their cross-subsidy amount to be bulk-funded into a community authority rather than being allocated to their community service obligations.

Unlike many strategies, the community water authority option is not being put forward on the grounds that the resultant service might be more efficient, nor that it would be technically any better than the service provided by existing service providers. It is proposed because it is an option whereby control may be returned to Aboriginal and Torres Strait Islander people to allow them to resolve, in time, many issues raised in this Report. It is a process of handover which allows people with specialised knowledge to release that knowledge and the decision-taking to Aboriginal and Torres Strait Islander people in order that they themselves can determine their response.

#### **12.4.3 Fostering Independent Technical Advice by Non-Government Organisations**

This is a complementary strategy to the community water authority option.

By definition, governments are bound to certain policies, standards and methods of operation from which they have great difficulty departing, largely due to the weight of public opinion and the political process. Likewise, community organisations and peak Aboriginal and Torres Strait Islander organisations have political positions and claims they would make on governments which restrict their flexibility in negotiations. In addition, they often do not have recourse to a

level of scientific and technical expertise which allows them to argue for different or more appropriate options.

There are a number of examples in the case studies which demonstrate the difficulties which occur because of the donor-recipient relationship between Government and Aboriginal and Torres Strait Islander communities. Internationally, non-government organisations (NGOs) such as the Red Cross or Community Aid Abroad have arisen to fill a role of negotiation and mediation between community groups and governments. The third-party NGO is not necessarily aligned with the stance of either group and has the opportunity to think laterally, explore within the community a diversity of views and opinions and to relieve governments of direct involvement in the process of negotiating appropriate outcomes.

The fostering of independent technical advice through NGOs (as in the international arena) to provide grass-roots input to technical decision-making is another way of ensuring greater control of service provision by communities, while at the same time resourcing communities with expertise responsive to community aspirations.

The presence of an independent organisation is more in keeping with a process approach to problem-solving. If it is agreed that water supply is a process occurring over time, then Aboriginal and Torres Strait Islander people need access to advice over time. The provision of such advice is dependent on consistency and trust in the group providing that advice. Whilst it is not impossible for local governments and consultants to engender this trust, the case studies reveal a level of scepticism in advice provided.

There would appear to be value in establishing a network of technical resource centres which concentrate their attention on the specific problems faced by communities. These groups would be independent of the service delivery networks and would not benefit financially as a result of the outcomes of their advice. Their contribution would be the provision of an independent stance and freedom to work at the grass-roots level as well as draw on the resources of technical agencies of government. NGOs are generally able to provide for a cross-cultural mix with a goal of increasing the participation of Aboriginal and Islander people. A significant benefit of such groups is their ability to maintain a continuous dialogue with intended beneficiaries and to adjust activities to meet needs on a continuous planning basis. In most situations, NGOs work on a process methodology and attempt to phase themselves out of the process as the local control grows.

## **12.5 Negotiation Protocols**

The variability found in consultation and negotiation processes in the study indicates the need to detail and endorse accepted protocol for technical consultations.

Several writers (Wells 1973, Smillie 1991:215) have referred to the 'three-tiered phenomena of the engineer, the economist and the bureaucrat and the way this triumvirate draws control away from the community.'

Engineers - whether working for government, Aboriginal and Torres Strait Islander organisations or private consulting firms - generally favour the most modern, technically efficient equipment which is usually capital rather than labour intensive, frequently urban-biased and of an inappropriate scale. Economists, unfamiliar with the technical aspects of a proposed solution to a problem, are prone to accepting the 'best' engineering advice. By the time a

proposal reaches the 'bureaucrat' - an individual who is usually technologically conservative and traditionally averse to altering the status quo - the options have been substantially reduced and the decision is all but made.

What leeway remains in the decision-making process will normally be biased in favour of reducing the workload, especially in a situation where human resources are scarce, staff cutbacks are in place and demands on time are severe. This places a premium on economies of scale rather than one-off small interventions which are often more complex, have to be designed from the ground up and require more time, more judgment, more frequent trips to the community and greater risk.

In the public sector, risk avoidance - common to engineers, economists and bureaucrats alike - results in a low tolerance for deviation from established practices. There is also public pressure to achieve maximum benefits for the least amount of money, so untested, innovative solutions are less likely to be chosen.

In this type of situation, it is problematic whether Aboriginal and Torres Strait Islander people are being heard; and whether consultants, technologists and bureaucrats are attempting to see the problem from an indigenous point of view rather than formulating standardised solutions in order to minimise risk and reduce time involved in a costly consultative process. It is also problematic whether consultants and advisers to the community would know when they have achieved an informed consent from clients.

To overcome these problems, a protocol could be defined to be applied in all negotiations relating to new and existing service provision. The time and effort spent in observing the protocol should be funded or costed into a program in the same way that allowance is made for materials or contingencies. The requirement to observe the protocol should be included in the consultant's brief and would be binding on both parties; that is, it would stipulate obligations and responsibilities of both sides in completing a negotiation.

Appended to such a protocol would be a statement regarding the ethical considerations involved in working with an Aboriginal or Torres Strait Islander community. While such developments would be applicable across a number of disciplines, engineering is of particular relevance to the provision of water and sanitation.

