LIVEABLE COMMUNITIES
How the Commonwealth can foster sustainable cities and regions

A national policy statement by the Planning Institute of Australia

February 2004
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APPENDIX B PIA SUBMISSION TO THE COMMONWEALTH PARLIAMENT’S ‘SUSTAINABLE CITIES’
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1. **OVERVIEW**

**PIA’s Agenda**

The Planning Institute of Australia (PIA) supports the Australian planning profession and the community generally in the creation of sustainable cities and regions. The Institute has a long and proud history of involvement in urban and regional policy development and research.

PIA believes that, despite the significant impact which settlement and land use patterns can have on a host of national aspirations for the environment, the economy and communities, the Commonwealth Government lacks a focus on these issues. This is not to say that the Commonwealth is neglecting key issues like salinity, energy conservation, water resource management or the metropolitan - country divide. There are some important initiatives underway in such areas. However, without an overarching policy framework, these responses are blunted. They are weakened by the lack of co-ordination between agencies, both within the Commonwealth and across jurisdictions.

**A New Urban and Regional Policy for a New Federation**

Against this background, PIA has revised and reissued its own framework for a comprehensive Commonwealth policy for the cities and regional development. PIA’s aim is to facilitate constructive debate within Government and the community generally leading to a robust, bipartisan perspective on national sustainable development.

This statement retains much of the structure and analysis of the Institute’s previously published “Liveable Communities” policy\(^1\). However, it acknowledges the significant shifts in inter-governmental relations that have been set in train in the post GST environment.

\(^1\) Adopted by the Institute in 2001
Within the context of a rejuvenated federation, this policy calls for the establishment of an **Australian Sustainable Development Charter**. This would describe the overarching principles for sustainable urban and regional development and set out time-bounded and measurable national targets on matters like:

**Environmental sustainability**
- energy consumption per capita;
- greenhouse gas emissions per capita;
- water consumption per capita;
- water quality standards;
- air quality;
- environmental flows in key river systems;
- salination;
- bio-diversity retention or protection;
- native vegetation; and
- modal split in urban transport.

**Social sustainability**
- access to quality public transport service;
- tolerable divergence in socio economic indicators;
- comparative living standards in indigenous communities
- accessible urban public domain per capita;
- alleviation of housing stress;
- tolerable divergence in per capita incomes between regional and urban areas; and
- conservation of built heritage.

**Economic sustainability**
- road congestion costs;
- accessibility of metropolitan jobs by public transport;
- growth in business service and other high value added exports;
- availability of higher order skills in key regions;
- rate of new business formation; and
- growth in participation in the workforce and/or training.

This policy statement further proposes the establishment of a **$10 billion over 10 years** program under which the Commonwealth
would provide untied payments to the States and Territories, and through these to local government, for the implementation of sustainable development strategies, including investment in key infrastructure, introduction of pro-sustainability pricing policies and institutional reforms to bring about better integration of planning and budget setting processes.

This program would be funded partly through the productivity dividend from more sustainable cities and regions. Efficient settlement patterns, better resource management and improved institutional arrangements for development assessment and infrastructure provision will lead to significantly higher rates of economic growth and taxation receipts, compared to a continuation of current conditions. The program would also be funded by the re-assignment of some existing Commonwealth expenditures in urban and regional infrastructure.

The bulk of funds would only begin to flow to the States and Territories once they have developed appropriate plans and policies to meet the targets and milestones set out in the Sustainable Development Charter. These plans and policies would need to be certified as efficacious by an independent Commonwealth body – the Australian Sustainable Development Commission. This would audit proposed policy packages and monitor actual progress towards the sustainability targets and milestones in each jurisdiction. The Commission would report directly to Parliament.

Continuing flows of sustainable development funding to the States and Territories would be contingent upon satisfactory progress against the milestones as assessed by the Commission via open and public hearings. While the discipline to meet sustainable development outcomes will be enforced in this way, the States and Territories will enjoy full discretion in how best to achieve these outcomes in their own jurisdictions.
2. **URBAN POLICY AND NATIONAL GOVERNANCE**

Urban and regional policy is about the places where we live, learn, work and recreate. These are issues which are close to home. It makes sense that local institutions – our Councils and State Governments – should have a big say on how these environments are managed. And, one would expect to see a diversity of responses to similar environmental challenges as one moves from community to community, reflecting local differences in culture, endowments and preferences.

Until recently, governance arrangements in Australia militated against, rather than supported, this ideal of local leadership on local matters. The key barrier was ‘vertical fiscal imbalance’. This is a situation of mismatch between the spheres of government where much of the urban services spending takes place, i.e. State and local, and the sphere of government where most of the tax raising occurs, i.e. the Commonwealth.

Such discordance between where the taxes are raised and where they are spent can undermine sound governance on urban and regional issues in a number of ways. The service delivery spheres of government perennially have the excuse of inadequate tax transfers from the Commonwealth, while the Commonwealth can perennially offer the argument that the States are not efficient enough in their use of available resources. In this sense, both spheres of government may seek to avoid accountability for service outcomes ‘on the ground’.

While certain rules governed the broad allocation of tax resources across the jurisdictions, the Commonwealth enjoyed immense discretionary funding power. This was amply demonstrated by the once much remarked upon annual Premiers Conference, where the State and Territory leaders effectively went ‘cap in hand’ to Canberra to seek a better tax share deal for the forthcoming year. Embedded in this power was an almost inevitable incentive for the
Commonwealth to negotiate involvement in policies and programs which were largely local in nature.

The taxation reforms of the 90’s, culminating in the inter-jurisdictional agreements around the sharing of GST revenues, made a substantial contribution towards remedying the vertical fiscal imbalance problem. Ultimately, the GST revenues were to flow back to the States from which they were collected, without further ‘gatekeeping’ or intervention from the Commonwealth. In a sense, this re-instated a direct taxation power of the States linked to economic growth. Accordingly, the States and their local governments can look forward to greater discretion in how they frame their budgets and spending priorities - in short, they are better placed to attend to local matters, like urban and regional policy, in their preferred local way.

These reforms have helped to clarify the rationale for Commonwealth involvement in urban and regional policy. In the past, the pre-eminence of the Commonwealth as the tax raising sphere of government meant that it was often called upon to directly solve the problems of the cities and regions, whether these be backlogs in sewerage programs, obsolete public transport infrastructure or poor protection of heritage assets, regardless of where these issues lay in terms of jurisdictional responsibilities as envisaged by the architects of the national constitution. These interventions by the Commonwealth were often of great practical value and continue to be appreciated today. But, they were effected at some cost to clarity in responsibilities and accountabilities for urban and regional outcomes. Arguably, this diminished the capacity of local jurisdictions and local communities to manage their regions, cities, towns and neighbourhoods.

In today’s environment of partially re-instated fiscal independence for the States and Territories, the purpose of the Commonwealth in urban and regional policy is more clearly defined. The Commonwealth should become involved in this policy area only when it is in the national interest. “National interest” in this context can be assessed in terms of the following criteria;

- national objectives of social security, health and economic performance are at stake;
• the matters at hand significantly affect Australia’s external affairs; and
• there is an opportunity to reinforce the cohesion and effectiveness of the States and Territories.

PIA’s case for re-engagement of the Commonwealth in urban policy on national interest grounds is elaborated in the next section.
3. THE COMMONWEALTH AND URBAN POLICY

Why the Commonwealth Needs an Urban and Regional Policy

Given that considerable policy effort has gone into clarifying the respective roles of the Commonwealth and States in service delivery, and given that the Commonwealth has gone to some lengths to provide the States with independent access to a growth tax to help fund this clarified set of roles, why should the Commonwealth now (seemingly) ‘muddy the waters’ and re-enter the field of urban and regional policy?

The rationale for a Commonwealth urban and regional policy is three-fold. Firstly, the PIA argues that it is not possible for the Commonwealth to fully deliver on its own constitutional and self-appointed national objectives in areas like social security, health and economic management if it does not appreciate these issues through an appropriate spatial lens.

Secondly, at the operational level, the Commonwealth stands to gain significant efficiencies in the delivery of its services through better spatially framed co-ordination mechanisms, which involve other jurisdictions.

Thirdly, while the States and Territories may now have a more clearly defined leadership and ‘primary provider’ role in urban and regional policy, it is unrealistic to expect that this sphere of government can execute this role with any substantial degree of independence from the Commonwealth. The Commonwealth’s own decisions regarding immigration, taxation and infrastructure have profound implications for the urban development environment within which the States and Territories must work. This calls for a co-ordinated urban policy framework embracing both the activities of the Commonwealth and the States.
Commonwealth Policy is Less Effective when it is ‘Aspatial’

One of the Commonwealth’s universally recognised roles concerns sound management of the national economy. For the most part, the Commonwealth has pursued this key role using policy instruments that are essentially ‘aspatial’. These include monetary policy, fiscal (government spending) policy, labour market reform, competition policy, trade policy and restructuring of infrastructure companies and institutions.

By and large, the exercise of these aspatial levers has served Australia well. For almost 2 decades, the nation has performed consistently strongly against other OECD countries with respect to indicators like economic expansion and growth in high value added exports.

But there is mounting evidence that in a globalised economy, the continuing competitive advantage that can be wrung out of macro-economic settings is diminishing, if for no other reason than our competitors are inexorably moving towards emulation of these settings.

While sound macro-economic management using traditional levers will remain a necessary condition for continuing prosperity, it will no longer be sufficient. Such policies will need to be supplemented by strategies to build key competencies, to foster clusters of industries which can support R&D and exploit tacit knowledge, and to attract and hold a highly skilled labour force. When it comes to these matters, the spatial structure of the economy needs to be understood as well as its aggregate indicators of performance.

Put another way, when observed at the spatial level, more opportunities to create a competitive edge become evident in the economy. For example, modelling work undertaken by the National Institute for Economic and Industry has shown that improved structuring of the Sydney metropolitan region would enable the NSW economy to be $1.4 billion larger than it otherwise would have been in 15 years time and the Australian GDP would be boosted by $1.7 billion. There would be 20,000 more jobs in NSW and 24,000 more jobs across Australia.
When considered across the whole of urban Australia, this economic pay off from good urban management is likely to be of a scale comparable to National Competition Policy.

The PIA argues that the Commonwealth cannot hope to deliver on its obligations as a sound manager of the national economy unless it brings a spatial dimension to policy making in this area.

Similar arguments can be made about the Commonwealth’s obligations in social security and health. Researchers have made it very clear that reliance on Commonwealth transfer payments alone (i.e. unemployment benefits, disability pensions, rent assistance etc) will not create the conditions of equal opportunity and healthy living that we collectively aspire to as national ideals. Some communities, or segments of communities, are locked into cycles of deprivation which are compounded by poor economic, social and environmental conditions in their neighbourhoods and regions. These conditions need to be addressed as well as providing the households in question with cash assistance.

**Better Commonwealth Services**

Even if one leaves aside the nexus between spatial policy and national economic, social and environmental goals, the Commonwealth requires a spatial framework to gain operational efficiencies in its own service delivery operations, for example, CentreLink, aged care, veterans affairs, migrant and refugee programs etc.

There are significant costs to such Commonwealth programs from poorly managed urban development. Neighbourhoods developed without due consideration to jobs and training access can trap successive generations of households in welfare dependency. Similarly, cities and neighbourhoods which have missed opportunities to maximise active transport may be storing the potential for heavier per capita health care costs.

Moreover, a spatially co-ordinated approach will enhance Commonwealth services as it will foster partnerships with private,
State Government and local government providers of allied services. It would support more effective research into the structure and requirements of local communities, providing insights as to how the Commonwealth might package its services with those of other agencies to create customised and powerful responses to client needs. In short, the Commonwealth agencies in question would come to see themselves not as dispensers of isolated and often palliative services (like transfer payments), but as part of local or regional network of public, NGO and private sector enterprises dedicated to a “joined up” approach to place related problems and opportunities.

**Enabling the States to Do their Job**

As discussed, the post GST environment promises to foster a clearer assignment of roles between the spheres of government in ways which should support more accountable, accessible and efficient governance. To an extent, the pre-eminence of the State and Territory jurisdictions in urban and regional affairs has been re-affirmed.

A genuine acknowledgement of the pre-eminence of these jurisdictions in urban policy would oblige the Commonwealth to carefully consider the impacts which its decisions on immigration and infrastructure spending might have on the metropolitan and regional strategies of the States. It makes little sense for the Commonwealth to establish urban management as a ‘State’ matter, and then pursue policies which, in effect, compromise the capacity of the States in question to implement appropriately developed strategies for their cities and towns. This is NOT to say that Commonwealth policy in the national interest should be beholden to local planning. Rather the settlement pattern effects of programs like the First Home Owners Grant, funding for nationally significant roads (like the Mitcham to Frankston Freeway and the Western Sydney Orbital) and regional migration incentives, need to be well understood and, where appropriate, harmonised with State and local government aspirations for urban development. This also requires the Commonwealth to have a spatial frame to its policy development.
National Issues Requiring a City and Regional Policy Response

To recap, the three elements of the rationale for a national urban and regional policy include;

- allowing the Commonwealth to more fully achieve national goals for prosperity, social security and health;
- improving the impact of Commonwealth programs through 'place management' and 'joined up' approaches to service delivery; and
- allowing the States and local governments to properly fulfil their potential as urban and regional managers.

These have been presented separately in the foregoing discussion to highlight the key issues. In practice, the three rationales tend to be closely intertwined.

Perhaps the best way of exploring the need for positive Commonwealth involvement in this area is to consider a series of discrete 'problems' or 'challenges' which are clearly national in scope (using the tests we outlined earlier) and which could be advanced through inter-jurisdictional partnerships in urban policy.

In its 'Liveable Communities' policy statement, published in 2001, the Institute identified 7 such issues;

- Issue 1 There is a lack of investment and co-ordination measures to keep our major cities world competitive;
- Issue 2 Human and development capital is fleeing from some non-metropolitan regions with long established communities;
- Issue 3 Neighbourhoods and districts of social exclusion are emerging across our cities and regions;
- Issue 4 The cost of housing is unnecessarily boosted through inappropriate regulation and poor management of land supply for new housing.
- Issue 5 The ecological integrity and productive value of Australia's land resource is running down;
- Issue 6 The greenhouse gas problem is made worse by the form and structure of our major cities;
Issue 7 Our settlement patterns are generating health problems through exposure to air pollution and other environmental hazards;

The Institute’s analysis of conditions, prospects and potential ways forward under each of these issues is reproduced in Appendix A.

In a similar vein, the Institute has commissioned a series of essays on the environmental challenges in urban development. These were prepared as part of the Institute’s input to the Commonwealth Parliament’s Sustainable Cities Enquiry. The essays are reproduced in Appendix B.
4 HOW THE COMMONWEALTH CAN PLAY ITS PART

Principles

The Commonwealth has led the nation into a new millennium with a rejuvenated model of federalism. With direct access to a ‘growth tax’ in the GST, there is a clear expectation that States and Territories will take the initiative in a range of areas which are the ‘natural constitutional home’ of this sphere of government, including the broad field of urban and regional policy. Shaped by their own environmental, social and economic circumstances, the State and Territory Governments will, no doubt, find varying solutions to urban and regional development issues. The diversity in their approaches will contribute to the knowledge base about effective policy and, ultimately, will support greater progress towards shared sustainable development goals.

But, as discussed, the States and Territories and local government cannot go it alone in the urban and regional policy area. The Commonwealth makes a range of decisions which directly affect the capacity of other spheres of Government to resolve sustainable development issues. These Commonwealth decisions variously cover immigration, water policy, resource and energy taxation and environmental impact assessment, to name just a few policy areas of relevance.

For the Commonwealth’s part, key national objectives relating to sound economic management, comprehensive safety nets for at risk groups in the community, universal health care and international treaties on the environment cannot be delivered fully or efficiently without strong partnerships with the States, Territories and Local Government in urban and regional policy.

For these reasons, there is no doubt that the Commonwealth should have a strong and positive position on urban and regional policy. But, this does not mean a re-run of past Commonwealth forays into
this policy area, including the Better Cities Program of the early 90’s and the multiple urban policy interventions made by the Australian Government in the first half of the 70’s.

The PIA believes that the reshaping of the Commonwealth – State relations through the GST and other policy reforms of the past decade call for a fresh approach to national involvement in urban and regional policy. The models the Institute looks to in this regard are both internationally and locally inspired. From the international perspective, the concept of ‘subsidiarity’, which has become a cornerstone of policy development in the European Union, has much to offer Australian governance practice in sustainable development. Subsidiarity calls for policy development and implementation to be undertaken at the lowest possible levels of governance and administration, i.e. those closest to local communities, but consistent with the discipline that such policy development does not compromise agreed objectives at the regional, state and national levels. Thus, for example, more compact metropolitan areas might be adopted through accountable planning processes at the State (and, indeed, national) level to be essential for sustainable development. However, local governments could reasonably have discretion on how such consolidation might best be achieved at the local level.

Subsidiarity supports a diversity of policy responses in line with the diversity of communities and their environmental circumstances. Importantly, however, this diversity is harmonized towards agreed higher level goals. In the process, cross-fertilisation of ideas and the creation of multiple policy models and case studies will support innovation in urban policy making.

A good example of subsidiarity at work in an Australian context is National Competition Policy (NCP). In this case, the Council of Australian Governments (COAG) signed off on a set of overarching principles to boost the openness of, and level of competition in, Australian markets. The Australian Government established a system of incentives by which the States and Territories would be encouraged to accelerate legislative and administrative reforms in line with NCP principles. But, in the end, it was left up to the States and Territories to determine their programs for implementation and to decide whether reforms to open up competition in particular
markets within their jurisdictions were warranted in social cost-benefit terms.

In this context, the debate about whether deregulation and competition are good things is not relevant. The key observation is that the Commonwealth led national reforms in a host of areas which were the constitutional responsibility of the States and Territories, without direct intervention and with due respect for the other jurisdictions in the federation. A similar approach is required for effective Commonwealth involvement in urban and regional policy.

Key Elements

The model of Commonwealth urban and regional policy promoted by PIA features 4 key elements;

1. The adoption of sustainable development targets, set out in national Charter;
2. The formulation of policies, strategies and investment plans by the States and Territories to meet the targets and milestones set out in the Charter;
3. The establishment of an independent Commonwealth body to assess the robustness of these policies, strategies and investment plans and to monitor their achievement of the targets and milestones under the Charter; and
4. The provision of untied Commonwealth funding to the States and Territories contingent upon their formulation of appropriate policies, strategies and investment plans and their progressive achievement of the nationally agreed targets and milestones.

Each of these elements is outlined below.

1. The Australian Sustainable Development Charter

COAG would resolve a set of time bounded national objectives regarding sustainable development. These objectives would relate to (list not exhaustive):

Environmental
- growth in energy consumption per capita;
greenhouse gas emissions per capita;
growth in vehicle kilometres travelled per capita;
water consumption per capita;
water quality standards (domestic consumption);
air quality;
percentage of sustainable environmental flows in key river systems;
land area subject to salination;
retention or reinstatement of current or historic bio-diversity levels;
degree of retention of native vegetation;
share of public transport + cycling + walking in overall trip generation;

Social
proportion of households within 400 metres of a quality public transport service;
level of divergence between constituent urban communities using the ABS SIEFA index;
education, housing and living standards within indigenous communities versus benchmarks drawn from the wider Australian population;
accessible urban public domain per capita (parks, gardens, beaches, piazzas, cultural precincts etc);
proportion of households below the 40th percentile in the income distribution suffering housing stress;
level of divergence in average per capita incomes between regional and urban areas;
level of divergence between local average per capital incomes and those in Sydney;
proportion of the National, State and local cultural heritage estate removed from risk of demolition or decay.

Economic
level of road congestion costs;
percentage of metropolitan jobs accessible via a 30 minute public transport ride from the 66th percentile census collector district, ranked by quality of public transport services;
growth in business service exports;
As part of the Australian Sustainable Development Charter, signatory governments would commit to achieving specific outcomes on the above measures over, say, a 10 year period, but with similarly clear intermediate milestones. The essential point is that progress towards the targets must be capable of independently verifiable measurement.

The Charter may also provide weightings to the various outcome measures, recognizing that some are derivatives of others, or may be just another way of looking at the same objective.

To some considerable extent, the outcomes and progress measures identified in the Australian Sustainable Development Charter will have already been addressed in other fields of policy across jurisdictions. However, it would be published as a tangible and consolidated statement of commitment by all signatory governments to sustainability. It can reasonably be expected that peak organizations in business, the unions and the community generally will similarly sign up to the Charter, underlining the point that sustainability is not just a matter for governments but for everybody to consider and act upon.

2. Strategic Planning, Policy Development and Implementation

The commitments given by all governments, including local government, under the Australian Sustainable Development Charter would cover the full field of urban and regional policy making, not just the formulation of plans and strategies, though this will be an essential element. Other relevant public policy action could include:
• resource **pricing** and property right regulation to enable more sustainable outcomes to be mediated through market processes;
• improved **administrative arrangements** for the assessment of strategic (settlement pattern shaping) infrastructure projects and to forge closer links between State/ Territory/ Local Government budget process and urban and regional strategies;
• better **development approval** arrangements, such as those emerging from the Commonwealth’s Development Approval Forum (DAF);
• new arrangements for **funding** infrastructure, affordable housing and environmental rehabilitation/ conservation; and
• **marketing and education** campaigns to promote awareness and changed consumption behaviour with respect to environmental issues.

3. **Sustainable Development Commission**

The Sustainable Development Commission would be a new Commonwealth agency with responsibilities and powers similar to those of the National Competition Council (NCC), the Australian Competition and Consumer Commission (ACCC) and the Auditors General at the State/ Territory level. Its role would be to scrutinize and endorse (or otherwise) the sustainable development plans and policies proposed by signatory governments and to rigorously monitor progress towards the agreed sustainability outcomes in each jurisdiction.

The Sustainability Development Commission would undertake its enquiries, both into the efficacy of strategies and policies proposed by jurisdictions and into the progress being made against targets in the Charter, through public hearings at which any interested parties may appear or provide submissions. The Chair of the Commission would report directly to the Parliament of Australia, as do the State Auditors General. This will ensure the highest possible degree of independence and rigor in the deliberations of the Commission.
Again, some of the work proposed for the Sustainable Development Commission is already being carried out via other agencies, forums and inter-governmental arrangements (e.g. State of the Environment reporting). PIA does not propose that the Commission ‘take over’ these functions or duplicate the work of others. Instead it would draw together this material and publish its findings in a consolidated report that can be used as a definitive reference point by all Australians with an interest in sustainable development.

4. Contingent Commonwealth Funding

New Commonwealth funding will be essential if the Australian Sustainable Development Charter is to make the transition from lofty words and theoretical targets to a process that will galvanise activity at the State, Territory and local government level and achieve real, on the ground, outcomes.

These new funding arrangements should adhere to three key principles:

- **Scale**: The funding must be substantial recognizing the enormity of the sustainability challenge and the need to address some key cultural and political barriers to progress in these areas;

- **Un tied funding**: While the Commonwealth, in consultation with the States, should lead the national discourse on what is required for sustainable development and what targets should be set, how these outcomes are to be achieved should largely be left to the States, Territories and local governments in accordance with the subsidiarity concept. In short any Commonwealth funding to the States under the Australian Charter of Sustainable Development should be tied to sustainability outcomes achieved in the jurisdiction in question, rather than to delivery of particular programs and actions in that jurisdiction.

- **Independent performance measurement**: Certification that proposed policies are likely to meet agreed targets and milestones, and actual measurement that appropriate progress is being made, needs to be undertaken through a
process which is at arm’s length from both Commonwealth and the jurisdictions in receipt of the funding.

The PIA envisages a contingent funding process under the Australian Sustainable Development Charter. The details are, of course, a matter for COAG, but a possible schedule of payments could be as follows:

- States and Territories would be entitled to an ‘up-front’ payment upon signing of the Sustainable Development Charter. This will facilitate consensus building around the targets and milestones included in the Charter. It would also kick start the policy review and development process that each partner will have committed to by signing the Charter. The purpose of this review process would be the formulation of policy packages to meet the targets and milestones as they apply in the jurisdiction in question (see below).

- Upon endorsement of a jurisdiction’s plans and policies by the Sustainable Development Commission, further payments would be made to that jurisdiction. The maximum amount of this payment would be agreed at the time of Charter formulation. Jurisdictions would be entitled to this full amount or some pro-rata share recommended by the Commission, based on its assessment of what proportion of the (weighted) outcomes have been adequately addressed in the jurisdiction’s plans and policies. Jurisdictions would be free to assemble a comprehensive package of sustainability initiatives or to progress their agenda with a series of partial submissions to the Sustainable Development Commission. Similarly, jurisdictions may choose to present comprehensive, state wide, policy packages to the Commission, or proceed in stages, by way of a series of regional or area specific initiatives.

- Further payments would flow to the participating jurisdictions if and when the agreed milestones and outcome measures set out in the Charter and incorporated in jurisdictional policy packages are met. These payments could be staggered over the 10 year period of the current Charter.
Funding Commitment

As noted, the funding flows to the States and Territories (and through these to local governments) need to be substantial to achieve a positive ‘rudder shift’ towards settlement patterns which deliver significantly better environmental, economic and social outcomes. As they did with NCP, these jurisdictions are likely to face significant resistance from vested interests in implementing some of the hard decisions to bring about more sustainable development. Issues to do with road pricing, infrastructure cost recovery, densification around key metropolitan nodes will inevitably generate controversy.

To some extent, the States and Territories will need to be in a position to moderate the adverse impacts on those whose interests are served by the less than sustainable patterns of development that characterize our cities and regions today. Precedents for this include the industry restructuring package offered to the nation’s dairy farmers when that industry was deregulated under NCP.

Moreover, the capacity of the States and Territories to make strategic infrastructure investments will need to be bolstered for these jurisdictions to win broad stakeholder support for a strong pro-sustainability stance in urban policy. As mentioned, ‘strategic infrastructure’ projects are those with the capacity to reshape settlement patterns by dramatically changing accessibility patterns or the resource base of a region (for example, the Western Sydney Orbital, the Melbourne City Link and the Gold Coast Railway).

Regulatory and pricing changes will affect market behaviours and ultimately urban form. To effect such challenging reforms, Governments will need to demonstrate their bona fides by simultaneously investing in their communities through major infrastructure projects.

The scale of any sustainable development package must be a matter for COAG. Two key issues in ‘sizing’ this program will be the productivity dividend from more efficient and sustainable patterns of development and the scope to re-bundle existing Commonwealth
infrastructure expenditures under the banner of the Sustainable Development Charter.

Based on the research cited in Section 3, PIA believes that a program of some $10 billion over 10 years, including all three types of Sustainability Charter payments (i.e. those made upon signature, those upon submission and certification of strategies and policies and those upon achievement of successive milestones) could be funded from the productivity dividend alone.

An agreement of this scale would enable NSW, for example, to undertake one (additional) project of the same strategic significance and impact as the WSO over a 10 year period, provided its overall package of sustainability policies was certified to be efficacious by the Sustainable Development Commission. Funds of this magnitude could be used to significantly improve Sydney’s ailing mass transit system – a ‘must do’ if that city is to approach any of the ideals of sustainability. Similar ‘structural’ projects could be undertaken to underpin sustainable development across Australia’s cities and regions.
APPENDIX A

NATIONAL CHALLENGES IN URBAN AND REGIONAL DEVELOPMENT

Extract from PIA 2001 Policy “Liveable Communities”
Challenge 1; Keeping Our Cities World Competitive

Globalisation - an historical perspective

Early last century industry began to assemble itself into large vertically integrated groups, largely because of regulation. New laws such as America’s Sherman Act, which was designed to prevent ‘horizontal’ collusion amongst competitors, and continued trade protection policies, promoted the vertical integration of ownership across strategic industries.

National governments further contributed to the consolidation of wealth creation after World War II by developing large fully integrated manufacturing centres as part of policies to promote self sufficiency, import substitution, regional development and employment (Roberts, 1997). These fully integrated systems of production remained largely intact until the 1970’s.

However, this established pattern of manufacturing and general business operation was reshaped by several forces which gathered momentum during the 70’s. First, the poor performance of western production techniques was exposed. The huge conglomerates were burdened by massive levels of idle inventory, inflexible production processes, and management attitudes that sought to preserve enormous economies of scale rather than give priority to the consumers’ desire for customisation.

Japanese manufacturers, on the other hand, were benefiting from leaner and more flexible manufacturing techniques and lead the world as a production centre throughout the 1970’s. Western manufacturers subsequently were forced to follow suit in the 1980’s, embracing notions of ‘continuous improvement’ in production technology.

Second, the removal of the gold standard and the promotion of free trade agreements² led to major structural changes in trade, industry

² Such as the Bretton Woods agreement in 1972 and the subsequent General Agreement on Tariff and Trade (GATT) agreements now administered by the World Trade Organisation.
location and investment (Roberts, 1997). Most notably, these agreements facilitated foreign investment into the then termed ‘developing world’, particularly Asia.

Access to cheaper factor inputs, predominantly labour, and the willingness of Asian governments to provide investment incentives, promoted a mass migration of core manufacturing activity to the developing world during the 1970’s and 1980’s. The simultaneous rapid improvement in communications technologies allowed the ‘front’ (i.e. product design, R&D, innovation, etc.) and ‘back’ ends (i.e. marketing, distribution) of the production processes, and the corporate administration (i.e. planning, finance, etc.) to be retained by their original home countries.

Thus, the entire production chain was no longer achieved under one roof or even within one country. The production chain became more spatially dispersed, with individual links of the chain locating in regions with the most propitious conditions.

Meanwhile the increased incomes in Asia and Eastern Europe, associated with their ongoing industrialisation, presented significant opportunities for global entrepreneurs. But with these opportunities came greater and more diverse risks implicit in operating in international markets. To cope with these risks production techniques had to be both efficient and flexible.

Internationally oriented corporations began concentrating on core competencies, shedding non-core organisational functions and acknowledging knowledge, innovation and flexibility as the key determinants of business success. Advanced economies in particular have witnessed a spate of outsourcing in recent years and the subsequent reclassification of manufacturing jobs to service industry jobs.

The end result is the emergence of the new (or global) economy where the objective of cost minimisation has been supplanted by the imperative to create value for money for the customer. The major sources of productivity stem from the intensive use of knowledge not resources, usually by redefining the way goods and services are produced and delivered. The ability to leverage and commercialise
knowledge in international markets outweighs the old adage of domestic market domination.

**Distributed value chains and e-commerce**

The advent of ‘e-commerce’ is set to radically accelerate the ‘unbundling’ of value chains. Business to business transactions - or the procurement strategies which ultimately govern the geography of economic activity - are being reshaped by ‘vertical and horizontal buying hubs’. These are Internet market places, where businesses can source best quality and lowest cost inputs very quickly and very efficiently.

The car manufacturing industry is already well advanced with its hub. Manufacturers will be able to source components from anywhere in Australia, and indeed, the world by a ‘click of the mouse’. The protection once afforded by proximity, by personal contact with management and by long standing trading relationships will remain important. But every supplier will face a relentless requirement to invest in new ways of packaging or re-inventing their products or services so that they can offer improved value for money.

The auto industry hub is a ‘vertical’ or single industry market place. ‘Horizontal’ hubs will cater for multiple industries and generic inputs like stationery, IT equipment, HR services, security and the like.

It is estimated that over 40% of American businesses will be engaged in some form of on-line procurement inside 5 years. This trade is already worth US$336 billion (see Table 2.1).

**Table 2.1**

<table>
<thead>
<tr>
<th>US Online Business to Business Commerce.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Volume (US$ billion)</td>
</tr>
<tr>
<td>-------------------------------</td>
</tr>
<tr>
<td>Penetration</td>
</tr>
</tbody>
</table>

The pivotal role of the cities

With production chain unbundling and the imperative for companies to access specialised skills and knowledge in their product development and bidding activities, Australia's cities will increasingly play a dominant role in the economy. This will largely be due to the depth of the informal and formal infrastructures for building knowledge and creativity in the nation's major urban centres.

To the extent that Australia continues to earn a living from our resource base, the cities will play a vital part. The nation's exports of dairy product, for example, will rely as much upon the marketing experts, food scientists and logistics engineers working in city based clusters as they will on the prowess of the farmers on the land. The competitiveness of Australia's miners will similarly be dependent upon the scientific and financial brokerage skills sourced in Perth, Adelaide, Brisbane and the other capitals. Value chains originating in rural and regional Australia are increasingly 'laced through' the metropolitan areas.

Whether the nation continues to build exports of elaborately transformed manufactures will also depend upon the quality of specialised 'knowledge services' which are overwhelmingly concentrated in our cities.

Moreover, in the new economy, our cities have been liberated from dependence upon their local production hinterlands. Spatial redistribution and specialisation in the value chain, and the increasing ability of producers to source inputs conveniently from anywhere in the world through Internet hubs, ever cheaper air travel and franchising arrangements, will mean that the same marketing experts, food scientists and logistics engineers who are commissioned by Bonlac or National Foods in Australia can work for Parmalat in Italy or its equivalents in North America. Thus cities can, and have, become major service exporters in their own right. For example, Sydney's fortunes today are much less tied to the health of the non-metropolitan NSW economy than it once was.

There is a need to shake off the traditional notion that national and regional economic development is about winning and holding complete value chains - whether they be in biotechnology, or IT or
Managing the cities for greater competitiveness

The special capacity of the major cities to drive national prosperity in the new economy derives from a number of factors.