The Institution of Engineers (Australia) has developed an extensive code of ethics which outlines seven tenets or rules governing professional behaviour for Institution members. Rule 1 of the code states:

*the responsibility of engineers for the welfare, health and safety of the community shall at all times come before their responsibility to the profession, to sectional or private interests or to other engineers. (Institution of Engineers, 1988)*

In the explanatory notes, it says in part that members shall work in conformity with acceptable engineering standards and not in such a manner as to jeopardise the public welfare, health or safety. However, throughout this Report it has been shown that standards, values and cultural pursuits are interdependent and strongly linked to technology. There needs to be some scope to introduce a clause which requires consultants to be aware of the cultural basis of their values and to ensure that they have adequately and actively attempted to access the value base of the client. Without this it is questionable whether the judgments or responsibility for welfare, health and



safety are founded on Aboriginal values, or the culture of the engineer. This should in no way be interpreted to mean a lesser regard for safety in an Aboriginal community.

In many instances, a consideration of the value-basis of standards and technology may well take engineers outside their area of competence, which transgresses Rule 3 of their code.<sup>22</sup> Thus Aboriginal and Torres Strait Islander communities must be aware that many of the technological solutions they request are 'loaded': supported by values which may not be shared by them and that will ultimately modify their lifestyle.

Rule 5 states that 'Engineers shall apply their skill and knowledge in the interest of their employer or client for whom they shall act, in professional matters as faithful agents and trustees'. This rule goes on to explain that members shall advise their clients or employers when, as a result of their studies, they believe that a project will not be viable. As many of the examples in this Report have shown, the viability of particular projects in Aboriginal and Torres Strait Islander communities has generally been associated with little more than technical feasibility. There are enough examples of malfunctioning technologies observed to suggest that elements of their viability were overlooked in the first analysis.

In the same way as engineering standards are value-laden, so also are concepts of viability. In fairness to Aboriginal people, a much broader definition of viability is necessary to avoid disappointment. Again, it is difficult for many Aboriginal and Torres Strait Islander people to accept statements recommending that they do not proceed with particular projects. The desire to identify one all-encompassing solution to a problem is just as strong in Aboriginal people as in non-Aboriginal people. There is often increased frustration if a consultant recommends a staged or phased response to a problem. Unless the recommendation can be placed in a broader framework, people tend to see it as a rejection of their desires. For this reason it is important that some technical input is available at the time of defining the problem. Too often, consultants are asked to detail a solution rather than examine and solve a problem. They are called in after expectations have been raised to specify the desired solution.

The semi-private nature of Aboriginal and Torres Strait Islander communities should also carry responsibilities for disclosure provisions about information and opinions gained in the process of working in the community. Many projects in Aboriginal communities are often developmental in nature. There are a number of examples of new waste disposal methods or modified sewage treatment systems which are built in communities without the community being aware that they are experimental or developmental. If the new techniques were being tried in the medical arena, there would be concerns regarding research ethics and consent, for example. The difficulty in the technical arena is how a consultant or funding organisation obtains an informed consent to undertake work when the technical implications are not evident.

A check-list such as the one suggested below may provide some guidance as to whether a consultant or service provider has achieved an informed consent.

- ***What is the Problem?***  
How do people do it now?  
Did people ask me to solve a problem or provide a solution?  
Did they distinguish between what they want and what the need was?
- ***How Have I Explained It?***  
How long have I spent in the community talking with people?  
How many sessions did I spend with them?

- Did I use models or sketches?
- ***How Did They Explain It?***  
Did they provide any drawings, sketches, documentation of their ideas?  
Have I outlined at least three separate options including do nothing?
- ***Did I Outline The Cost and Recurrent Cost?***  
Have I costed options for both capital plus recurrent costs?  
What is the size of the community budget and personal incomes in the community?  
Have I constructed a story which explains the daily and weekly maintenance issues?
- ***Do I Know What Resources Are Available?***  
Have I explained the skill and resource implications for this particular group of people?  
What skills are available in the community?  
Did I investigate the support networks available to their community from organisations, suppliers and nearest urban centres?  
What training programs are available to support the proposed solution?
- ***What Other Activities Are Occurring in the Community?***  
Have I attempted to see this technical issue in relation to broader housing infrastructure and social and cultural issues?  
If I exchanged places with the client would I think this issue is important? Why?  
Have I identified statements which are culturally biased or merely clichés and technical jargon?  
Have I alerted people to other communities which have a similar problem and have solved it in similar or different ways?  
Alternatively, are people aware they are the first community to use the particular solution or system?  
Do I have any idea what the next need might be after this one is resolved?
- ***What Else Does the Community Want Out of This?***  
What have the community indicated as their underlying goals regarding employment, young people, local participation, values, finances?  
Have I been dealing with ATSIC, government departments, community advisers or community councils? Who is the client?  
Have I set out where the aspirations and requirements of each of these groups might vary?  
Do the options presented articulate or upgrade as people's aspirations change or are people locked in?

A similar check-list of questions may assist Aboriginal and Torres Strait Islanders determine their understanding of proposals being advanced.