- The critical mass of the metropolitan market for business services diminishes the risks associated with specialisation.
- Specialisation in business services requires a strong network of brokerage agents operating both formally and informally. The metropolitan area is more likely to feature such networks.
- Specialisation requires an advanced knowledge platform, including exchanges with key research institutions like universities. These in turn require ready access to a rich base of researchers and research infrastructure to remain credible and competitive in their own fields.
- Anchor customers, who engage in measured risk taking to create a competitive edge, are also required to support specialisation. Such customers are also more likely to be concentrated in the cities.
- The metropolitan areas provide a compelling livability package to attract scientific and entrepreneurial talent.

For these reasons, Australia’s metropolitan areas are inexorably increasing their share of higher order business services. O’Connor (1999) shows that while metropolitan Australia maintained a steady 65% share of all national employment in the period 1986 to 1998, its share of producer services (i.e. services to business, finance and property and media and publishing) was significantly greater in 1998 at over 78%.

Further evidence of the metropolitan areas’ comparative advantage in producing advanced business services is given by their growing share of ‘knowledge workers’ as measured by persons employed in professional and associate professional occupations. In 1991
metropolitan Australia accounted for 57% of the country’s knowledge workers. By 1996, this proportion had climbed to more than 70% - see Figure 2.1.
This pattern is unlikely to be reversed by new communication technologies. There is now a growing consensus in the literature that face to face contact remains the essential ingredient in the development of knowledge based skills and enterprises.

“The talk of disembodied cyberspace misses the fundamental point that creative work occurs primarily in face to face exchange within teams, where people live and work in close proximity. Electronic communications are important, but not a substitute for the trust, sharing and intense interpersonal interaction essential for the creative process. The heart and soul of the New Economy - where the action is - will be tied to place.” Douglas Henton, quoted in Pierce (1999)

It is no surprise that the ‘dot com’ companies, the very purveyors of new communication technologies and e-commerce – which to some extent will liberate us from the ‘tyranny of distance’ – are flocking to downtown locations.

It is also no surprise that most advanced nations recognise the strategic economic role of cities and have taken positive policy positions on this.

“Everywhere, cities are the great engines of economic growth. Their share of national output, in almost every country, is much higher than their share of the labour force. Cities make their
people productive... Cities are places of innovation - in production, lifestyle as well as consumption patterns.”

The cities that will drive national prosperity in the new economy will successfully embrace a globally focussed role as well as their traditional functions (see Figure 2.2). They will improve the dynamism of their locales by enhancing the effectiveness of knowledge development and diffusion and by ensuring a high quality of life for knowledge workers.

Particular urban policies can be used to develop this economic driver role of the cities. For example, the Property Council of Australia and the Council of Capital City Lord Mayors (1999) has argued that national policy should focus on 4 themes.

- **Commercial connectivity**: This relates to the international gateway role of Australia’s cities, that is, their capacity to link the nation to the rapidly growing trade in knowledge based goods and services. Specific policies here will relate to airport investment, national and international freight transport and telecommunications.

- **Cost competitiveness**: How cities are managed with respect to settlement pattern, density, distribution of activity centres, public and private transportation systems and environmental quality will have a profound effect on the cost of doing business. This impacts not only on the physical production and delivery of goods and services but also on the capacity to attract and retain knowledge workers.

- **Innovation**: While cost control is important to competitiveness, the capacity for innovation distinguishes superior performance in the new economy. Innovation is more likely to be nurtured in a well resourced and well managed city environment that offers a depth of cultural experiences. The quality of urban life is, again critical to the capacity to attract and retain knowledge workers. Key policies here will relate to facilitating business clusters and improved business - R&D interaction, urban design, the creation of

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of distinct neighbourhoods in our big cities and access to lifestyle regions in rural and regional Australia.

- **Cultural tourism:** Cities can be looked on as an internationally traded product in their own right. Cultural or urban tourism is a 'superior good', the appetite for which has expanded and will continue to do so as a global living standards rise. Those cities which can develop a distinctive cultural address will ride this wave to the benefit of their resident populations.

Figure 2.2: The Traditional and the Global City

The 'traditional city' characterised by:
- Specialisation of urban services in line with needs of local production hinterland
- Income driven by prices for production hinterland exports
- Seaport and rail as key trading infrastructure

The 'global city' characterised by:
- Specialisation of urban services in line with direct export markets
- Reduced dependence on local production hinterland
- Production hinterland offering lifestyle services to city
- Airport and telecommunications as key trading infrastructure

All of the above rely heavily on the provision of quality infrastructures be they traditional ‘hard’ infrastructures common to the planning arena or the more difficulty cultivated ‘soft’ infrastructures.
Challenge 2; The metropolitan - country divide

Rates of population growth, capital investment and economic development across Australia have historically been uneven. Broadly this has translated to a growing divide between the economic performance of metropolitan and country areas.

Given the differences in the locational and resource attributes of various regions these disparities are often understandable and in some cases predictable. Population movements and capital flows between regions and between country and city have often reflected their varying fortunes and are widely perceived to merely reflect the apparent inevitable growth of cities and the decline of rural areas. While there is some basis for this simplistic notion, more complex shifts are taking place and the patterns of growth and decline cannot be solely explained as a metropolitan – country divide.

Long term patterns relating to population redistribution in Australia have been in place for much of last century (Figure 2.3). Metropolitan growth was based on immigration and the movement of people from rural and regional areas. These factors were so strong that metropolitan Australia continued to increase its share of the nation’s population. About three decades ago these well established trends faltered. Immigration as a factor in population growth slowed, certain regional areas started to grow strongly and the growth of metropolitan areas started to include households who commuted but who lived in areas outside of the defined metropolitan area.

Figure 2.3
Changing Distribution of Population Between Metropolitan, Non-Metropolitan, Other Urban and Rural Sectors, 1921-96
Growth in some non-metropolitan coastal regions, the increasingly globalised economy of the larger metropolitan areas, changes in manufacturing employment and the absolute population decline in some rural regions, all widened the gap between fast growing regions and those areas that were seen to be left behind. Over the last two decades growth and decline have increasingly been concentrated in distinct geographical regions.

These forces have accelerated to the point where the gap is so wide in some cases as to be almost 'built into' the economic fortunes of particular regions. The perception has developed, reinforced by superficial media reporting, that it is a simple pattern of metropolitan growth and rural decline. The differences between some areas expressed in basic social and economic indicators, together with the stark presentation of realities, have fed the community’s view of a growing divide in the lives and fortunes of those in the large metropolitan areas compared to those in country Australia. At the broad geographical level of definition between metropolitan and country, the levels of disadvantage associated with access to the larger cities has now been well documented.

Table 2.2
Australia: Geographic Distribution of People Living in Most Disadvantaged Areas, 1996

<table>
<thead>
<tr>
<th>Section of State</th>
<th>Highly Accessible</th>
<th>Accessible</th>
<th>Moderately Accessible</th>
<th>Remote / Very Remote</th>
<th>Total</th>
<th>Highly Accessible</th>
<th>Accessible</th>
<th>All Persons</th>
<th>Moderate Accessibility</th>
<th>Remote / Very Remote</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Major urban</td>
<td>55.2</td>
<td>0.0</td>
<td>0.0</td>
<td>55.7</td>
<td>62.1</td>
<td>0.6</td>
<td>0.0</td>
<td>62.7</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other urban</td>
<td>17.3</td>
<td>11.9</td>
<td>0.7</td>
<td>33.8</td>
<td>12.8</td>
<td>7.1</td>
<td>2.0</td>
<td>23.3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rural locality</td>
<td>1.1</td>
<td>2.0</td>
<td>0.0</td>
<td>5.2</td>
<td>1.0</td>
<td>0.8</td>
<td>0.5</td>
<td>0.3</td>
<td></td>
<td></td>
<td>11.5</td>
</tr>
<tr>
<td>Total</td>
<td>74.7</td>
<td>16.5</td>
<td>4.6</td>
<td>4.3</td>
<td>100.0</td>
<td>81.8</td>
<td>11.8</td>
<td>2.5</td>
<td></td>
<td></td>
<td>100.0</td>
</tr>
</tbody>
</table>

Refers into the 20% of CDs with the lowest scores on the Index of Relative Socio-economic Disadvantage.

Source: ABS 2000 Australian Social Trends, Cat.N o.4102.0, ABS Canberra

This divide has also been revealed in the exercise of political power, the distribution of wealth, differing cultural and social views and opportunities and a growing resentment by some in rural areas that the benefits from economic development have not been equally distributed. This outcome is partly a result of Australia’s overall settlement pattern that concentrates some sixty per cent of the population in five cities. It also results from a growing separation in the livelihood of those in the large cities with their increasing international perspective compared with rural areas still seeming to be locked into resource based production and a rural service economy.

Other expressions of the divide between metropolitan and country, of the different rates of growth between regions and the way in which the prospects of various regions have changed include:

- The growing gap in residential property values between Australia’s largest cities and the rest.
Extract from PIA 2001 Policy on Liveable Communities

- Having large numbers of workers employed in manufacturing occupations is no longer necessarily seen as a major asset for a region.
- With an ageing population and a shorter working life, retirement areas often became growth centres.
- Overall, there has been a population movement northwards and to the coast.

In part, some of these changes were due to social changes while others were driven by external factors. Some changes represented a maturing of the economy and others reflected the growth of technology. Key themes included:

- The increasing globalisation of the national economy,
- The deregulation of the finance sector and the removal of subsidies,
- Changing employment demands and increased levels of personal mobility.

On another level though, these changes represented the emergence of new types of regions.

- Regions generally did better if their economy was geared to the new economy based on the importance of lifestyle factors, on the growth of service industries and the need for integration with the global economy.
- Regions locked into old forms of production and protection, which lacked natural and locational attributes, and were unable to attract new capital, tended to languish and found it increasingly difficult to compete.
- Young people moved away from old growth regions in search of jobs and higher education and found fewer reasons to return.

These factors reinforced the view that the major cities were winners and the rest were losers. The image has been that those regions beyond the major cities have all suffered a similar fate. There has been a concentration of population and capital in the larger, faster growing cities compared with those in rural regions tied to debt ridden farming and towns and regions unable to attract new investment.
Other factors have also been in evidence:

- Some of the capital cities such as Hobart and Adelaide, and Melbourne for a time saw the flight of people and capital to more “attractive” regions.
- The larger metropolitan areas experienced continuing population growth but much of that was concentrated in the extended commuting area they drew upon.
- Capital investment in the larger cities was not necessarily focussed only in their central areas but dispersed to new district centres, based on office, retail and new service sector employment. Infrastructure development followed.
- While a number of rural regions experienced actual population decline and considerable net outflows of capital, many rural regions, particularly those with natural resources attributes, continued to grow and prosper based on re-investment in primary industries and on the back of service sector growth including tourism.
- Isolated nodes of development particularly in parts of Queensland and Western Australia developed international links and associations.
- The scene across Australia became one of a growing unevenness in levels of private investment.

These disparities between regions have tended to become more pronounced, and an overall pattern has emerged which is broadly characterised by three major elements.

1. Concentration of population growth and capital investment in and around a small number of metropolitan areas principally Sydney, Brisbane-Gold Coast, Perth and Melbourne and regional centres like Cairns and in tourist and retirement centres along the eastern seaboard.
2. Continuing investment in primary industries, but focused around major mineral and energy deposits, new timber plantations and high value horticulture in irrigation areas.
3. Population loss or very slow growth and consequent low levels of private sector investment, in regions including urban areas generally with the following characteristics: inland and/ or relatively isolated, with traditional manufacturing sector
industrial bases and dependent on extensive dryland farming and agricultural commodities that have experienced low world prices

Hugo (2000) sums up this developing pattern as follows;

“It will be noted that areas of population growth in regional Australia are strongly concentrated in certain non-metropolitan areas, namely...

- The areas surrounding metropolitan areas.
- Along the well watered east coast and southwest coast.
- Some resort and retirement areas.
- Some regional centres.
- Along the Hume Highway linking Sydney and Melbourne.
- Some relatively remote areas, especially those with growing mining activities, tourism and significant indigenous populations.

On the other hand, there is also a spatial concentration of the areas experiencing population decline...

- Above all the dry farming areas of the wheat-sheep belt such as in western Victoria extending through central-western New South Wales and Queensland, the southeast Eyre Peninsula and mid north of South Australia and the wheat-sheep belt of Western Australia.
- Many pastoral areas in central Australia.
- Certain mining areas such as Broken Hill.
- Declining industrial cities such as Whyalla in South Australia.
- These stark patterns point to a substantial degree of population variation within regional Australia.”

One factor that has ‘blurred’ the distinction between metropolitan and country is that those areas within commuting distance of metropolitan areas and even those within weakened retreating distance such as coastal areas, heritage areas, or recreational areas like ski-fields are brought into an extended or exurban metropolitan area. This force in some areas has highlighted the remoteness of those rural areas well beyond the influence of metropolitan areas. In the case of Sydney and Melbourne the extended metropolitan area covers a relatively large proportion of the State. In States such as Western Australia it includes much of the south-west of the State, particularly along the coast.

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The levels of population growth and loss, and the differing rates of capital investment in various regions has brought with it and exacerbated a range of social and economic problems at the regional, community and household scale.

- Analysis of household income levels, education attainment and access to essential services and facilities generally shows increasing disparities between major urban centres and remote and declining regions.
- These problems have been highlighted in the media in respect to rural regions generally with a focus on the closure of publicly funded services such as schools, hospitals and public transport and the removal of retail and banking functions.
- For many rural regions though this trend in the decline in the service role of small towns was in force over much of the twentieth century and reflected the declining labour needs of the rural sector.
- Over the same period the role of large regional service centres emerged and their functions strengthened often at the expense of the smaller centres they serviced.
- It has been observed that these ‘sponge cities’ cannot keep growing at past rates unless they assume new functions. In some cases they now find themselves quite closely linked in an economic sense to the nearest major metropolitan centres with consequential rapid changes in their economic structure, such as in south east Queensland, central Victoria, south west Western Australia and the central coast of New South Wales.

Possibly the single most significant trend that has set apart most rural areas from the major metropolitan areas has been the strong out migration of young people searching for education, training, employment and greater social and cultural opportunities. This continues to have a long standing impact on country towns and rural communities and sharpens the divide between them and metropolitan areas. This loss of population has been partly counteracted, particularly in Victoria and New South Wales, by older age groups migrating to non-metropolitan areas. Much of this movement though represents households relocating to areas outside the fringe of the metropolitan area but within commuting distance.
Regions tagged as 'in decline' are often unable to retain locally generated capital for re-investment in their region let alone attract external capital for new growth. Their overall economic prospects are such that they are often experiencing a net outflow of capital.

- Alternative investment opportunities outside of depressed regions understandably look more attractive. An example of this is the net outflow of superannuation payments from poorly performing regions to the investment institutions in the major cities.
- Superannuation funds understandably are not attracted to invest back into such regions.
- The net annual outflow of superannuation payments from all of Australia’s rural regions to the major institutions based in the large cities has been estimated to be in the order of $5 billion.
- Regions across Australia can be loosely defined as ‘winners’ and ‘losers’ in the competition to retain population and capital investment funds. Often this characterisation becomes a self-fulfilling prophecy.
- Whole regions, including states like Tasmania, are being dismissed as offering few prospects for retaining population and capital.
Responses to this emerging situation at the state and national level have been uneven and disjointed. Specific regional assistance packages have been produced at regular intervals often as either crisis management responses or as election sweeteners. Most programs have not been co-ordinated across agencies and between federal and state governments and have rarely been targeted to specific areas of need. The role and responsibility for federal governments in regional development has always been an area for debate and political mileage.

- Only for a brief period in the 1970's under the DURD initiative has Australia flirted with the concept of deliberate intervention to redress the inherent disadvantages experienced by some regions.
- This lone initiative stands in contrast to the systematic programs conducted by some western democracies notably in Europe to implement measures designed to direct public and private capital to so called depressed regions.
- At the state level there have been consistent programs and departmental support for regional economic development but for political reasons these have almost always shied away from targeting specific areas.

There have been consistent calls for national population policy with an outcome of addressing long-term settlements needs. At neither the federal or state level has there been a systematic program to develop a population or settlement policy and carry it through.

- Calls for such policies have usually had their origin in debates about migration levels and ecological sustainability rather than a move to redress uneven population growth and capital investment levels across Australia’s regions.
- Despite continuing calls for genuine decentralisation policies no government has truly embraced such a policy let alone implemented measures designed to bring about any form of population redistribution.

Any policy response to the flight of human and investment capital from some regions must also recognise the importance of grass roots leadership and action operating in harness with nationally driven strategic directions.
Challenge 3; Inequality and Social exclusion

Australia, like many developed countries throughout the world, has become a less equitable society in the last 30-40 years. A number of interrelated trends such as changing employment patterns and disparities in education and skill levels have seen the divide between affluent and poorer members of the Australian population widen dramatically. These trends are driving a ‘hollowing out of the income distribution’, where the proportion of the population in upper and lower income brackets is continually expanding while proportion with midrange incomes is declining.5

This ‘polarisation’ of Australian society is becoming increasingly apparent in the spatial form of our settlements as both poverty and wealth are tending to concentrate geographically into enclaves characterised either by chronic deprivation or abundant privilege.6 The increasing spatial concentration of poverty and affluence in Australia is driving a self-perpetuating process of social exclusion where certain groups and individuals in the population are becoming marginalised from mainstream society. These people experience a lack of power and limited opportunities for social participation; they are often trapped in a cycle of entrenched disadvantage caused by factors such as unemployment, poor education/skill levels and low self-esteem. Spatial concentration of these people compounds the level of disadvantage they experience and often creates a culture of welfare dependency with intergenerational effects.7

However, while the concept of social exclusion accepts that location is important, it suggests that “...relational rather than distributional issues (need to be addressed, and in so doing) places emphasis on inadequate social participation, lack of social integration and lack of power, rather than the resources at the disposal of an individual or group of

5 Yates and Wulff (1999) and Lloyd, Harding et.al. (2000)
6 The spatial manifestations of inequality in Australia were perhaps most famously articulated by Labor leader Gough Whitlam during a policy speech prior to the 1972 federal election. Recent analyses of growing inequality in Australia include: Borland and Wilkins (1996); Gibson et.al. (1996); Gregory and Hunter (1995); Harding (1997); Johnson et.al (1995); and Marcuse (1996).
7 Gibbins (2000)
individuals, and more on the relationship between those individuals and society at large...".⁸

Social exclusion needs be addressed, not only for reasons of social justice and equity, but also from a pragmatic perspective: polarisation of Australian society has the potential to undermine our political stability and even our economic competitiveness.⁹ In an era characterised by footloose global capital and a highly mobile workforce, factors such as political and economic stability, quality of life and social cohesion will become increasingly important. Our ability to attract investment will largely depend on our capacity to offer an attractive living and working environment – to provide a stable and equitable setting which fosters innovation and entrepreneurial endeavour.¹⁰

**Key Trends Driving Social Exclusion In Australia**

**Widening income differentials**

The hollowing out of Australia's income profile is observable using a variety of measures including individual, family and household income 'units'. It is important to consider the growth of income inequality using various units because changes in the income profile are likely to be influenced by parallel changes in the socio-demographic characteristics of Australian society. For example, the ageing of the Australian population is likely to be an important factor in the rapid growth in the number of individuals with lower incomes. Similarly, changing household/family structures (e.g. growth of single parent families) are likely to play a major role in the growth of low income households/families.

Analysis of individual incomes over time suggests that different sectors of the Australian population have experienced variable shifts in real after-tax-incomes. Figure 2.5 illustrates the absolute and percentage changes in individual incomes between 1982 and 1993-94 according to household decile ranking. Those people at the top and those at the bottom of the income distribution have fared better than

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⁸ Taylor (1998)
⁹ Gibbins (2000)
¹⁰ Spiller (1999)
those in the middle. Rises in market incomes are likely to be the principal factor behind the income increases at the top of the income distribution, while increases in social security payments explain the growth of incomes for those at the bottom of the spectrum.\textsuperscript{11}

Figure 2.5

\textbf{Average dollar and percentage changes in income (real equivalent disposable household income): individuals, 1982 to 1993-94.}

\begin{figure}[h]
\centering
\includegraphics[width=0.5\textwidth]{figure2.5}
\caption{Average dollar and percentage changes in income (real equivalent disposable household income): individuals, 1982 to 1993-94.}
\end{figure}

Source: King (1999)

Increases in social security payments have tended to mask a sharpening inequality of market incomes in Australia. Figure 2.6 demonstrates the disparate rates of growth in the wages earned by people in full-time employment. Those workers at the upper end of the wages distribution have experienced a far higher increase in real wages than those at the lower end. In fact, those workers whose earnings are less than 50\% of the median wage experienced a decline in wages in real terms between 1986 and 1993/94.

\textsuperscript{11} King (1999)
The widening income distribution in Australia is also observable in terms of household incomes. The number of households at both the upper and lower ends of the income spectrum has increased rapidly in recent times, but there has been very little growth in the number of households with mid range incomes.

Figure 2.7 shows the relative growth rates of household numbers by income category between 1986 and 1996.
Not only have the number of high and low income households grown at a far higher rate than middle range income households, but there is a growing spatial concentration of poverty and wealth in Australia. Studies of average incomes in neighbourhoods (census collector districts (CDs) were used as a proxy for neighbourhoods) over time have shown that the gap between household incomes has increased dramatically since the 1970s.\textsuperscript{12} Table 2.3 shows the difference between the average weekly household income in Australian neighbourhoods that have the lowest, median and highest Socio-Economic Status (SES) as ranked by the Australian Bureau of Statistics (ABS).

\textsuperscript{12} Gregory and Hunter (1995)
Table 2.3
Neighbourhood Household Income Differentials (1995$)

<table>
<thead>
<tr>
<th>Census Year</th>
<th>First Percentile to Median</th>
<th>Median to Top Percentile</th>
<th>Bottom to Top Percentile</th>
</tr>
</thead>
<tbody>
<tr>
<td>1976</td>
<td>116</td>
<td>442</td>
<td>558</td>
</tr>
<tr>
<td>1981</td>
<td>175</td>
<td>430</td>
<td>625</td>
</tr>
<tr>
<td>1986</td>
<td>227</td>
<td>620</td>
<td>844</td>
</tr>
<tr>
<td>1991</td>
<td>230</td>
<td>854</td>
<td>1,084</td>
</tr>
</tbody>
</table>

Source: Gregory and Hunter (1995)

As the table above shows, the difference between the average weekly income of households in the bottom one percent of neighbourhoods (by SES ranking) and the income of the median ranked neighbourhoods virtually doubled from $116 in 1976 to $230 in 1991 (figures in $1995). Furthermore, the difference between the average income of median ranked neighbourhoods and those in the top one percent of neighbourhoods rose by a factor of 1.9 from $442 in 1976 to $854 in 1991. The overall gap between the average weekly household income in the lowest and highest ranked neighbourhoods increased by around 1.9 times from $558 to $1,084 during the same period.

As discussed later in this paper, shifts in housing markets and housing tenures have tended to reinforce polarisation in the spatial distribution of the wealthy and the poor.

These trends toward a divergent income profile are also observable at a broader level of spatial analysis. Recent studies suggest that average household incomes vary dramatically between different types of settlements. Average incomes in the capital cities tend to be much higher and growing at a faster rate than other parts of the country (Table 2.4). The apparently strong rate of income growth in rural areas shown in Table 2.4 is in part explained by the relatively low income base of these areas (20% below metropolitan incomes in 1991) and the fact that 1996 was a relatively good year for the agricultural sector in some parts of Australia. Lloyd, Harding et al. (2000)
Extract from PIA 2001 Policy on Liveable Communities

reflects the aggressive adoption of high technology farming techniques and management practices with the ‘shaking out’ of more marginal enterprises.
The increasing level of income disparity is also observable at the regional level of analysis. Table 2.5 illustrates household income distribution by region in 1991 and 1996. The hollowing out of the income spectrum is clearly apparent across all regions of Australia, with growth being experienced in the upper and lower income brackets and a decline in the middle range income groups.

However, there is some regional variation in this overall trend. The growth of low income households is less pronounced in the capital cities than in other regions (excluding rural areas where, as noted, income trends are likely to be significantly affected by the restructuring of farming businesses, commodity prices and climatic conditions). Correspondingly, the capital cities also show a higher rate of growth in the higher income brackets than other regions. The rate of decline of middle range income households is relatively consistent in all areas if the lower and upper middle bands are considered together (-3.0 to -3.3% excluding rural areas). However, rural towns appear to be experiencing particularly sharp decline in the lower-middle income category, while the capital cities showed a pronounced drop in the upper-middle income bracket.
Table 2.5
Proportion of households within given income ranges, by region.

<table>
<thead>
<tr>
<th>Income Group</th>
<th>Capital Cities</th>
<th>Major Urban Areas</th>
<th>Regional Towns</th>
<th>Rural Towns</th>
<th>Rural Areas</th>
<th>All Regions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low &lt;$15,600p.a.)</td>
<td>% change</td>
<td>% change</td>
<td>% change</td>
<td>% change</td>
<td>% change</td>
<td>% change</td>
</tr>
<tr>
<td>1991</td>
<td>18.2</td>
<td>22.3</td>
<td>24.2</td>
<td>27.1</td>
<td>22.9</td>
<td>20.2</td>
</tr>
<tr>
<td>1996</td>
<td>20.0</td>
<td>25.0</td>
<td>26.7</td>
<td>30.0</td>
<td>23.3</td>
<td>22.1</td>
</tr>
<tr>
<td>Lower middle ($15,600-$36,400p.a.)</td>
<td>-0.7</td>
<td>-1.3</td>
<td>-1.3</td>
<td>-2.3</td>
<td>-1.4</td>
<td>-1.0</td>
</tr>
<tr>
<td>1991</td>
<td>31.5</td>
<td>36.0</td>
<td>38.9</td>
<td>43.1</td>
<td>41.3</td>
<td>34.3</td>
</tr>
<tr>
<td>1996</td>
<td>30.8</td>
<td>34.7</td>
<td>37.6</td>
<td>40.8</td>
<td>39.9</td>
<td>33.3</td>
</tr>
<tr>
<td>Upper middle ($36,400-$78,000p.a.)</td>
<td>-2.3</td>
<td>-2.0</td>
<td>-2.0</td>
<td>-1.0</td>
<td>-2.3</td>
<td>-2.0</td>
</tr>
<tr>
<td>1991</td>
<td>37.7</td>
<td>33.7</td>
<td>31.2</td>
<td>26.2</td>
<td>29.3</td>
<td>35.2</td>
</tr>
<tr>
<td>1996</td>
<td>35.4</td>
<td>31.7</td>
<td>29.2</td>
<td>25.2</td>
<td>29.4</td>
<td>33.2</td>
</tr>
<tr>
<td>High (&gt;=$78,000p.a)</td>
<td>% change</td>
<td>% change</td>
<td>% change</td>
<td>% change</td>
<td>% change</td>
<td>% change</td>
</tr>
<tr>
<td>1991</td>
<td>12.6</td>
<td>8.0</td>
<td>5.7</td>
<td>3.6</td>
<td>6.6</td>
<td>10.3</td>
</tr>
<tr>
<td>1996</td>
<td>13.9</td>
<td>8.6</td>
<td>6.5</td>
<td>4.1</td>
<td>7.4</td>
<td>11.3</td>
</tr>
</tbody>
</table>

Source: Lloyd et al. (2000)

The overall inequality of income distribution in Australia is perhaps best illustrated by comparing the share of total income received by different income quintile groups. If there were no income inequality, then each quintile would receive 20% of the total income. Table 2.6 however, clearly shows that Australia, in 1995/96, was far from this situation. The lowest quintile of the income distribution received less than 6% of the total income according to a variety of income ‘unit’ measurements. By contrast, the highest quintile accounted for more than 44% of the total income on all definitions of income units.

Table 2.6
Income received by people (a) in different per capita quintiles of income distribution by sharing unit type, 1995/96.

<table>
<thead>
<tr>
<th>Income quintile</th>
<th>Share of total income</th>
<th>Average per capita income</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Income Units</td>
<td>Families and single people (b)</td>
</tr>
<tr>
<td>Lowest 20%</td>
<td>% (5.3)</td>
<td>5.9</td>
</tr>
<tr>
<td>Second</td>
<td>% (10.2)</td>
<td>10.6</td>
</tr>
<tr>
<td>Third</td>
<td>% (14.8)</td>
<td>15.5</td>
</tr>
<tr>
<td>Fourth</td>
<td>% (23.6)</td>
<td>23.3</td>
</tr>
<tr>
<td>Highest 20%</td>
<td>% (46.1)</td>
<td>44.7</td>
</tr>
<tr>
<td>Total</td>
<td>100.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Source: ABS (1999a)

As mentioned earlier, this level of income inequality can have negative economic impacts. A detailed study of OECD countries conducted by the World Bank found that the higher the share of the
national cake owned by the richest 20 per cent of the population, the lower the rate of long term economic growth.¹⁴

Employment restructuring

The increasing level of income inequality in Australia reflects a variety of important shifts that have occurred in the nation’s pattern of employment during recent decades. Persistently high unemployment is the most obvious of these changes, but a range of other trends are also evident including: increases in the level of part-time and casual work; growing participation of women in the workforce; the decline of traditional employment sectors such as resource based industries and ‘factory floor’ manufacturing; and the rise of the services sector as the key area of employment growth.

Australia, like most developed nations, has experienced an increasing rate of unemployment in recent decades (Figure 2.8). During the late 1960s and early 1970s, the Australian workforce effectively enjoyed full employment, but since that time the unemployment rate has climbed to a peak of 11% in 1992/93 and then dropped slightly to around 8% in 1998/99. In addition to this rise in the overall unemployment rate, the duration of unemployment also appears to have increased over time. In 1973 the average duration of unemployment was around 9.7 weeks, by 1989 the figure had risen to 44.5 weeks and in 1996 it sat at around 50 weeks.¹⁵ Throughout the 1990s around one third of all unemployed people in Australia had been out of work for more than a year.¹⁶

¹⁴ Steketee (1999)
¹⁶ ABS (1999a)
The rising level of unemployment in Australia has had variable impacts. Certain groups within the population such as young people, immigrants, and the indigenous community experience particularly high levels of unemployment (>30% in some instances). Moreover, unemployment also tends to be spatially concentrated, with chronic unemployment being experienced in various pockets scattered throughout both urban and regional areas of the country. Regions such as Fairfield-Liverpool in Sydney, the Illawarra region (NSW), inner western Melbourne, the LaTrobe Valley (Victoria), Whyalla (South Australia), Burnie-Devonport (Tasmania) and a range of others suffer from particularly high levels of unemployment.

Another key trend in the changing pattern of employment in Australia has been the decline in the number of full-time jobs and a concomitant rise of part-time and casual work (see Figure 2.9). The number of people undertaking 15 hours or less of paid work per week grew rapidly during the late 1980s and early 1990s. However, at the other end of the spectrum, the number of people working more than 40 hours per week has also risen. These trends suggest that a pattern of ‘overworked’ and ‘underworked’ employees is beginning to emerge in Australia. There is a growing polarisation developing.
between those people working longer hours and the even greater number who have limited paid work or none at all.\footnote{17}

These patterns vary according to gender. Despite a decline in the overall proportion of men who have paid work, those who do, appear to be working longer hours. By contrast, the proportion of women with work has increased over time, but this is largely a result of increasing participation in part-time or casual work.

Figure 2.9

Employment/population ratio indexes (1964=100)

\begin{figure}
\centering
\includegraphics[width=\textwidth]{employment_population_ratio.png}
\caption{Employment/population ratio indexes (1964=100)}
\end{figure}

Many of the employment trends discussed above reflect the broader dynamics of Australia's shift to a service-based, knowledge driven economy that is linked to global markets. As discussed in earlier sections of this report, Australia's traditional employment sectors - resource-based industries and manufacturing - have experienced an extended period of decline resulting in a large numbers of workers being laid off throughout the country. At the same time, the services sector has experienced ongoing period of job growth, particularly in

\footnote{17 Probert (1993)}
terms of ‘knowledge-based’ industries that involve the collection, manipulation and distribution of information.¹⁸

This shift towards a knowledge economy has exacerbated the problems of income polarisation in Australia. Those workers who trade in intellectual creativity are enjoying rapidly rising salaries and greater control over their employment prospects. By contrast, traditional workers, whose skills qualify them for more basic manual jobs or clerical tasks are suffering from fewer job opportunities, casualisation of their employment terms and slower growth in real wages.¹⁹

Again, the widening gap between the knowledge workers or ‘symbolic analysts’ and the ‘rest’ of the Australian population has a distinct spatial pattern. Inner city, globally connected regions (particularly Sydney and Melbourne) appear to be attracting disproportionate numbers of knowledge workers while traditional production and rural centres continue to suffer from low incomes, poor skills/education and high levels of unemployment.²⁰ Those areas with low proportions of knowledge workers and ‘enterprise households’ (entrepreneurial individuals and families that generate income in their own right) tend to lack the skills base and innovation that these types of people can offer. As a result, these communities will struggle to adapt to shifting economic pressures and are likely to become increasingly marginalised as they lag behind more prosperous regions.

Population movements

It is increasingly apparent that population movements are, in themselves, contributing to social exclusion with increasing numbers of disadvantaged people moving to certain geographic areas, either seeking increased economic opportunities or a lower cost of living (or both) or effectively being ‘locked out’ of areas of opportunity. Key locations for the socially disadvantaged include:

- **Inner city areas.** The city core was the prime location for the socially disadvantaged up to the 1970s. In the 1990s most cities

¹⁸ Spiller (1999)
¹⁹ Spiller (1999)
²⁰ NIEIR (1998)
in Australia experienced a revival of their central areas and consequently poverty has generally been pushed outwards. However, pockets of socially disadvantaged households remain, often in public housing estates, or in run-down rental housing such as boarding houses. The concentration of facilities, welfare organisations other social assistance assets in the central and inner city also tend draw the needy to these locations.