- Does this consultant appear to appreciate the values underlying our lifestyle?
- Are we doing this because there is money in the budget or because we see this as the most important thing we should tackle?
- Have we made sure everybody in the community who will be affected by this problem has had an opportunity to talk with the consultant?
- Have we identified where this particular activity fits in our overall plan for the community?
- Do the recommendations provide for increased control, employment and opportunity for people in our community?
- Half our people are female and under the age of nineteen - how does this affect them?
- How will we keep this solution going in 3, 5 or 10 years time?

These issues need to be discussed in detail by Aboriginal and Torres Strait Islander people to identify a protocol which can be recommended for use by technical consultants. Significant

improvements in confidence and communication could result if negotiations, including the assumptions and discussions leading to the technical specification, were systematically documented. This would then provide for unbiased evaluation at a later point in time.

Many projects in overseas situations use logical framework project planning matrices which allow short summaries of assumptions, inputs and outputs that assist to document the process outcomes of a project as well as the technical specifications. It is a practice that, if adopted here, could well increase the level of professionalism in provision of services to Aboriginal and Torres Strait Islander communities.

## **12.6 Sustainable Development**

It is quite clear from local and international experience that technology alone does not guarantee the achievement of higher order goals such as self-determination, maintenance of culture, improved health etc. In solving one set of problems technology invariably creates another.

The concept of sustainability has been overused and its meaning has become somewhat debased. In hard economic times, sustainability takes on a meaning of self-sustainability or the capacity of a project or activity to stand on its own financially when external support is withdrawn. This fundamental interpretation leads to programming efforts focused on narrow, short term economic concerns which fail to appreciate the broader context within which genuine sustainability must exist. To some degree, sustainability has arisen as a concept in recognition of the limits to growth and development and does not sit easily with people who have hitherto been denied development opportunities.

*Sustainable development is a cultural adaptation made by society as it becomes aware of the emerging necessity of non-growth* (Daly cited in Smillie 1991:46).

The implications of this argument in the context of Aboriginal and Torres Strait Islander water supplies is that many systems are designed using technologies and techniques which work in urban structures where economies of scale increase feasibility and resources are more plentiful. As economic trends change, the vulnerabilities of these technologies will be felt first in remote isolated situations. Increased fuel prices are a good example of this. So whilst it might be argued that sustainability should be directed at those who have reached a desirable level of development, the reality is that the implications will be felt initially by Aboriginal and Torres Strait Islander people.

The move to conserve water resources in Australia and the world is a response to the increasing urban use of water. In many small communities, this may not be as critical provided the level of development in the community does not extend to the level of service provided in the urban setting. Consequently, the responses adopted nationally may not be as applicable in the remote situation.

*There is broad consensus among alternative thinkers that decentralisation and local accountability must be the key features of a sustainable eco-economy* (Korten 1991:184).

Nevertheless, while dependency is in place and funding for projects is driven by principles of equity and justice discussed earlier, there will be a tendency to encourage activities which are not sustainable in Aboriginal and Torres Strait Islander communities. For example, diesel-powered technologies are most flexible and adaptable in remote communities and provide a

known solution. Changes in fuel costs or application of full cost recovery may well cause people to reassess their dependence on this particular technology.

It is therefore inappropriate for Aboriginal people to choose technologies without considering the level of dependence reflected in those solutions and the impact on their community of choosing particular options. It could also be argued that it is unethical to encourage levels of service and associated technologies for communities when the recurrent resources are not identified.

There are also other issues regarding sustainable development which require consideration. Under community control, sustainable development may be localised, selective and have differential growth patterns, whereas with a regional focus (such as ATSIC Regional Plans) it tends to be generalised with an economic impetus. Service provision needs to be sustained at both levels.

The challenge is how the two levels of development may be integrated to provide a regional development framework which tolerates localised activity. In the same way that sustainable development is not possible without careful technology choice from the mainstream of technologies or through the development of appropriate local technologies, it is also impeded by inappropriate regional development foci.

Many of the benefits sought by communities are only available as a result of technical intervention. If the technology cannot be sustained or maintained and replaced in a timely fashion, the benefits disappear. It is in the context of sustainability that concepts of equity need to be reassessed to encompass issues of self-determination, independence and control and relevance of training. There are numerous instances in the Report that indicate that longer term problems resulting from neglect of these aspects of technology choice and the provision of equality in services will have disastrous implications for Australians in general.

## **12.7 Conclusions**

The purpose of this section of the Report has been to promote some strategies for discussion and investigation by Aboriginal and Torres Strait Islander people. It may be that debate of the issues needs to be facilitated over a longer period of time to allow a range of views to be expressed. The three stories reprinted in Appendix A, which were used at the National Water Forum to draw out responses to some of the complex issues raised, may be useful to communities wishing to explore the matters further.

Necessarily, the examples and references relate to rural and remote situations in which Aboriginal and Torres Strait Islander people live. There are parallels which relate to Aboriginal and Torres Strait Islander people living in urban and semi-urban situations which also require consideration and articulation as part of the discussion which should occur among Aboriginal and Torres Strait Islander people.