- **Outer suburbs.** While not all outer suburbs suffer from locational disadvantage – indeed some have better facilities and services than more central locations – there is evidence that many outer metropolitan locations suffer from serious deprivation in terms of access to a broad range of services and facilities, thereby accentuating the social and economic marginalisation of residents.

- **Rural communities.** Rural communities often suffer from a lack of diversity in their local economy. Many towns are heavily reliant on one major employer or one source of income (e.g. agricultural and mining commodities). As a result, these communities are particularly susceptible to the impacts of economic restructuring such as the widespread closure or rationalisation of both public and private sector organisations and the associated reduction of employment opportunities. The long-term decline in commodity prices has also dramatically reduced the economic base of these areas.

While population decline and reduced services are far from universal in rural towns and regions, there is little doubt that these trends are having a particularly pronounced impact on those people who rely on locally provided services. Wealthier members of these communities are often able to cope with the cutbacks, but those who are poorer, less healthy and less wealthy suffer far more. As a result, the level of inequality within many rural town is rising considerably.

In addition, rural communities are increasingly becoming an attractive location for low-income households because housing is cheaper or public housing waiting lists are shorter. The influx of such households can place increasing pressure on the social services in these areas which are usually already struggling to maintain standards and subject to the cutbacks discussed above.
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- **Rural and remote indigenous communities.** The traditional lands of indigenous communities and the settlements created under past aboriginal ‘protection’ and cultural assimilation policies often do not align well with regions of economic opportunity. Many of these areas feature very poor access to education, training and jobs, and basic infrastructures like housing, water supply and road access are often primitive or non-existent.

- **Declining industrial towns.** As discussed earlier, the ongoing shift from a primary industry and manufacturing based economy to one which is services driven is having particularly strong impact in certain areas. Traditional industrial towns and certain suburbs in larger metropolitan areas have suffered from dramatic job losses, casualisation of the workforce and consequently an increasing reliance on social security.

The lack of employment opportunities in these areas and a negative public image has resulted in an increasing exodus of population from many of these regions. Again, the combination of these patterns has meant that these industrial communities are becoming increasingly socially and economically isolated from the more prosperous parts of Australia.

- **Emerging coastal welfare regions.** While in many cases poor people are attracted to large cities, there also appears to be a growing number who are fleeing the major urban areas in search of better lifestyles and lower skill employment opportunities. Predominantly, these people are moving to coastal areas with high levels of amenity, favourable climates and growing service industries such as tourism (e.g. Queensland, northern New South Wales and south west Western Australia).

Unfortunately, many of the employment opportunities in these areas are part-time, casual or seasonal and are often poorly paid. Furthermore, many of these regions are unable to provide stable, low cost housing options for these households because many properties are rented as tourist accommodation at highly inflated prices during certain times of the year. As a result, many of these poorer households become reliant on social security payments (at
least for part of the year) and the underdeveloped social support networks in these regions.

The influx of poorer households to these regions is having a dramatic impact on the socio-economic composition of these communities because traditionally, many of these coastal regions have been retirement and tourism destinations. As the poorer, working-age households move into these areas there appears to be an increasing level of social and economic division both within these communities and between them and other parts of Australia.\footnote{Fincher and Wulff (1998)}

**Government responses to inequality and social exclusion**

Social polarisation and exclusion rose to prominence as a government policy issue towards the end of the long boom. In the early 1970s the Whitlam Labor government came to power on the basis of a policy platform which sought to address the increasing spatial manifestation of economic and social disadvantage.\footnote{Spiller (1999)}

The new government established the Department of Urban and Regional Development (DURD), which quickly became one of the key agenda setting agencies of Government. DURD initiated a range of plans and policies which sought to reduce the rising problem of social disadvantage in the major metropolises by promoting decentralisation and redirecting growth into designated regional centres such as Albury-Wodonga and Bathurst/Orange. DURD also established publicly funded land commissions which were intended to provide competition for private land developers as means of maintaining housing affordability. Other initiatives included the funding of the Australian Assistance Plan and the Area Improvement Program which were intended foster community building programs across the nation’s regions.\footnote{Spiller (1999)}

The direct national government approach to urban affairs undertaken by DURD was relatively short lived. The Whitlam
government was dismissed in 1975 and the incoming Fraser government quickly dismantled DURD, replacing it with the less powerful Department of Environment, Housing and Community Development (DEHCD). This new organisation was itself dismantled in 1978 after only two years of operation.\(^{24}\)

The Hawke and Keating Labor Governments of the 1980s and early 1990s revived the role of federal governments in urban affairs through the Better Cities and Regional Development programs (administered by the then Department of Housing and Regional Development). However, while some important progress was made through these programs, they suffered from inadequate funding and the fact that the interventionist approach was not in keeping with the Government’s dominant agenda of micro-economic reform and ‘small government’.

While the Hawke and Keating Governments never took up the extreme positions of the Thatcher and Reagan administrations, Australia’s political balance clearly shifted to the right during the 1980s and 1990s. Ironically the Labor party appeared to be considerably influenced by the ‘hands-off’ approach espoused by the conservative governments in the UK and US. Increased inequality was seen by many political leaders as the unfortunate, but inevitable price of regaining some control over the nation’s economic future in the face of globalisation (see discussion above on ‘competitive cities’).

More recent responses to social exclusion and other urban and regional problems have tended to focus on the extremely disadvantaged in the population. Government fiscal constraints have led to an increasing emphasis on targeted financial assistance to the poor through rent assistance and family allowance payments. At the same time, direct government involvement in the provision of infrastructure (e.g. public housing) designed to mitigate the effects of social exclusion has generally been wound back.

The particular spatial aspects of social exclusion in areas such as public housing estates are largely being dealt with by focussing on concepts such as building community, developing partnerships,

\(^{24}\) Orchard (1999)
creating jobs and ‘changing the landlord’. While these efforts signify an important recognition of the influence that both space and ‘image’ play in the cycle of entrenched disadvantage, some commentators (e.g. Taylor, 1998) suggest that the effectiveness of this approach is limited because these four concepts are currently very narrowly defined. As a result, some efforts to deal with social exclusion have actually aggravated the problem.

The escalation of social exclusion represents one of the most challenging issues for policy makers in the 21st century because phenomena such as globalisation, post-industrialism and e-commerce have the potential to accelerate the processes of social polarisation. These factors are having a dramatic impact on the way resources are distributed between and within countries, offering a seemingly endless array of opportunities for those members of the community that are ‘plugged into’ the processes of global restructuring, but increasingly marginalising those that are not.

However, social exclusion is not necessarily an inevitable outcome of global restructuring. While there is a variety of evidence to support the contention that social polarisation is being exacerbated by the structural changes associated with globalisation, there are also a range of other factors that contribute to the uneven distribution of resources and the disparate ‘life-chances’ of different members of the population. For example, factors such as ethnicity, gender, and housing and welfare policies have a considerable impact on the pattern of social exclusion within Australian society.

Furthermore, the assumption that there is a mono-causal and unidirectional relationship between globalisation and social polarisation implies an economic and technologically determined future in which policy makers play very minor role. This perspective is problematic because there is in fact growing evidence that our future prosperity in the ‘New Global Economy’ depends on our ability to mitigate problems such as social exclusion; that well

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26 Harvey (2000)
28 Gibson, Huxley et.al. (1996)
informed and appropriately directed policy initiatives will play crucial role in our ability to compete in the global context.\textsuperscript{29}

Urban and regional policy initiatives that address the problem of social exclusion will play a critical role in developing an investment environment of this type.

Because social exclusion is increasingly expressed in the physical form of our cities and regional areas, planning professionals are well placed to address it (they are also likely to be some of the ‘first in the firing line’ if the problem of social is not confronted). Urban and regional policy makers and practitioners can offer a range of on-the-ground skills and experience that will be invaluable in terms of dealing with the problem of social exclusion. For example, planners can help mitigate the divisive impacts of economic restructuring through activities such as: opportunities analysis, community consultation, strategy building and brokerage of partnerships.\textsuperscript{30}

It is important however, that the policies and programs be developed in a co-ordinated manner in order to ensure that initiatives operating at different levels do not undermine one another. A national policy framework for dealing with social exclusion will help develop motivation, provide guidance and prevent conflicts and duplication in strategy development and implementation.

**Challenge 4; Affordable Housing**

**A Home of Your Own - Still the Great Australian Dream?**

While Australia has a long tradition of high levels of home ownership (around 70% for the last forty years) there are distinct signs that this pattern is declining.\textsuperscript{31} This decline is occurring in most segments of the population, but particularly amongst the young (<35 years).\textsuperscript{32,33}

\textsuperscript{29} Spiller (1999). See also Cox (1999) and Gibson, Huxley et.al. (1996)

\textsuperscript{30} Spiller (1999)

\textsuperscript{31} Yates and Wulff (1999)
This drop in the overall home ownership rate has occurred despite an increase in the proportion of people who own their home outright. The overall decline, therefore, primarily reflects a substantial drop in the number of people purchasing their homes (Figure 2.10).

The decline in home ownership means that there are an increasing number of households who are competing for private rental properties, traditionally something of a ‘residual sector’ in Australia with rather inelastic supply characteristics (Figure 2.11).

Figure 2.10  
Change in outright ownership and home purchase, 1986-1996

The decline in home ownership levels is likely to reflect a broad range of factors including shifts in the socio-demographic characteristics of the Australian population, variations in interest rates, changing investment preferences, changes in work patterns demanding greater mobility between regions and, of course, changes in affordability.

The affordability of housing in Australia has fluctuated considerably in the last 30-40 years, but overall, there has been a consistent downward trend. Figure 2.12 illustrates a steady rise in the estimated annual income required to purchase a median priced house over time (the peak during the late 1980s and early 1990s reflects the high interest rates during that period).
The rise of housing costs does not, in itself, demonstrate a decline in housing affordability because parallel rises in income can offset the housing cost increases. Figure 2.13 shows that housing prices in Sydney and New South Wales grew far more rapidly than either average weekly earnings or general consumer prices (as indicated by the CPI) between 1983 and 1998. Moreover, the relationship between incomes and housing costs tends to be fairly consistent across the country (Table 2.7).
Figure 2.13
Indexed median housing sale prices in NSW compared with general consumer prices and earnings indices

Source: Holliday (1999)

Table 2.7
Household housing costs and income ($), by tenure type and capital city, 1997/98

<table>
<thead>
<tr>
<th>Tenure type</th>
<th>Sydney</th>
<th>Melbourne</th>
<th>Brisbane</th>
<th>Adelaide</th>
<th>Perth</th>
<th>Hobart</th>
<th>Canberra</th>
<th>All capitals</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Income</td>
<td>Costs</td>
<td>Income</td>
<td>Costs</td>
<td>Income</td>
<td>Costs</td>
<td>Income</td>
<td>Costs</td>
</tr>
<tr>
<td>Owner without a mortgage</td>
<td>1,025</td>
<td>25</td>
<td>807</td>
<td>22</td>
<td>955</td>
<td>27</td>
<td>629</td>
<td>18</td>
</tr>
<tr>
<td>Owner with a mortgage</td>
<td>1,332</td>
<td>269</td>
<td>1,188</td>
<td>207</td>
<td>1,242</td>
<td>201</td>
<td>1,043</td>
<td>174</td>
</tr>
<tr>
<td>Renter-State housing authority</td>
<td>339</td>
<td>59</td>
<td>413</td>
<td>71</td>
<td>399</td>
<td>61</td>
<td>308</td>
<td>60</td>
</tr>
<tr>
<td>Renter-private landlord</td>
<td>1,016</td>
<td>210</td>
<td>773</td>
<td>153</td>
<td>681</td>
<td>147</td>
<td>681</td>
<td>136</td>
</tr>
<tr>
<td>Total renters(c)</td>
<td>850</td>
<td>172</td>
<td>722</td>
<td>138</td>
<td>665</td>
<td>132</td>
<td>530</td>
<td>103</td>
</tr>
<tr>
<td>Total owner and renter households</td>
<td>1,053</td>
<td>138</td>
<td>924</td>
<td>117</td>
<td>959</td>
<td>122</td>
<td>747</td>
<td>98</td>
</tr>
</tbody>
</table>

Source: ABS (1999b)

What Choices for those on Low Incomes?

Figure 2.14 shows that lower income households (disposable income quintiles 1 and 2) have shown a consistent decline in the home purchasing rate. The second income quintile in particular has shown a strong downward trend in the home purchasing rate whereas the
higher income groupings have shown a downward, but variable trend over time.

While the demand for private rental housing amongst lower income groups is growing, the capacity of the private rental market to meet this need appears to be limited. In fact, ABS data suggest that there has been a considerable decline (-28%) in the stock of low cost rental housing in Australia (Table 2.8).  

Figure 2.14
Home purchasers by disposable income quintile

![Bar chart showing home purchasers by disposable income quintile](chart.png)


Table 2.8
Profile of private rental stock in Australia, 1986 and 1996.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$ pw ($1996)</td>
<td>cum. %</td>
<td>cum. stock</td>
</tr>
<tr>
<td>R1 Low</td>
<td>$ 1 - 99</td>
<td>26.2</td>
<td>246,821</td>
</tr>
<tr>
<td>R2 Low-Moderate</td>
<td>$100 - 149</td>
<td>65.6</td>
<td>619,053</td>
</tr>
<tr>
<td>R3 Moderate-High</td>
<td>$150 - 199</td>
<td>86.1</td>
<td>812,334</td>
</tr>
<tr>
<td>R4 High</td>
<td>$200 and over</td>
<td>100.0</td>
<td>943,643</td>
</tr>
<tr>
<td>Total stock</td>
<td></td>
<td>943,643</td>
<td>1,267,864</td>
</tr>
</tbody>
</table>

Mean rent $139  $155  11.5


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33 Yates and Wulff (1999)
These trends are forcing lower income households, many of whom already suffer from ‘housing related poverty’, to compete with higher incomes households for private rental dwellings. Gentrification of traditionally low cost housing areas is a problem in many parts of Australia and has forced many low income households into marginal urban and rural areas which have poor services and facilities, thereby reinforcing the social and economic disadvantage they experience.

**Housing Stress and Housing Poverty**

The National Housing Strategy, (1992) suggested that households spending more than 30% of their income on housing costs should be considered to be suffering from housing stress. Figure 2.15 clearly shows that the proportion of low income households under housing stress is far higher than the overall level of housing stress in the population. However, it also shows that the level of housing stress varies considerably by location and by tenure type. For example low-income home buyers in NSW have the highest rate of housing stress, whereas in Victoria and Queensland low income renters are the most susceptible to housing stress.

Figure 2.15
**Proportion of households in housing stress, by State, May 1995-February 1998.**

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34 Yates and Wulff (1999)
35 Fincher and Wulff (1998)
36 AHURI (1998)
The high level of housing stress discussed above is paralleled by an increase in the level of ‘housing related poverty’. In 1975 the Commission of Inquiry into Poverty developed the ‘Henderson Poverty Line’ (HPL) which provided a measure of the income required for a basic standard of living. Two poverty lines were defined, one related to the household position before housing costs and the second taking into account these costs.

With reference to the HPL, updated for current prices, Figure 2.16 shows that the before and after housing poverty rates have increased over time. By 1996 an estimated 11.5% of the Australian population were suffering from after housing poverty.

**Figure 2.16**
*Before and after housing poverty, August 1973 and March 1996.*
Homelessness

Homelessness is by nature difficult to measure accurately because official statistical surveys such as the Census generally rely on people having a relatively permanent place of residence. It is difficult, therefore, to compare the prevalence of homelessness over time. However, it is generally accepted, that the number of homeless people has increased during the last 20-30 years.37

The 1985 federal study into Homelessness and Inadequate Housing estimated that there were approximately 40,000 homeless people and a further 60,000 at risk of becoming homeless.38 In 1996/97, the Australian Institute of Health and Welfare (AIHW) estimated that at least 100,900 people considered homeless under the definition used by the Supported Accommodation Assistance Program (SAAP) received assistance from social welfare agencies throughout Australia.39 However, it is likely that these figures significantly underestimate the extent of homelessness in Australia because only those who seek assistance are included in these statistics.

37 Bourke (1999)
38 Bourke (1998)
39 ABS (1999b)
Indigenous Housing

Indigenous Australians are by any economic or social measure significantly disadvantaged. This is compounded in many cases by their living environments, which are often a threat to basic health.

Readily available data from the 1991 Census highlights in broad terms the extent of housing disadvantage experienced by Aboriginal and Torres Strait Islander people in comparison with other Australians. For example, Table 2.9 shows that the rate of home ownership amongst Indigenous households is much lower than the overall rate for all Australian households.

The proportion of Indigenous households living in public housing is particularly high compared to the overall Australian population (31% v 6.8% in 1991).

Table 2.9
Indigenous household tenure patterns compared to Australian totals, 1991.