There will certainly be no set of strategies which will suit every circumstance. However, it should be possible for people to set out the differences and the circumstances in which they might apply. The purpose of the strategies is to establish a framework for more effective provision of services to Aboriginal and Torres Strait Islander communities. The role of the Race Discrimination Commissioner in this process is to facilitate the processes of awareness and to

encourage Aboriginal and Torres Strait Islander people to work through a range of strategies which will ultimately support their claims for basic human rights.

## **Chapter 13 - ACTIONS FOR THE IMPROVED PROVISION OF WATER AND SANITATION SYSTEMS**

### **13.1 Recapitulation**

The findings of the Race Discrimination Commissioner's water study are based on detailed case studies in ten diverse communities around Australia. The problems identified illustrate a range of issues which recur in other communities. The intention of the study was to analyse problems of water provision within the context of broader historical developments arising in particular communities and thereby identify underlying causes.

The study did not intend to identify resolutions to the local symptoms and manifestations of underlying structural problems. These local and regional responses are the province of local communities and government agencies, although support and assistance has been provided informally in the course of the study to assist with particular concerns. Thus, while in some case study communities issues may have recently been resolved, it would be inappropriate to point to them and argue that the findings of the study lacked validity. There is ample evidence that problems recur in communities and that temporary solutions do not amount to significant or lasting improvement in the overall situation. A meeting of representatives of the ten case study communities in April 1993 confirmed the widespread nature of the findings contained throughout this Report.

General misunderstanding of the intent of race discrimination legislation and human rights provisions have led some service providers and receivers to the view that all people should receive the same services, irrespective of their race. This outlook frequently results in technologies and programs being introduced to Aboriginal and Torres Strait Islander communities to achieve lifestyle changes and developments seen as desirable by non-indigenous people.

However, it is the Race Discrimination Commissioner's contention that community understanding of equity and justice principles espoused in the various human rights provisions need to be interpreted in a more sophisticated way if they are to support the full range of interests of Aboriginal and Torres Strait Islander people. To give one example, complex tools and technologies introduced into communities often impact negatively on the sense of control which the community has. In such a context, the continued provision of services in pursuit of achieving equal standards before consolidating existing services and community structures appears to undermine local control of resources and development.

### **13.2 Principles**

General principles have been derived from the case studies documented in this Report. These principles can be linked to the human rights instruments and legislation relevant to the provision of services to, and the human rights of, Aboriginal and Torres Strait Islander people.

This Report confirms that peoples' rights to water are contained within their right to adequate living conditions, adequate standards of living and satisfactory health as contained in Article 11.1 of the International Covenant on Economic, Social and Cultural Rights (ICESCR), Article 14(1) of the Convention on the Elimination of Discrimination Against Women (CEDAW) and Article 5(e)(iv) of the Convention on the Elimination of Racial Discrimination (CERD). The Race Discrimination Commissioner notes, however, that many aspects of these international

instruments could be more pertinently implemented in domestic legislation. In reality, the international conventions merely state broad principles to which individual nation states are signatories. The principles may or may not be implemented in domestic law.

The major instruments scheduled to the legislation administered by the Human Rights and Equal Opportunity Commission clearly articulate life, good health and adequate standards of living as basic human rights: but matters of quality, quantity, access and control are not defined and are subject to variability in their interpretation. Living conditions and health standards are controlled by issues of development and the provision of services and infrastructure. These factors are time dependent and sometimes location and culture specific. There is bias inherent in the professional bodies who interpret levels of service through western legal and technical constructs, precedents and standards. The Report shows that the application of such interpretations outside a framework that embraces cultural and community aspirations may well work against the achievement of goals of equity.

The application of such interpretations can include the use of inappropriate (and by definition unsustainable) technologies or processes to achieve the higher goals espoused in the human rights provisions. There appears to be a total lack of mechanisms, resources, research and skilled personnel which would permit a challenge to the ethnocentric nature of the development paradigms and precedents used in the provision of services in Aboriginal and Torres Strait Islander communities.

In addition to the right to an adequate standard of living, the ICESCR recognises the need to provide for continuous improvement of living conditions over time, rather than the application of one-off capital-intensive solutions based on inflexible comparative processes which provide for conformity with national norms at the expense of existing local conditions. In order to determine what is 'adequate' and the additional concept of 'adequate for what', this Report has examined notions of equality and their application through service provision over time.

The Report identifies both confusion over cultural respect and oblique racial discrimination (resulting from the application of ethnocentric views of equality) as the basis for differing values, goals, targets and standards reflected in the judgments and decisions of service providers and some Aboriginal and Torres Strait Islander resource organisations. If cultural respect, self-determination and principles of equality are moved into a central position in assessing the provision of service, the fundamental assumptions previously made about the level and type of service infrastructure and the technologies used to deliver these services in Aboriginal and Torres Strait Islander communities may be seen as inadequate. Holding these three principles central to the process of development raises the profile of consultation and negotiation from an optional extra of minor consequence to being the fundamental starting point and linking strategy of an entire program.

Under this framework, a conventional response to a claim of entitlement to the same level of service as exists in other parts of Australia may well result in undesired outcomes and inappropriate and unsustainable options. It is no longer adequate for a person to conclude simply on the basis of a technical comparison of what exists in one community and not another, that Aboriginal and Torres Strait Islander communities will obtain equal benefits from the introduction of the same level of service as is provided to other Australians. Entitlements based on technical comparison alone can reflect a cultural bias and an ethnocentric view of equality that often works against the principle of self-determination and promotes paternalistic responses. Such simple comparisons minimise the application of a consultative process used to determine needs and fail to recognise the real impact of technologies used to provide services in cross-

cultural circumstances. Statements comparing better or worse, good or bad, equal or unequal mean very little without reference to a higher principle such as those contained in the concepts of self-determination and cultural identity. The broad scope of CERD should be recognised, especially the fact that it seeks to recognise differences without ranking them as inferior or superior.

### **13.3 Findings**

The Race Discrimination Commissioner finds that the provision of water and sanitation in Aboriginal and Torres Strait Islander communities is affected by a number of underlying issues which have been explored in the preceding twelve chapters of this Report.

The Commissioner finds that self-determination as variously defined is inadequately applied in programs and policies directed to Aboriginal and Torres Strait Islander communities. Whilst the concept is still at the forefront of debate, it covers a range of meanings from self-government, self-management, self-sufficiency and self-reliance depending on which domain applies (Wolfe 1989). The concept is practiced in all of these forms in a framework which reflects a non-indigenous and predominantly urban context. The Commissioner further finds that that existing usage of the concept of 'self-determination' when applied to the provision of services is inadequate to provide for sustainable water and sanitation services in communities.

The structural framework in which a community can be self-determining rarely exists. In relation to water, the main constraints relate to undue pressure over the accountability for 'public' money, the limits and limited understanding of science and technology when applied to less well-served regions, and the inappropriateness of many training programs to the day-to-day skills required in many communities.

The application of limited and misconstrued notions of equality drawn from ethnocentric interpretations of human rights instruments have been shown to contribute negatively to the very ideals they purport to uphold. The structural tendency towards sameness, as opposed to recognising and supporting difference, appears contrary to many of the programs intended to enhance self-determination. To the extent that the RDA is mistakenly assumed to insist on strict sameness or similarity of service, it is not useful in achieving the full enjoyment of human rights for Aboriginal and Torres Strait Islander people.

Aboriginal and Torres Strait Islander initiatives and claims to cultural identity are constantly undermined by the apparent need to show that they are always worse off than others in order to be eligible for differential treatment and special measures. Whilst it is not the intent of the RDA that this interpretation applies, evidence from the case studies indicate there is a widespread misconception that impacts on Aboriginal and Torres Strait Islander people. Fear derived from misinterpretation of Section 13 of the RDA (which provides that it is unlawful for a person who supplies goods and services to refuse or fail to supply them by reason of a person's race), presents service providers with few opportunities to face the issues critical to the provision of water and sanitation in Aboriginal and Torres Strait Islander communities because of the overwhelming compulsion to provide similar services to all communities.

In this sense, the RDA does not in reality encourage mainstream recognition of Aboriginal and Torres Strait Islander people and their circumstances, except through initiatives which if tested in court might be described as 'special measures'. The temporary nature of special measures legislation<sup>23</sup> implies that at some end point, when 'special measures' cease, there will be no



difference between Aboriginal and Torres Strait Islander people and the mainstream policy directions of non-indigenous Australia.

There is a fundamental flaw in a development model that requires people to show their circumstances are worse or less than another person in order to achieve and maintain cultural recognition. Such a requirement must affect the psyche of indigenous people. The Race Discrimination Commissioner would not, of course, argue that the RDA is inappropriate or unnecessary, but rather that it is only one of several bases on which to establish a development paradigm that governs the provision of services to indigenous communities. In its current form, the RDA is focused on individual rights rather than community rights, and in the case of the provision of water and sanitation, the broader community picture must be paramount.

The Commissioner also finds that there would be greater opportunities available to Aboriginal and Torres Strait Islander people if there were a general shift away from the use of the concept of 'special measures' as the sole basis for different action in relation to Aboriginal and Torres Strait Islander communities, towards a broader base which recognises that different services are justified in their own right, and do not necessarily amount to invidious discrimination. In this regard it would be worth exploring the model adopted in some parts of the USA where different treatment for Native American people is based on recognition of their political status, not on their race (Burger 1977).

Throughout the course of this study, it has become clear that considerable education of indigenous and non-indigenous people is required to change the cultural biases evident in the interpretation of concepts of equity and justice. Clearly, the examples in the Report show that the same input (technically equal or equivalent service provision) can result in unequal or differential outcomes for Aboriginal and Torres Strait Islander people. There is a need to promote equality as a measure of outcomes of actions and not the input of similar resources in different situations. This mind shift will not occur in isolation from structural reform and policy changes which reflect holistic community-centred approaches as opposed to control-oriented approaches.