<table>
<thead>
<tr>
<th></th>
<th>Indigenous People</th>
<th>All Australians</th>
</tr>
</thead>
<tbody>
<tr>
<td>Owners and purchasers</td>
<td>28.0%</td>
<td>67.0%</td>
</tr>
<tr>
<td>Public renters</td>
<td>31.0%</td>
<td>6.8%</td>
</tr>
<tr>
<td>Private renters</td>
<td>33.0%</td>
<td>20.0%</td>
</tr>
<tr>
<td>Homeless or overcrowded households</td>
<td>21.0%</td>
<td>3.6%</td>
</tr>
</tbody>
</table>


More recent Census data shows that the rate of home ownership amongst of Aboriginal and Torres Straight Islander households increased slightly to 30.8% by 1996. However, the level of both public and private renting also increased amongst Indigenous households with each form of tenure accounting for 36.5% and 36.9% respectively in 1996.40

As Table 2.9 suggests, a large proportion of Indigenous households live in overcrowded housing conditions. The extent of this situation is clearly evident when the average size and occupancy rates of Indigenous households are compared with the overall averages for

40 ABS (1999b)
Australia. Figure 2.17 shows that Indigenous households generally have more residents than other households, averaging 3.7 persons compared to the figure of 2.7 residents per household for Australia overall. This discrepancy is particularly pronounced in the Northern Territory and Western Australia where Indigenous households tend to be much larger than other types of households. In addition to having more residents, Indigenous households also tend to have a much higher level of bedroom sharing. Of the Indigenous households where the number of bedrooms was stated, 7.5% had more than 2 persons to each bedroom while the figure the overall figure for Australia was only 1%.

Figure 2.17
Average household size and bedroom occupancy by State

<table>
<thead>
<tr>
<th>Average number of persons per household, 1996.</th>
<th>More than two persons per bedroom, 1996</th>
</tr>
</thead>
<tbody>
<tr>
<td>NSW</td>
<td>VIC</td>
</tr>
<tr>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>

(a) Includes all Indigenous and non-Indigenous households in the household breakdown group. Values one and Other not estimatable households excluded. (b) Includes all Indigenous and non-Indigenous households in the household breakdown group.

Source: ABS (1999b)

Despite the larger size and greater occupancy rates of Indigenous households, the average incomes of Indigenous households tend to be considerably lower than other Australian households. In 1996 the median weekly income for Indigenous households was $90 lower than the overall Australian average (i.e. $540 compared to $630). The level of income discrepancy is most pronounced in the Northern Territory and the ACT where the median Indigenous household income was approximately $200 per week lower than the total households median income. Although Indigenous households in the Northern Territory have the highest median income of all States and Territories, this is explained by the fact that the NT has the largest of average Indigenous household size. A comparison with individual income averages reveals that the median personal income of
Indigenous people in the Northern Territory is only 47.2% of the median income for the total population in the Territory.41

The characteristics of Indigenous housing discussed above clearly illustrate the relative disadvantage experienced by Australia’s Aboriginal and Torres Straight Islander people. The lower levels of home ownership, higher rates of rental, higher occupancy rates and lower incomes which characterise Indigenous households mean that they are far more likely to suffer housing stress than any other group in the Australian population. Furthermore, other problems such as the poor quality and servicing of Indigenous housing stock, high rates of unemployment, poor health and low education and skill levels compound the disadvantage and isolation of Indigenous Australians.

Policy Responses to Date

The various strategies pursued by governments to improve housing affordability, particularly for lower income groups, can be grouped into four categories;

- Measures to lower housing production and delivery costs through improvements in housing market efficiency;
- Housing finance and tenure innovations which improve access to affordable housing without the provision of subsidies;
- The provision of Commonwealth subsidies to bridge the 'affordability gap', that is, the difference between the market price or rental of appropriate housing and the amount which a low income household can afford.
- Measures which tap sources other sources to fund these subsidies.

Improving housing market efficiency

Measures to improve market efficiency can include;

- Ensuring that consumer protection and other regulations do not unwittingly create uncompetitive conditions in the housing production and transfer industries;

41 ABS (1999b)
Lifting labour productivity in the housing industry through more flexible work practices;  
Adopting asset transfer taxation arrangements which promote housing turnover and efficient use of the available stock;  
Providing better market intelligence to housing producers and consumers alike;  
Ensuring the smooth supply of developable land for both the greenfields and urban renewal industries;  
Making sure that site planning, building and infrastructure standards do not create unnecessary additional costs; and  
Running efficient development approvals processes which minimise delays and the associated investment risks.

A number of States (Queensland, Victoria, NSW and Tasmania) have revamped their planning legislation with a view to improving outcomes on the last three of these points. In part, these reforms reflect initiatives which were taken by the Commonwealth during the 90's to facilitate more efficient approval processes (e.g. Local Approvals Review Program or LARP and the Integrated Local Area Planning Program (ILAP))

The Commonwealth and the States are currently engaged in a consultative process aimed at 'harmonising' the planning systems across Australian jurisdictions. But this appears to be pre-occupied with approval processes and has not tackled more substantive issues of relevance to affordable housing. Land release for new residential development is one area which could well benefit from nationally co-ordinated reform. Some jurisdictions continue to operate prescriptive systems which may achieve reasonable co-ordination of infrastructure delivery in newly developed areas, but with the risk of creating serious land shortages from time to time. The Queensland model where developers may take up out of sequence opportunities provided they are prepared to meet the extra costs of accelerating infrastructure has potential for general application across the country.

Most of the other matters listed above have largely been left to National Competition Policy review processes, and have no particular focus on housing affordability.
Finance and Tenure Innovations

These measures, in turn, lend themselves to a three-way categorisation.

Firstly, there are mechanisms which redistribute the finance burden to later periods in the home purchase process. The current low interest rate environment, and greater competition amongst mortgage originators, appear to have lessened the need for Governments to involve themselves in the low start loans business. But the situation needs to be monitored.

'Sweat equity' approaches make up the second category. In these arrangements, lower income households can gain an affordable price (or lease cost) by taking up a run down or semi-completed (shell) dwelling, and then use their own labour to bring the accommodation up to their desired standard. There may be scope for Government to pilot sweat equity schemes to demonstrate market opportunities for the private sector.

Finally, the access cost of appropriate accommodation for lower income households can be lowered through tenure innovations. These can include sale of longer term leases as opposed to freehold, or the introduction of more customised leases and licences which, for example, require the buyers to share capital gains with a project sponsor. Such models abound in the retirement and leisure housing industries and could be capable of more widespread application. Again, Government working in partnership with the private sector, could pilot some of these applications.

Explicit Commonwealth and State Subsidy Programs

For over 50 years, the provision of public housing under the Commonwealth - State Housing Agreement (CSHA) has been a mainstay of Australia's national response to the affordable housing issue. Housing produced under the Agreement is owned by State and Territory authorities and is generally let to eligible tenants at an affordable rent i.e. between 25% and 30% of income.

The CSHA is regularly renegotiated. In its earlier decades, new agreements were struck every 5 years or so. During the 90's revisions
and adjustments occurred more frequently. The successive generations of the Agreement have reflected the changing role of public housing and the prevailing political philosophies. Initially, the CSHA was directed at accelerating the production of housing in support of post-war industrialisation of the country. Large public housing estates were built close to major car factories, steel mills and other heavy manufacturing enterprises, particularly in South Australia and Victoria. The ‘welfare housing’ role of public housing gradually became more prominent through the 60’s and 70’s, when the main housing policy thrust of governments was the promotion of home ownership. Public housing provided a safety net for those who could not afford a home of their own. The early 80’s saw a renewed flowering of public housing as a mainstream housing option. Cost rents rather than market rents were levied, allocations were made primarily on a ‘wait turn’ rather than needs basis and many policy makers of the time envisaged a public housing sector comprising perhaps 30% or more of the market, not only providing housing choices for people from all walks of life but ensuring that ‘exploitative’ prices in the private rental and purchase markets could not be set.

Today, public housing has once again reverted to a largely welfare or safety net role.

While the CSHA has been a core feature of housing assistance delivery, Commonwealth Governments have been active in providing direct income support to low income households in the private rental sector since the early 1970’s. This Rent Assistance is paid as an untied income supplement to eligible households. The rate of payment is determined by the Government as part of annual budget deliberations. Unlike public housing, where tenants are guaranteed affordable rents, Rent Assistance recipients may still be paying considerably more than conventional benchmarks for affordable rents, even though the payments rise to some extent with increases in rent.

Rent Assistance payments by the Commonwealth now outstrip total Commonwealth - State outlays on public housing (Figure 2.18).

Figure 2.18
Outlays on Public Housing and Rent Assistance
Current policy regarding national housing assistance for low income households has been substantially shaped by three events;

- the (1992) final report of the National Housing Strategy, commissioned by the Commonwealth Government;
- the 1993 report of an Industry Commission inquiry into public housing programs; and
- the deliberations of the Council of Australian Governments (COAG) in 1995.

The National Housing Strategy was significant for promoting the concept of universal affordability benchmarks. Implicitly, it highlighted the issue of horizontal inequity between recipients of Rental Assistance in the private sector and public housing tenants. The effective subsidy enjoyed by the latter tended to be significantly greater than that delivered to their counterparts in private rental housing, even if their income circumstances were the same.

In its inquiry, the Industry Commission found that public housing was cost effective over the medium to long term and addressed private rental market failure, related to affordability, discrimination and lack of security of tenure. However, the Commission also highlighted the inequity of people living in public housing receiving
higher levels of housing subsidy than private renters in receipt of Rent Assistance. In addition, the Commission said there was a need for governments to clarify their housing objectives, provide housing assistance under arrangements that improved accountability and transparency and better delineate the roles of each level of government.

At the request of COAG, Housing Ministers reported on housing policy reforms to address the issues identified in the Industry Commission’s Report. In April 1995, COAG endorsed new roles and responsibilities - the Commonwealth would be responsible for housing subsidies and affordability; and the States and Territories would take responsibility for public housing management and delivery. This was a dramatic decision which implied that the States would run their public housing programs on commercial lines and that the Commonwealth would pay for the ‘rental rebates’ provided to tenants in government owned housing. The historic nexus between capital and subsidy funding embedded in the CSHA was to be broken.

This, however, has not occurred. Despite repeated reaffirmation of the principles declared at the 1995 COAG meeting, public housing funding arrangements remain much as they have been for the past 2 or 3 decades. A number of theories can be proffered as to the inaction on these structural reforms. One is that the States would have no sustained incentive to invest in public housing if the Commonwealth assumed responsibility for topping up incomes regardless of the sector within which tenants might be housed. In political terms, the blame for any affordability problems encountered at State level could be easily shifted to the Commonwealth.

While the wholesale changes foreshadowed in 1995 have not come to pass, the debates initiated by the National Housing Strategy and the Industry Commission report have certainly redirected public housing programs towards a tighter welfare role.

Another important impact of the National Housing Strategy, the Industry Commission Inquiry and the subsequent deliberations of COAG and Housing Ministers has been the higher profile given to ‘community housing’ programs. While community housing is generally owned by governments, it differs from public housing in
that tenancy and asset management is undertaken by tenants, community based groups or not for profit organisations, as opposed to a government agency. Community housing generally features similar criteria for targetting of housing assistance as public housing but management philosophies and practices can differ markedly.

As a relatively recent addition to the Australian housing policy landscape, community housing still accounts for only a minute fraction of the total dwelling stock Australia wide. Nevertheless, this form of social housing figures prominently in the rhetoric of governments of all persuasions. Promotion of community housing addresses four broad objectives;

- to counteract monopoly in the provision of low income or ‘welfare housing’;
- to provide a better service to low income tenants with special needs;
- to capture additional community development and personal development benefits in the delivery of shelter services; and
- to facilitate off - budget financing of low income housing.

Alternative Ways of Funding Housing Subsidies

While the national public housing, Rent Assistance and community housing assistance programs involve annual outlays of more than $3.2 billion, serious shortfalls in affordable housing still remain - especially in those inner and middle metropolitan markets which offer excellent access to jobs, training and community facilities. A number of jurisdictions have looked for alternative ways of funding housing affordability subsidies to supplement the mainstream programs.

Three main funding sources are evident in Australian practice;

- Through **local government**. Some councils have chosen to directly dedicate some of their rate income to the provision of affordable housing, or indirectly through the provision of land at less than its commercial value.
- Through **charities**. Many churches, community based groups and philanthropic organisations provide capital for the provision
of affordable housing either in their own right or in partnership with government and private sector bodies.

- Through the **planning system**, by requiring developers to contribute to the stock of affordable housing.

With respect to the last of these, the Planning legislation in at least one State (Queensland) rules out regular 'infrastructure charge type' development contributions for affordable housing. Recent Court decisions in NSW have cast doubt on whether regular Section 94 contributions in that State can be taken for affordable housing (although the State Government is considering legislative amendments to confirm the right of Councils to levy developers for affordable housing).

In any case, alternative approaches can be taken to the use of planning requirements to achieve affordable housing objectives, including the concept of "inclusionary zoning". This relies on the very broad definition of 'environmental values' and the scope of planning in most Planning Acts.

In general, 'environment' in these Acts is defined to include such matters as social fabric and community conditions, as well as factors to do with the built and natural environment. Consequently, if a Council were to see social mix as an integral part of the environmental quality of an area, it may well be legally justified in devising planning measures to retain and sustain these environmental values. Such measures could involve requirements on developers to incorporate a proportion of affordable housing within their projects or, alternatively, provide cash payments so that this obligation can be met elsewhere in the neighbourhood. Technically, the latter payments would not be defined as 'development contributions' for infrastructure, but would be more like the obligations faced by developers in heritage areas. They generally have to incur higher costs in the interests of maintaining streetscape, views or landform characteristics which define the environmental quality of the area.
Challenge 5; Australia's Diminished Ecological Integrity

On a large number of fronts Australia's environment is facing seemingly insurmountable issues. Land clearing, loss of biodiversity, water quality and quantity, coastal development, soil loss and dryland salinity are just some of the issues that call out for a national approach in partnership with public and private sector.

The very real link between sustainable national growth and development and the management of our land and water resources is becoming increasingly apparent. Moreover, the demand for rising standards of living and improved social outcomes is ultimately tied to the maintenance of ecological integrity and our unique biodiversity. Realization and understanding of these links is increasingly being fostered at the regional and local level in policy making and in on-ground initiatives. Landcare, an Australian invention, is now embraced by a large sector of the farming community who have seen the value of working cooperatively on a catchment basis.

Nevertheless, there are large segments of society that are yet to understand the significance of these issues for Australia's future prosperity. National settlement trends, issues surrounding regional viability, the type of strategic planning undertaken and infrastructure development all need to reflect a better understanding of the environment and allocation of natural resources. Themes for inquiry which emerge from such an agenda include:

- the acceptability or otherwise of high growth, high resource use and high waste economic strategies;
- the impact of population growth in and around the high rainfall high quality agricultural areas of south eastern Australia;
- the settlement impacts of long term unsustainable land management and agriculture; and,
- the disjointed policy response to “environmental” issues and resource management, and the slow acceptance of triple bottom line accounting.  

42 “Triple Bottom Line Accounting” seeks to report on the social and environmental impacts of an enterprise as well as its financial performance. Formal techniques for such reporting have been
The presentation of information which links productivity, community sustainability and current scientific research into land degradation and ecological decline is often contentious, both locally and across urban and non-urban Australia. Certainly within the media, such information is posited as operating only at the extremes of the issue; within discussions such as the carrying capacity of Australia, more extreme population policy perspectives and the in the general context of decline in the “bush”. While conversely the environment is strongly linked to urban pollution, tourism and national parks.

The value of the environment as a resource - tourism, sustainable harvesting - has enabled conservation to be viewed more widely within the community, particularly in regions that see potential benefits (Industry Commission: 1997). Similarly, wider understandings of sustainable land and water management have resulted in a willingness to participate in activities and to accept controls that, especially in rural areas, were previously anathema to social and cultural values. In an urban context too, healthy local environments and global problems have linkages, such as that between urban pollution and global warming.

The Australian economy and its settlement patterns in metropolitan and regional areas drives resource dependence disproportionately when compared to many other developed and developing societies. Dependence on agricultural and mineral exports, as well as the form and structure of Australian communities, creates a heavy reliance on natural resources. Hence the environment debate is about population and settlement, about the flow and production of energy, material and waste and, importantly, about attitudes to goals of sustainability and biodiversity.

Population and Settlement

Debate about population levels and settlement patterns in an environmental management context involves two factors. Firstly, there is the debate about population levels and the impact of growth pioneered by the Shell Oil Co. and are now in widespread use across the private and government sectors in the US and EU.
on the local and global environment. Secondly, there is the less often
discussed impact (or potential impact) of declining resource integrity
on resource dependent communities.

Population policy debate in Australia is limited, either in relation to
immigration and migration between regions. Discussion of
“ecological carrying capacities” is too easily intertwined with a race-
based immigration debate, while constraints on population
movement between regions is both socially unacceptable and
economically naïve (and were so even during past “closer
settlement” policies). In addition, questioning of the impact of
general living standards and the growth imperative are largely
beyond the realm of acceptable political debate.

In relation to rural and regional areas, many of the changes in
population and settlement patterns that relate to the declining
resource base are tied up with overall rural restructure. Declining
rural population and decreasing agricultural employment are seen as
largely arising from changes to farm size and farm practice, the
centralisation of transport and value-adding and the deregulation of
traditional commodity markets. The capacity of farm business to
provide the stewardship, land management and capital investment
to change farm practice is linked to these overall trends and levels of
certainty. Of course this pattern is itself disparate, with many
regions benefiting from high levels of new investment and a focus on
sustainable agriculture. Nevertheless, questions remain as to the long
term sustainability of any major agricultural system in Australia.

The sense that population displacement is already resulting purely
from ecological limitation is not readily developed in existing
research and commentary (not withstanding environmental histories
focussing on unsustainable cropping and grazing and the
inappropriate closer settlement policies of the past). However, the
limitations presented by poor water quality and availability,
declining soil structure and general perceptions of “environmental
decline” are (from time to time) presented as serious future threats to
major population centres in both mainstream media and other
sources.
Production, Energy Use and Waste Flows

Land degradation and the pollution and degradation of surface and groundwater are interrelated issues affecting vast areas of Australia, with serious consequences for agricultural sustainability. The exploitation of energy and mineral resources and the high levels of energy and resource use that support our economy and lifestyle create an ongoing dependency, and a generally poor willingness to invest in change.

Specific production and resource use issues include:

- pollution in urban and rural environments;
- the effect of agricultural waste streams on water quality and the health and environmental impacts of this;
- the effects if urban and industrial waster streams on inland waterways, the coastal/ marine environment and local and regional air quality;
- the use and allocation of agricultural and urban water resources; and
- rural land practices that include land clearing and overgrazing.

Responses to these problems are varied in approach and success. Examples such as the proliferation of large and small timber plantations have obvious long term benefits to general forest resource allocation decisions, while they present challenges to local communities and local environments. Increased irrigation efficiency through infrastructure investment and pricing decisions has enabled greater productivity and reduced local environmental impacts, although the long term implications of continued water use on the ecology of, say, the Murray-Darling and the water supply of Adelaide remain unanswered.

Figure 2.19: Median Monthly Flow: River Murray downstream of Yarrawonga Weir, (MDBC)
Clearly these problems have both a policy-making/political and an attitudinal dynamic. Exploration of both is crucial.

Understanding the Environment

Managing the “environment” and “natural resources” is of considerable interest from a social and economic perspective. The intrinsic values of biodiversity, pollution, landscapes and nature conservation sit alongside land and water management, and the allocation of forestry, water and fisheries resources. Moreover, global environmental problems are increasingly a component of policy making and public perception. Despite this, there is a tendency in Australian public policy and debate to see the “environment” as a sectional interest, outside of economic and community wellbeing.

Surveys have repeatedly shown that the community views air pollution, global warming and forest management as the environmental issues of most concern. The fact that “land degradation” tends to be seen as less important reflects poor recognition of the linkages between the resource economy and environmental ethics (Table 2.10).

Table 2.10
Ranking of Environmental Concerns, ABS 1992
Extract from PIA 2001 Policy on Liveable Communities

<table>
<thead>
<tr>
<th>Issue</th>
<th>Response Ranking</th>
</tr>
</thead>
<tbody>
<tr>
<td>Air pollution</td>
<td>40</td>
</tr>
<tr>
<td>Forest-related issues</td>
<td>33</td>
</tr>
<tr>
<td>Ocean pollution</td>
<td>32</td>
</tr>
<tr>
<td>Freshwater pollution</td>
<td>30</td>
</tr>
<tr>
<td>Ozone</td>
<td>29</td>
</tr>
<tr>
<td>Industrial waste</td>
<td>21</td>
</tr>
<tr>
<td>Loss of species</td>
<td>19</td>
</tr>
<tr>
<td>Greenhouse</td>
<td>17</td>
</tr>
<tr>
<td>Land degradation</td>
<td>15</td>
</tr>
</tbody>
</table>

Importantly, this division of perceptions is reflected in the structure of policy making and planning in Australia. The Commonwealth plays an important role in addressing global environmental responsibilities. The states undertake land management and conservation and delegate responsibilities to local government and other agencies.

Dryland salinity has emerged as probably the most significant, widespread and long term natural resource management issue facing Australia. It is now recognised by the Murray Darling Basin Commission as their highest priority task. While there has been a substantial focus on salinity’s current and likely future effects on agricultural production in Australia’s largest river system, its impact is potentially greater in other geographical areas. It is now estimated that a six fold increase in areas affected by salinity will mean that about one third of the Western Australian wheatbelt will be taken out of production over the next generation. WA now leads the nation in terms of a co-ordinated State Government response committing itself to fight the causes of dryland salinity. Increasingly it is being recognised that the greatest long term financial impacts from dryland salinity may not be on agriculture but rather on the life shortening effect on urban infrastructure such as roads, bridges, drainage systems and parks. Urban impacts in turn mean higher costs for residents in terms of damaged house foundations and underground pipes and private gardens. While such costs are still largely seen as issues for country towns, major impacts are likely to be felt in some larger regional centres and metropolitan areas. Already the City of Wagga has estimated that the repair and replacement costs for the assets damaged in the City as a result of salinity are in the order of $100m. A dryland salinity discharge area is now detrimentally affecting a recent subdivision on the edge of
urban Launceston in Tasmania. There is evidence emerging that there could be up to 100,000 houses in western Sydney located in areas that will be affected by dryland salinity.

Western Australia’s State Salinity Strategy estimates that roads can have their lifespan reduced by up to 75% by the impact of salinity. The cost implications are potentially devastating, particularly for small rural Councils whose roads represent their major expenditure item. To further emphasize the potential cost of one natural resource management issue – dryland salinity, the National Dryland Salinity Program commissioned study on local government has found that unless Councils change their practices, many of them re heading for bankruptcy on salinity alone. With lost revenue from saline affected land and reduced lifespan and higher costs for a whole range of Council provided infrastructure, they will be financially unviable unless major changes are made in financial resourcing and infrastructure management.

A broad scale national issue like salinity shows up the deficiencies associated with a fragmented State response to environmental and resource management issues. Commonwealth powers do not extend to the detail of land management or matters such as vegetation clearance. Three States have largely ineffective native vegetation clearance powers. Local government, with its land use planning and development powers set and constrained by the prescriptions of State legislation, has a fragmented and ad hoc approach to resource management issues. For most local governments tackling whole of catchment issues like dryland salinity is largely an ‘optional extra’ on their agenda; an option that very few Councils will want to embrace given the scale of the issues and the hard decisions that will have to be taken. Many Councils have made major advances in environmental management in recent years and have exceptionally strong commitments. However, this response is far from consistent and many local governments have barely considered the issue.

Certainly in last two decades, the Commonwealth has, at intervals, co-ordinated and coerced consistency in some matters, such as coastal management and forestry. But, in general, the exercise of State Government responsibilities has resulted in at least six responses to managing the environment. The frantic land clearing in
Queensland, and the strong response in South Australia to control clearing typify this diversity.

It becomes critical that government, including large and small (urban and rural) local government, recognise the nexus between resource use and management and ecological integrity. There is a need for greater understanding that environmental management is not just an ethical issue, or a matter of managing a tourism asset, but a matter of coming to terms with the fact that the current levels of resource and material use in Australia relies upon an unsustainable pattern of land and water use, urban settlement and waste flow.

Challenge 6; Settlement Patterns and the Greenhouse Gas Problem

The greenhouse effect is necessary to support life on Earth, however increasing levels of carbon dioxide (CO$_2$), primarily from the burning of fossil fuels, are exaggerating the Earth’s natural warming process (World Resources Institute, 1996) $^{43}$. ‘Global warming’ is threatening climatic changes around the globe with potentially serious consequences for many nations and the environment generally; for example, the melting of polar ice caps and the subsequent rise in sea levels that will endanger coastal cities. And, it is being aided by human practices such as land clearing and deforestation, which are having a profound effect on rainfall patterns and agricultural productivity around the world. Current predictions estimate that a doubling of CO$_2$ levels could cause a rise in global temperatures of 1.5 to 3.5 degrees Celsius in the next 50 years (British Energy, 2000). The world’s climatic scientists have identified that the balance of evidence suggests a discernible human influence on global climate (NGHS, 1998).

The UN Framework Convention of Climatic Change established the Kyoto protocol to which Australia, amongst many developed nations, is a signatory. Under its Kyoto commitments, Australia’s

$^{43}$ The greenhouse effect is symptomatic of an abundance of greenhouse gases in the earth’s atmosphere. Gases in the atmosphere, i.e. carbon dioxide and other gases, trap heat as it is radiated from the Earth’s surface back to space. This natural greenhouse effect keeps the Earth’s temperature about 33 degrees Centigrade warmer than it would otherwise be (World Resources Institute, 1996).
greenhouse gas emissions are to be no more than 8% above its 1990 levels by 2012. This would require a cut of about 35%, or some 135 Mt of CO₂ equivalent, from expected ‘business as usual’ growth by 2010. Currently, Australia’s greenhouse gas emissions are already 9% above its 1990 levels (ARA, 2000).

While agriculture, industrial processes and forestry are significant generators of greenhouse gases, emissions from the energy and transport sectors are the most closely linked to settlement patterns. These are given greatest attention in this paper.

**Energy sector - stationary and fugitive sources**

The energy sector is the single largest source of CO₂ emissions in the world, accounting for about 40% of all global warming emissions (British-Energy, 2000). These emissions come from the burning of fossil fuels: coal, oil and gas. Considering Australia’s propensity to consume fossil fuel energy, it is not surprising that emissions from the energy sector accounted for 78% of Australia’s total net greenhouse gas emissions during 1997 (AGO, 1999). These emissions were predominantly produced during electricity generation.

*Figure 2.19*

**1997 Energy Sector Emissions**

*Total 339 Mt CO₂-e*


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44 Stationary includes emissions from fuel combustion to provide energy for: energy industries i.e. electricity generation, manufacturing industries and construction.

45 Fugitive includes emissions from: waste methane from the production of coal; and waste methane and CO₂ emissions produced as a result of leakage or as a by-product from oil and natural gas production and distribution.
Extract from PIA 2001 Policy on Liveable Communities

The largest component of energy emissions in Australia derives from stationary energy sources, i.e. energy production. Emissions from these sources increased by 18% between 1990-1997, while energy industries accounted for 35% of national emissions (AGO, 1999). An overview of energy sector emissions from stationary energy sources, as identified by the 1997 National Greenhouse Gas Inventory, is provided in the box below.

**Overview of emissions generated by energy production (stationary)**

- By 1997 emissions from electricity generation had risen 18% from 1990 levels.
- In 1997, black coal accounted for approximately 60% of greenhouse gas emissions from electricity supply, brown coal and briquettes contributing 34% and natural gas 5%.
- Electricity production from brown coal increased by 11% from 1996-97 and by 25% from 1990-97.
- Electricity production from brown coal increased by 2.5% from 1996-97 and 21% from 1990-97.
- Emissions from petroleum refining decreased by about 10% from 1996-97.

*Source: NGGI, 1999*

Increases in energy production, as illustrated above, reflect increases in energy consumption. The 1997 National Greenhouse Gas Inventory identified that energy consumption in the commercial sector increased by more than 25% from 1990-1997. Consumption in the residential sector increased by over 10% during 1990-1997, resulting in 51Mt of emissions for that period (AGO, 1999). Overall activities in these sectors accounted for a combined total of 21% of net Australian greenhouse gas emissions (AGO, 1999). With population growth of some 16% forecast between 1990-2020, emissions will rise sharply under ‘business as usual’ conditions.

Fugitive emissions accounted for 7% of national net greenhouse emissions during 1997, an increase of only 0.5% between 1990 and 1997 (AGO, 1999). Methane was the biggest contributor of these emissions (80%). Seventy percent of these emissions were from surface and underground coal mining (AGO, 1999).

Figure 2.20
Transport sector

Contributors to greenhouse gas emissions in this sector include road transport, domestic air transport, coastal shipping, and rail transport.

‘The Australian Rail Task’ Report (ARA, 1997) identified that rail freight is at least three times more fuel efficient than road freight and produces less than one third of the greenhouse gas emissions per tonne kilometre. Australia’s railways haul over half of the combined rail and road non-urban freight task, but use only 15% of the energy requirements and produce only 18% of the greenhouse gas emissions from that task.

Road transport consumes nearly 90% of Australia’s transport energy requirements and produces 86% of the nation’s domestic transport greenhouse gas emissions (ARA, 2000). In contrast, rail transport consumes just 3% of Australia’s domestic transport energy consumption and contributes only 2% of transport greenhouse gas emissions (ARA, 1999).

The 1997 National Greenhouse Gas Inventory (1999) identified that over half of the emissions from the transport sector were produced by cars, with other road transport contributing the second highest proportion of emissions. In total, 89% of transport emissions in 1997 were generated from road transport; this was an increase of 16% from 1990 (AGO, 1999). While Australia ranks sixteenth among major greenhouse gas producing nations, it has the third highest greenhouse emissions per capita for road transport (ARA, 2000).
As noted, CO₂ is the most common greenhouse gas. Reduction of these levels is paramount to Australia’s role in protecting the ‘global commons’⁴⁶. Australia’s dependency on the car is problematic in that the transport sector’s total greenhouse gas emissions for 1997 were in the majority CO₂ emissions (see Box below). Increasing provision and utilisation of rail transport (light rail included) is an obvious solution to counter the CO₂ emissions from road transport. However this is problematic due to the present nature of growth of our major cities.

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⁴⁶ Global Commons: Are those elements of the global ecosystem that are simultaneously used, experienced and shared by all and are under the effective jurisdiction of no-one, i.e. the atmosphere and the climatic system (Held et al, 2000).
Overview of Road Transport Emissions

- Road transport accounted for almost 15% of total national emissions in 1997:
- 56% of emissions in 1997 came from passenger vehicles, mostly petrol driven cars.
- However, an increase in fuel efficiency has been documented with a 3% improvement from 11.9 litres per 100km in 1998 to 11.5 litres per 100km in 1995.
- In 1997, Liquid Petroleum Gas (LPG) provided 6.5% of the energy to the passenger car fleet but these cars produced only 5.4% of the emissions compared to petrol which provided 89.9% of the energy and produced 90.9% of the emissions.
- By 1997, emissions from trucks were 18% above the 1990 level.
- Fuel efficiency of rigid trucks fell by 4%, these type of trucks account for 60% of the truck vehicle kilometres travelled.
- Emissions from light commercial vehicles (LCV’s) in 1997 were 21% higher than in 1990.
- Emissions from buses remained low and fairly constant between 1990-97.
- In 1990, most buses used automotive diesel oil and none used natural gas; but in 1997, 5.6% of the fuel used was natural gas. As a result greenhouse gas emissions have decreased.


Figure 2.22

CO₂ emissions form the bulk of the transport sector’s total greenhouse gas emissions

Forces shaping the current greenhouse gas problem in Australia

Overall Australia’s contribution to total global greenhouse gas emissions is relatively small, at about 1.4%, but its per capita emissions are among the highest in the world (PMSEIC, 1999). This reflects, for the most part, particular national circumstances: a high dependency on fossil fuels for energy production; a high proportion of energy intensive industries; major exports based on energy intensive products; and a high dependence on fossil fuels for transport, exacerbated by a high degree of decentralisation and a preponderance of road over rail transport (PMSEIC, 1999).

A number of factors have shaped the current and prospective situation in Australia.

The Australian economy has evolved on the basis of its abundant supply of natural resources and efficient production and processing of fossil fuels and mineral resources. Fossil fuels currently provide 94% of our energy needs (AGO, 1997), far more than any other OECD country.

With population expected to grow at far higher rates over 1990-2020, compared to Europe, Australia will be placing heavy demands on the energy sector in terms of new construction in the residential, commercial and industrial sectors (AGO, 1997). Following the construction phase there will also be increases in demand for energy required on a day-to-day basis, i.e. to power household appliances, machinery- industrial, commercial, and residential, heating, fuel for road vehicles, etc.

The pattern as well as the amount of growth will tend to boost greenhouse gas emissions. Low density sprawl is not conducive to the provision of efficient public transport. And this disadvantage in terms of emissions abatement will be worsened by changing work practices, with more people holding ‘portfolios of remunerative activities’ rather than regular 9 to 5 jobs with predictable travel demands. The Bureau of Transport and Communications Economics (1993) study of greenhouse gas emissions and the demand for public transport concluded work activities were no longer automatically attracted to major employment location (BTCE, 1993). The Bureau
noted that 'although it is early days in the full cycle of work time and space opportunities, the increased flexibility may work against the future of public transport, especially public transport which requires a relatively dense corridor of movement activity in order to be economically and environmentally sustainable'.

Land clearing for urban growth and for agricultural activities also aggravates the greenhouse gas problem by reducing the 'carbon sink' effect.