In essence, the findings reflect a tension between two fundamental development paradigms. The human rights provisions relating to the provision of goods and services are invariably interpreted through what a number of writers (Brinkerhoff 1989, Lea & Wolfe 1993) have been described as a control-oriented or government planning process. The provisions for self-determination and cultural identity are covered by more decentralised community development models (Rowse 1992). The Race Discrimination Commissioner does not call for the abandonment of one approach in favour of the other, but rather notes the imbalance between the two approaches and the inconsistencies this creates in the field.

In circumstances where policies and programs are driven by the rhetoric of one development paradigm, while local conditions reflect the other paradigm, the resolution of specific issues (such as what type of toilet is adequate or what drinking water standards are appropriate given the other risk factors existing in remote communities at a particular point in time) become hopelessly frustrated, biased and prone to misrepresentation and inconsistencies. The confusion raised fuels an underlying distrust between a local community and external agencies. The resultant fear and bias can at times find expression in racist actions.

In general, this project has found that ignorance of the linkages between technologies that assist in the delivery of services and the values required to maintain and sustain the performance of

these technologies is a recurring factor in poor service provision. The use of technologies deemed to be proven in conventional water supply practice is the only available option for service providers in the absence of research and development activity into alternatives that recognise the unique circumstances applying in remote communities. Conforming to the status quo in the provision of services enables governments and individuals to avoid claims of professional negligence. Until the unique characteristics of remote cross-cultural communities are considered with equal weighting to technical considerations, Aboriginal and Torres Strait Islander people will not be aware of the limitations of the conventional options which are presented. Without appropriately funded research that examines the context in which technology is used, Aboriginal and Torres Strait Islander people are always in a position of having to absorb the learning experiences of technical mismatches. Conversely, while responses are confined by known parameters, service providers and Aboriginal and Torres Strait Islander people are unable to fully explore a range of options that might support their wider development aspirations.

The physical living conditions and persistent health (or rather, ill-health) characteristics of Aboriginal and Torres Strait Islander people are the obvious signs of difference between indigenous and non-indigenous people. They form the basis for persistent medical, social and technical intervention. These differences can be reconciled (though not necessarily equalised) in a number of ways. It is clear that a drive to modify circumstances through direct technical or medical intervention is short-lived. It is naively assumed by many that education and training will provide the skills necessary to reduce the gaps created by further technical intervention, although the relevance of courses to lifestyle for many people is confusing. Such assumptions are founded on the same limited misrepresentation of the notion of equality. In such a context, activities undertaken to secure adequate advancement and equal enjoyment of rights of Aboriginal and Torres Strait Islander people are an inadequate and unrealistic means of guaranteeing the long-term rights and fundamental freedoms of Aboriginal and Torres Strait Islander people seeking to sustain the development of their communities. They are a necessary but not sufficient response to their needs.

#### **13.4 Recommendations**

##### ***Recommendation 1: Community Control***

*That Government at all levels recognises the vital element of community control in the effective provision of services and reviews relevant legislation and structures to provide for the establishment of Aboriginal and Torres Strait Islander service provision authorities.*

The review of overseas literature and current development practice combined with findings of a number of recent national reports (including the RCADIC) assert that community involvement, self-determination and control of projects is vital to the long term success of service provision. This aspect is inadequately addressed in current service provision to Aboriginal and Torres Strait Islander communities. It is therefore imperative that Federal and State Governments create options whereby local water districts, based on local or regional communities, may be established to facilitate the formation of local service authorities who would regulate and control the provision of services at these locations if people so choose.

Such an approach would require that block funding for service provision be made to these communities and that they be resourced to cope adequately with the increase in responsibilities and administrative loads that accompany this transfer of responsibility.

Whilst such a reorganisation of service provision may seem inefficient in the short term and could be subject to claims of inferior service, guidelines could be negotiated to assist communities who choose to proceed with this option.

A move to independent community-controlled Aboriginal and Torres Strait Islander service provision would enhance the development of local service delivery strategies and implementation targets. Such moves would return control to the community but would not debar them from amalgamation with others in time to form service delivery networks.

### ***Recommendation 2: Equality and Discrimination***

*That Government at all levels actively promote a broader community understanding of equity and equality based on recognition of differences between cultures. Evaluation should be on the basis of equitable outcomes, not similarity of inputs.*

The analysis of this Report has revealed that misconception and misunderstanding of the human rights provisions observed in Australia has led to poor outcomes for Aboriginal and Torres Strait Islander people. These misunderstandings have found their way into the approaches used in service provision in Aboriginal and Torres Strait Islander communities. The widespread nature of the limited views of equality which persist signifies that a much broader systemic response is required before beneficial change can occur. Politicians and bureaucrats would be well advised to revisit approaches and styles of intervention in the pursuit of solutions to problems.

The Race Discrimination Commissioner concludes it is unlikely there will be a lasting response or improvement in service provision until these issues are addressed and a community mind shift obtained that will support local initiatives aimed at supporting Aboriginal and Torres Strait Islander aspirations. Promotional activities should reflect the need for a shift in the communities' understanding of equality and the need to evaluate outcomes, not inputs. A successful campaign would carry the message that a significant factor in the provision of relevant and appropriate services is a perception of equality that is not culturally biased and is appropriate in the context of Aboriginal and Torres Strait Islander aspirations and goals.