Australia's dwelling stock too is not geared towards a greenhouse friendly regime. Generally speaking housing in Australia remains energy hungry and inefficient.

**Housing and Energy in Australia**

- In 1994, the average size of newly constructed dwellings (private, detached) was 197sqm; This represents an increase of approximately 20sqm since 1985.
- Trends in dwelling size have led to an increase in indoor space use per person. According to Barnett (1995), space per person in the 1950's was about 20sqm/person, and is no around 60sqm/person.
- More than 64% of households in Australia use electricity for their hot-water service.
- Around 43% of households in Australia use electricity for heating their home.
- Another commonly used energy source in households is the use of mains gas for hot water (28%) and room heating (27%).
- 40% of separate houses have insulation only in one roof, 3% have insulation only in the walls, and 15% have insulation in the roof and walls.
- In 41% of detached houses, insulation is absent or status unknown. (Newton, 1997)

**Government’s response to date**

The Australian Greenhouse Office (AGO) has been established by the Federal Government to monitor greenhouse gas emission levels on a national scale for the following sectors: energy, transport, agriculture, industrial processes and waste, and forestry and other subsectors in land use change and forestry (AGO, 1999). The inventory will be updated regularly and is made public.
The AGO’s National Greenhouse Strategy focuses action on three fronts:

- Improving our awareness and understanding of greenhouse issues;
- Limiting the growth of greenhouse emissions and enhancing greenhouse sink capacity; and
- Developing adaptation responses (NGHS, 1998).

Some examples of initiatives designed to complement the National Greenhouse Strategy are:

- **The Cities for Climate Protection Australia Program**: This project provides a strategic framework for action on greenhouse by local government. The program is an International Council for Local Environmental Initiatives (ICLEI) program in collaboration with the Australian Greenhouse Office.

- **Greenhouse Challenge Program**: This is a program of cooperative agreement between industry and government, whereby companies undertake action to abate their greenhouse gas emissions through energy efficiency and other measures. The program includes regular monitoring and public reporting and independent verification. The program began in 1995 and in 1997 the Commonwealth Government doubled the programs budget. Total funding between 1995-2003 is $36 million.

- **Bushcare and National Landcare Program**: These programs support revegetation and sustainable management activities, which contribute to enhancing Australia’s carbon sink capacity and reducing emissions.

- **International Centre for Application of Solar Energy (CASE)**: CASE is a joint initiative of the Western Australian and Commonwealth Governments under the patronage of the United Nations Industrial Development Organisation (UNIDO). It promotes and facilitates the sustainable application of solar and renewable energy in developing countries.

- **Derby Tidal Energy Project**: This project in Western Australia is supported by the Commonwealth Government. Independent
Consultants have been assigned to assess the feasibility of the project. The Commonwealth has already offered $1 million in support to Derby Tidal Energy through their Renewable Energy Commercialisation Program should the study prove positive and the project proceed.

Other AGO initiatives relate to improving energy efficiency, i.e. energy codes and standards for housing and commercial buildings, and establishing minimum performance standards for appliances and equipment.

The success of these initiatives will be the subject of the next National Greenhouse Gas Inventory. Rapid progress needs to be demonstrated given what appears to be mounting evidence of significant climatic change; - the Earth has experienced its hottest 12 years on record since 1990; El Nino is appearing in consecutive years now rather than its traditional 4-7 year cycle; and grass is growing in the Antarctic!

Positive attention needs to be given to the establishment of alternative sources of energy, i.e. solar, wind, tidal and nuclear, as is occurring in many European countries.

Promoting public transport, and improving its accessibility and service provision to attract commuters - despite the difficulties posed by changing work patterns - is also very important.

**Challenge 7; Settlement Patterns and Health**

In world relative terms, Australians are only minimally affected by environmental health factors. Through the DALE (Disability Adjusted Life Expectancy) index, the World Health Organisation (WHO) publishes the expected number of years to be lived in what might be termed the equivalent of ‘full health’ across member nations. Of 191 countries, Australia is ranked second, with an overall DALE of 73.2 years. This points to relatively healthy living environments, good access to health services and a favourable climate.
Yet urban living still accounts for substantial health costs in Australia. This issue is explored in the following pages under four themes.

- Air Pollution
- Water Quality
- Noise Pollution
- Non-active transportation dependency

**Air Pollution**

While exposure to poor quality air indoors is the bigger killer (Figure 2.23), outdoor air pollution remains a serious health problem. In 1997, it was reported that human health impacts of poor air quality in Australia cost in the range of $3.0 and $5.3 billion dollars each year (Newton, 1997:ix) - this is despite the fact that great strides have been made in cleaning up urban air through regulatory initiatives aimed at fuel and automobile technology. It was also estimated that Australia suffered 1000 deaths per year because of air pollution.

Figure 2.23
Deaths Caused by Indoor and Outdoor Exposures to Poor Quality Air
By far the greatest generator of air pollution is car usage. This accounts for 86% of all carbon monoxide atmospheric pollution (Figure 2.24).

**Figure 2.24**

<table>
<thead>
<tr>
<th>Source</th>
<th>Carbon monoxide</th>
<th>Hydrocarbons</th>
<th>Oxides of nitrogen</th>
<th>Sulphur dioxide</th>
</tr>
</thead>
<tbody>
<tr>
<td>Motor vehicles</td>
<td>86</td>
<td>45</td>
<td>67</td>
<td>10</td>
</tr>
<tr>
<td>Other mobile</td>
<td>3</td>
<td>2</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>Waste combustion</td>
<td>1</td>
<td>1</td>
<td>&lt;1</td>
<td>&lt;1</td>
</tr>
<tr>
<td>Fuel combustion</td>
<td>7</td>
<td>10</td>
<td>21</td>
<td>32</td>
</tr>
<tr>
<td>Petroleum/solvent</td>
<td>&lt;1</td>
<td>35</td>
<td>4</td>
<td>37</td>
</tr>
<tr>
<td>Miscellaneous</td>
<td>2</td>
<td>5</td>
<td>4</td>
<td>18</td>
</tr>
</tbody>
</table>

Note: Extrapolated from Air Emission Inventories (1985) for the Australian Capital Cities—Australian Environment Council Report No. 22. Percentages quoted are indicative only and are an arithmetic average of the values for Sydney, Melbourne, Brisbane, Perth and Adelaide.

*Source: ABS (1999a, p. 314)*

Source: Newton (1997:5)
The impact of motor vehicle-caused pollution is significant in each major city of Australia, especially in terms of Carbon Monoxide (CO) and Nitrogen Oxides (Nox) - Figure X. Moreover, these impacts tend to be made worse by the tendency of Australians to run older cars (see Figure 2.25). Many older cars are fuelled by leaded petrol.

**Figure 2.25**

| Source: Inquiry into Urban Air Quality in Australia (1997) |

The health impacts associated with the various classes of air pollution are briefly reviewed in the chart below.

**Figure 2.26**

| Proportion of cars older than 10 years |

The issue of particulate matter pollution warrants specific comment. Small particle pollution, especially those of the smallest variety (less...
than 10 microns in diameter (PM$_{10}$) and also those less than 2.5 microns (PM$_{2.5}$) are easily inhaled deeply into the lungs. They can remain in the atmosphere for over a month and infiltrate air-conditioned buildings and vehicles. Studies have shown a correlation between increased density of such particulates and adverse health outcomes, especially amongst those most vulnerable with existing respiratory and cardiac disorders$^{47}$. One such study has documented the expected increase in health effects for every 10µg/m$^2$ increase in particles with an aerodynamic diameter less than 10µm (Table 2.11).

Table 2.11

<table>
<thead>
<tr>
<th>Change in health indicators for each 10 µg/m$^2$ increase in PM$_{10}$*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Daily mortality (all causes)</td>
</tr>
<tr>
<td>Respiratory deaths</td>
</tr>
<tr>
<td>Cardiovascular deaths</td>
</tr>
<tr>
<td>Hospital admissions:</td>
</tr>
<tr>
<td>Chronic obstructive pulmonary disease</td>
</tr>
<tr>
<td>Respiratory disease</td>
</tr>
<tr>
<td>Pneumonia</td>
</tr>
<tr>
<td>Heart disease</td>
</tr>
<tr>
<td>Exacerbation of asthma</td>
</tr>
<tr>
<td>Respiratory symptoms:</td>
</tr>
<tr>
<td>Lower respiratory</td>
</tr>
<tr>
<td>Cough</td>
</tr>
<tr>
<td>Upper respiratory</td>
</tr>
</tbody>
</table>

* National Environment Protection Council, after Dockery and Pope

$^{47}$ (http://ces.iiscernet.in/hpg/envis/poldoc917.html).
<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Sources</th>
<th>Health effects</th>
<th>Population at risk</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carbon monoxide</td>
<td>Mainly from fossil fuel combustion sources. The car is the main contributor of this pollutant.</td>
<td>Increase in illness due to ischaemic heart diseases.</td>
<td>People with ischaemic heart conditions.</td>
</tr>
<tr>
<td>Sulfur dioxide</td>
<td>From coal burning, oil combustion and some industrial processes.</td>
<td>Mortality; respiratory diseases, decrease in lung function.</td>
<td>Elderly people; sufferers of respiratory disease.</td>
</tr>
<tr>
<td>Oxides of nitrogen</td>
<td>Natural sources include lightning and soil biological processes. Also from fossil fuel combustion, biomass burning, cultivated soils and intensive use of fertilisers.</td>
<td>Respiratory disease; decrease in lung function.</td>
<td>Sufferers of respiratory disease, such as children with asthma.</td>
</tr>
<tr>
<td>Lead</td>
<td>One of the most significant pollutants, owing to its toxic nature. Sources include leaded petrol engines, lead smelters, refineries, combustion of recycled sump oil and battery manufacture.</td>
<td>Behavioural and neurological disorders.</td>
<td>Children.</td>
</tr>
<tr>
<td>Particulate matter (particles)</td>
<td>Particles may include sea salt, sulfate from sea salt and SO$_2$ emissions, carbon from combustion processes such as diesel engines, silica from soil and pollen.</td>
<td>Mortality due to cardiovascular and respiratory diseases; hospital admission due to respiratory disease; decrease in lung function.</td>
<td>Elderly people with respiratory and cardiovascular diseases; people with respiratory diseases, such as children with asthma.</td>
</tr>
<tr>
<td>Ozone</td>
<td>Tropospheric ozone is a secondary air pollutant, formed by photochemical reactions among other chemicals.</td>
<td>Mortality due to respiratory and cardiovascular diseases; hospital admission due to respiratory diseases; decrease in lung function.</td>
<td>Elderly people; people with respiratory diseases</td>
</tr>
</tbody>
</table>

Source: Adapted from ABS Cat. 4140.0, pp. 72–99; SoE (1995, pp. 5-21 – 5-23); ABS (1996a)
The burning of diesel fuel is a major contributor to fine particle air pollution. The encouragement given to the use of this fuel type through the cut in price of diesel as part of the GST package, may have a significant adverse impact on the rate of pneumonia, loss of lung function, asthma and other respiratory disorders in particular air corridors.

Monitoring and controlling fine particle pollution is difficult in Australia because events such as bushfires and large pollen discharges often impact on ambient pollution levels.

Management of exposures to air pollution is also rendered more difficult by the concentration of the Australian population in coastal cities. As noted in the Inquiry into Urban Air Quality in Australia (1997),

Each capital city airshed suffers conditions which frequently trap or circulate the air mass over urban areas during periods of high sunlight intensity, or winter inversions. Levels of photochemical smog or airborne particulates can then approach or exceed air quality standards. These conditions can be considerably exacerbated by the occurrence of bushfires or hazard reduction burning in the vicinity of the airshed or even at some distance from it.

This effect was also described in the 1996 State of the Environment report (Figure 2.27).
Despite improvements in the monitoring and management of water quality in Australia in recent years there remain gaps in the knowledge of water-borne health risks. The proportion of human disease attributable to poor water quality in Australia is unknown, and the impacts of mainstream water treatment processes are only partially understood (The National Environmental Strategy, 1999:Ch7).

It would appear that in comparison with food and air, drinking water appears to be a minor source of health threatening pollutants. But the quality of water varies from location. In rural and remote areas, water quality control is less frequent as is full water treatment and catchment protection.

**Noise Pollution**

This issue appears to have been put into the ‘too hard’ basket across the globe. A report on Noise Pollution Impacts and Community...
Perception presented at the recent 6th World Congress on Environmental Health (2000), concluded that ‘residents are the victims of community noise pollution, which is part and parcel of the physical development and can’t be totally escaped’. Yet excessive exposure to high levels of noise (considered by the World Health Organisation (WHO) to be more than eight hours per day) causes hearing loss, sleep disturbance and speech interference with related physiological and psychological effects (Ibrahim, 2000).

The 1994 Victorian Transport Externalities Study discussed the impact of noise on the community in terms of loss of property values only. Similarly, the WHO does not consider noise to be a priority field, despite its forecast that noise disturbances are set to increase exponentially and uncontrollably all over the world (Karlsson, 2000).

Non-active transport dependency

Our cities have evolved in such a way that the car has become an integral part of their functionality. This dependency is making the population unwell, not only in terms of the motor vehicles contribution to air pollution, but through the downgrading of active transport modes, such as cycling and walking.

A study in the UK showed that from 1974 to 1995 there was a 24% decrease in the amount of walking undertaken by school aged children, primarily due to the changing nature of taking children to school by car.

In an Australian context, it is worth noting:

- From the 1980’s, the proportion of Australian adults who are overweight, obese or inactive has increased in parallel with our greater reliance on car transport (Mason, 2000).
- Recent reports have noted the effect of an obese population is causing an increase in epidemic proportions of chronic illnesses such as diabetes and heart disease.
- Mounting evidence reveals that a healthier Australia would have a huge impact in costs to Australians. An increased focus on
active transportation is seen by many as a means of curbing this health slump.

**Major Health Issues in Non-Urban Areas**

Rural and regional Australians face significantly different environmental health issues as identified in the Australian Institute of Health and Welfare’s report, *Health in Rural and Remote Australia*. Important factors noted by the Institute included:

- Poorer access to services;
- Socio-economic disparities;
- Greater exposure to injury;
- Lower road quality;
- Small, sparsely distributed populations; and
- Indigenous health needs.

The differences in health outcomes across metropolitan and rural and regional Australia are summarised in Figure 2.28.

**Figure 2.28**

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Metropolitan</th>
<th>Other Cities</th>
<th>Rural</th>
<th>Remote</th>
</tr>
</thead>
<tbody>
<tr>
<td>Life expectancy at birth (years)</td>
<td>77.3</td>
<td>77.3</td>
<td>76.6</td>
<td>71.7</td>
</tr>
<tr>
<td>Infant mortality rate (per 1000 live births)</td>
<td>2.11</td>
<td>2.76</td>
<td>2.53</td>
<td>13.12</td>
</tr>
<tr>
<td>Age-standardised mortality rate (per 100,000 population)</td>
<td>67.9</td>
<td>65.2</td>
<td>734</td>
<td>905</td>
</tr>
</tbody>
</table>


**Urban Form and Health: Looking to the Future**

**The National Environmental Health Strategy**

The Commonwealth Department of Health and Aged Care published this strategy in 1999. It establishes an important framework for the future development of environmental health through practice, environmental health workforce, impact
Extract from PIA 2001 Policy on Liveable Communities

assessment, health justice and enhancement of environmental health capacity.

State of the Environment Report 2001

Preparation of this report is in progress. Its results will replace and update the findings of the 1996 report. The 1996 report was an independent, comprehensive assessment of land, water, air, plants and animals, human settlements and how we value them. It was the first time such an assessment was made in Australia.

Urban Air Pollution in Australia

This was an Inquiry conducted by the Australian Academy of Technological Sciences and Engineering in 1997.

This report made 35 policy recommendations for the control of future air pollution problems for urban centres in Australia. In terms of urban infrastructure, the Academy proposed:

- The adoption of planning strategies which deliberately channel and concentrate additional population and non-polluting industry into specific facilities, either existing or new, so as to maximise self-containment of housing, jobs and services and minimise unproductive travel.

- Also as well as improving the quality and choice of urban systems along the corridors which serve such development, the enhancement of the orbital connectivity between corridors and their major nodes.

Review of Fuel Quality Requirements for Australian Transport, March 2000

This report recommended the bringing forward of the phase out of leaded fuel. The review also examined further opportunities for the reduction of air pollution through cleaner motor vehicle fuels.

Re-shaping Our Cities for a More Sustainable Future

This 1997 CSIRO report examined various urban models, and assessed each for their efficiency and contribution to air pollution. Melbourne was used as a base example to determine what effect controlled development within certain geographical frameworks
would have on environmental outcomes. The most energy efficient model was found to be corridor growth.
PIA Input to the Sustainable Cities Enquiry

APPENDIX B
PIA SUBMISSION TO SUSTAINABLE CITIES 2025
HOUSE OF REPRESENTATIVES STANDING COMMITTEE ON ENVIRONMENT AND HERITAGE