A useful outcome from promotion of the mind shift would be commonsense guidelines for the application of concepts of equity, including an outline of consultation processes which could be adopted in determining the basis of equality of service and in preparing outcome statements.

### ***Recommendation 3: Indigenous Peoples Rights***

*That the Federal Government, as a matter of urgency, prepares a national statement of Indigenous Peoples Rights.*

This study finds that existing human rights instruments, including the RDA, are inadequate mechanisms for ensuring the service provision rights of Aboriginal and Torres Strait Islander people. Again, a systemic response is required to handle the wide-ranging nature of the reforms required. The Report argues that to proceed with responses to significant service provision issues through constant modification of, and recourse to, the RDA is inappropriate and will provide inadequate outcomes. There appears to be no other legislation, including the provisions of the Australian constitution, which will provide for an adequate response to indigenous needs.

At a practical economic level, the case studies detail the problems which constantly recur through failure to correct this fundamental structural issue.

#### ***Recommendation 4: Technical Advice***

*That ATSIC continue to consider and address the means by which Aboriginal and Torres Strait Islander communities receive and respond to scientific and technical advice; and assess the need for independent community-controlled review of options prior to endorsement of projects, consultants and policies.*

The case study participants all identified a lack of independent technical advice and a feeling of inadequacy when dealing with external agents to the community on a technical level. The Report shows that technical advice given outside the context of the affected community is often flawed and has led to sub-optimal outcomes for communities. In many instances when alternatives were discussed, people complained that they had not had options presented at the time of making decisions. They also raised concerns over the time frames of consultancies and the brief visits they received from technical personnel.

ATSIC and concerned community councils may find it useful to impose, as a condition of employment of contractors and consultants by or for Aboriginal and Torres Strait Islander people, an obligation that a code of ethics, negotiation protocol and record of consultation be maintained as a contractual obligation, along with a record of the assumptions made by individual consultants in planning projects.

For these strategies to be successful, a network of Aboriginal and Torres Strait Islander controlled technical non-government organisations would need to be fostered to provide access to independent advice; and to review commercial and community projects for the appropriateness and sustainability of proposals having regard for cultural, social, health, education and employment outcomes of such proposals.

It is likely that these organisations would need to be resourced to investigate alternative options on behalf of Aboriginal and Torres Strait Islander communities as it has been found that the unique circumstances faced by Aboriginal and Torres Strait Islander people are rarely taken into account in technical research and development.

Another or additional option would be the formation of a mobile negotiating team with a high level of cross-cultural skills, prepared to live with a community before and during the process of technological decision-making. This team would establish protocols and facilitate real communication between communities and technologists.

#### ***Recommendation 5: Sustainable Development***

*That peak Aboriginal and Torres Strait Islander groups consider the implications of the prevailing technology-led control-oriented development paradigm (based principally on sameness of service) in terms of its appropriateness for longer-term sustainable development in Aboriginal and Torres Strait Islander communities, particularly in small remote locations.*

This Report chronicles aspects of the development of case study communities and raises a number of issues emanating from the recent impact of technology on the development of these communities. Whilst there are strong arguments in support of these developments, the Race

Discrimination Commissioner feels that there is cause for reflection on technical interventions that arise as a result of inadequate consultation and negotiation processes.

The Report also probes the validity of the prevailing development paradigm in the context of sustainable development in remote isolated communities. It argues for an holistic evaluation of community goals that encompass economic, technical, social, political and cultural outcomes. The findings suggest there is an urgent need to review the rhetoric of development in Aboriginal and Torres Strait Islander communities in order to recognise longer term sustainable development objectives that provide for the ongoing human rights and fundamental freedoms of Aboriginal and Torres Strait Islander people.

A review of this nature might consider a nationally-endorsed protocol for technical consultation with communities including a document of ethics, objectives and principles leading to viable futures for community services provision and a process of accountability of service providers over a longer term.

### ***Recommendation 6: Concomitant Changes***

*That the Aboriginal and Torres Strait Islander Social Justice Commissioner determine if changes or augmentation of Government policies and programs are required to give effect to issues of standards, values, equality and self-determination identified in the Report.*

The nature of the mind shifts and structural reforms required to support the provision of water and sanitation are such that if governments fail to address them, little change will occur. To balance any tendency to inaction, it is considered essential that an independent evaluation of progress is made on a regular basis. The issues raised in relation to water and sanitation are typical of many of the social justice and equity issues that pervade work in Aboriginal and Torres Strait Islander communities. The findings of previous reports, as well as existing programs of a number of government departments, may well need re-appraisal as a result of the analysis undertaken in this study and presented in this Report. The Aboriginal and Torres Strait Islander Social Justice Commissioner appears to be best placed to provide this independent assessment of factors which might indicate a shift in community attitudes to problems that arise as a result of service provision.

Further, it may be appropriate that the Social Justice Commissioner investigate the ethics of promoting intensive capital developments in Aboriginal and Torres Strait Islander communities when the recurrent cost implications are not identified or made clear to communities at the outset. This issue is particularly relevant where government-initiated policy changes devolve responsibilities - after committing the communities to significant asset maintenance costs.

### ***Recommendation 7: Monitoring and Review***

*That the Race Discrimination Commissioner review progress made in the wake of this Report in the light of the recommendations, the Government's response to the Report, and the state of water and sanitation services in the ten case study communities; and that this review commence in one year's time.*

This recommendation is self-explanatory. It records an on-going interest by the Race Discrimination Commissioner in the ten communities and the range of problems and challenges that they face in common with other Aboriginal and Torres Strait Islander communities. It also

recognises the ongoing nature of the issues raised in this Report and signals the need for all parties to pledge themselves to a long-term commitment to the issues.

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## Endnotes

- 1 Mainstreaming is a term used to reflect a mode of service delivery where all citizens are served from a common set of programs which are freely available and sufficiently flexible to provide services to all. It is presumed to give equitable outcomes.
- 2 Mind-set is a framework of fixed and inflexible conceptual constructs that shape and unconsciously condition responses to every day problems.
- 3 This approach results in villagers making holistic decisions based on information, attitudes and feelings which account for all of the factors that individual specialists might raise. When these factors are combined the decision often exceeds the sum of the individual analyses.
- 4 The database is compiled from data supplied by water authorities across Australia and involves updating and analysis of databases for small communities with populations between 30 and 1000 people without a reticulated water supply and on the adequacy of existing reticulated water supply schemes serving fewer than 1000 people.
- 5 A reticulated water supply is one which has water delivered to a consumer's house from a central distribution point via a network of pipes. Communities without a water supply rely on roof tanks or carted water or have a central non-reticulated source of supply.
- 6 These terms are used to describe the physical and chemical characteristics of water. Refer to the glossary for descriptions.
- 7 Significantly, further analysis of the database from which these figures were drawn was to be undertaken as an adjunct to the current study. However, the fact that criteria for collection of the data in the first instance did not recognise communities under 1,000 people made it difficult to form sensible judgments from the data. A number of more recent ATSIC housing reviews provide a better indication of the level of service in most communities. Importantly, however, they are not using the NH&MRC guidelines as their sole criteria for assessment.
- 8 See Thomson & Merrifield (1988) for references up to 1985.
- 9 The most recent revision was released in draft form in 1993.
- 10 This Information is drawn from Interagency Performance Review, March, quoted in the Industry Commission Issues Paper, *Water resources and waste water disposal*, July 1991, p2.
- 11 (Therkilden 1988, Brinkerhoff and Ingle 1989, Kortzen 1991, Porter 1992, Brinkerhoff & Goldsmith 1992, Goulet 1992, Therkildsen 1992, Lea 1993)
- 12 This declaration - in effect a global policy statement - was endorsed by 134 governments participating in the International Conference on Primary Health Care at Alma Ata in September 1978. The declaration makes it clear that the water supply and sanitation objectives of the world water decade are part of the long term objective of improved public health by the year 2000. This Decade was considered by WHO as part of the broader *Health for All by the Year 2000 Strategy*, which consisted of eight major elements, two of which refer to safe drinking water and sanitation.
- 13 Figures are drawn from a paper prepared by the UNICEF Global Chief of Water and Environmental Sanitation presented at the Global Consultation on Safe Water and Sanitation for the 1990s, reprinted in *Waterlines* Vol.9 No.3, January 1991.
- 14 The Winters doctrine (or the reserved water rights) was articulated in a decision of the Supreme Court in January 1908. This decision was the first case in which the federal courts explicitly affirmed the water rights of Indian reservations. Armed with this reserved water rights, 40 Indian nations (in 1982) were locked in combat with non-Indian interests in administrative hearings and court rooms throughout the western United States claiming their share of the water resources on which the entire economic future of the West depended. The quantities of water in controversy were huge, as were the economic benefits accruing to which ever parties eventually won (Burton 1991:6).
- 15 The use of special measures is the subject of specific attention in other publications by the Race Discrimination Commissioner.
- 16 Technical terms are explained in Appendix B. A diagram of the reverse osmosis process of water desalination is also provided there.
- 17 This term is used to convey a sense of the aspirations of many Aboriginal and Torres Strait Islander people to participate in, and relate to, the symbols of urban environments and the benefits which accrue as a result of population size and density. The dream is difficult to replicate and therefore becomes distorted when applied to remote communities where size and density are not present. There is often an expressed desire to obtain benefits

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- without realising the necessity for a critical mass to generate the benefits.
- 18 A cut is a term applied to an old digging associated with an open mining operation. Usually situated in a depression, the cut fills with surface runoff after rain.
- 19 The term `special measure' has a legal definition established by the High Court of Australia. However, in this section of the Report, it is also used to refer generally to those actions, policies or programs which have been initiated in order to reduce disadvantage among Aboriginal and Torres Strait Islander people.
- 20 See, for example, the Yalata case study.
- 21 For examples see the Torres Strait, Yalata and Doomadgee case studies.
- 22 Rule 3 states: Engineers shall perform work only in the areas of their competence. To this end the Institution has determined that:
- (a) members shall inform their employers or clients, and make appropriate recommendations on obtaining further advice, if an assignment requires qualifications and experience outside their fields of competence; ...etc.
- 23 See Article 1(4) of CERD.