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INTRODUCTION

Recent international events in the field of environmental management have made sustainable development the focus for planning and development approval processes. It seems obvious, at least it should be to planners that local environmental planning, is one key way of achieving these objectives.

Unfortunately, the view is not unanimous: environmental planning at the local government level was not even mentioned in the reports of the ESD process (Australia, 1992) and from my experience is poorly recognised internationally.

This paper argues that local government planning is a key to the process of sustainable development. Uncoordinated development is not efficient in the short term and often not sustainable in the long term. Hence there is a need for plans to coordinate development activities, including their environmental effects. Land use plans can consider the cumulative impact of many individual developments.

Social attitudes determine plans (and laws) and the highest priority in environmental planning at the moment is to create positive attitudes in the whole community towards the need to protect the environment. Politicians will support environmental planning if they also have evidence to show how much better development could be if it was planned with the environment in mind and how strong the community support is. Unfortunately, local politics are often governed by local short-term thinking and by economic and social priorities. It is also notoriously difficult to get strong local support for planning compared with the strong local opposition to particular decisions. The consequence has been gross failures in planning for the environment, the lack of an environmental vision and reactive short-term planning rather than rational long term planning.

One of the side-effects has been an unnecessarily high level of community conflict about land use and development. Adequate planning could have prevented, or at least reduced, the conflict associated with Fraser Island, with Rochedale dump and other dumps, with road projects, with countless tourist resort projects, with Wolfdene and other dam projects, with conservation of the Wet Tropics rainforests and many others.

The central goal of sustainable development is to integrate development and environment. There are many things that planners can and should do. While legal and administrative reforms are necessary to provide more efficient and effective planning systems, the highest priority is to focus on the substantive issues in the environment, to collect the relevant information to support planning and to encourage the preparation of plans at the local that incorporate areas such natural resources and waste management and nature conservation.

THE ENVIRONMENT AND PLANNING

POLICIES AND GOALS

To integrate the environment into planning, environmental goals must be incorporated into plans. Achieving environmental goals can not be left to chance. Without environmental goals in plans there is little likelihood that the environmental dimension will be seriously considered in the preparation and administration of a plan. The environment provides resources for economic activities and a sink capacity for the wastes from those activities. This provides a suitable framework to consider the essential goals for environmental planning:

ENVIRONMENTAL RESOURCE GOALS

- control the intensity of environmental resource use so that production levels are sustainable,.
- encourage efficiency in the use of energy in transport, industry and residential sectors;
- ensure that development does not occur on land valuable for other purposes for example agricultural, scenic or recreational land resources;
- conserve wildlife habitats and maintain bio-diversity;
- ensure that new development does not occur on inappropriate land for example land subject to natural hazards.

ENVIRONMENTAL SINK GOALS

- ensure that the waste assimilation capacity of water bodies and airsheds can cope with planned growth;
- collect and dispose of solid and liquid wastes without casing long term contamination of land and water;
- provide for mobility within urban areas but minimise the adverse environmental effects of the intrusion of transport infrastructure and traffic movement on people;
- prevent off-site pollution problems caused by economic development by siting, by pollution controls, by design, or by separation of polluting land uses from pollution sensitive land uses;
- protect human healt.

The Situation in Queensland

How many of these goals are incorporated into current plans in Queensland ? Not too many of them in most of the local plans in Queensland.

Planning legislation in the past made only incidental reference to conservation and environmental matters and conservation as a use in its own right is still not well recognised in plans. Such areas not in state environmental tenures were usually shown as non-urban or open space or left blank, meaning they were only waiting to be found a more positive designation.

The *Local Government (Planning and Environment) Act* (S2.7) requires local governments in the state to prepare strategic plans and zoning schemes and enables local governments to prepare development control plans. These plans are the main tools available by local government to implement environmental objectives and policies. After a fullsome definition of the environment, neither the Act, nor accompanying regulations nor departmental guidelines provides much direction or assistance to local governments on the substantive content of the plans.

The LGPE Act provides for the preparation of planning studies to support the preparation of planning schemes, but the matters listed therein are very vague. (See Table 1) The LGPE Act also states criteria for considering amendments to planning schemes once they are made (see Table 2). Certainly the term environment is mentioned specifically in these sections of the LGPE Act and would be encompassed also by broad interpretation of planning terminology such as 'land use patterns', 'constraints', 'amenity' and 'suitability', but the balance of matters to be considered favours economic and social considerations. From the point of view of sustainable development, the specification of matters to be considered in planning schemes and their amendments clearly needs substantial elaboration and improvement.

Table 1 **Matters to be considered in a planning study**

(a)	topography
(b)	natural or built environment (or both)
(c)	regional land use patterns
(d)	public utilities and transport
(e)	economic and employment factors
(f)	social, cultural features and housing
(g)	constraints and opportunities for development
(h)	development options available

Source: The Local Government Planning and Environment Act (1991), Section 2.7

Table 2 **Criteria for Considering Amendments to Planning Schemes**

(a)	(i)	create a traffic problem
	(ii)	affect the amenity of the neighbourhood
	(iii)	create a need for increased facilities
(b)		need and effect on the balance of zones
(c)		consistency with Strategic Plans and DCPs
(d)		subject to inundation
(e)		adequacy of services
(f)		impact on the environment
(g)		relation to neighbouring localities
(h)		economic impact assessment
(i)		site contamination
(j)		other relevant matters

Source: The Local Government Planning and Environment Act (1991), Section 2.19.

An important further step forward is to recognise that not only World Heritage Areas and National parks, but all elements of the natural environment are valuable. Given that planners deal with the bulk of the land their jurisdiction covers many critical elements.

Despite the inadequacy in the legislative base for local planning, the currently available planning instruments are quite capable of implementing substantial improvements in the achievement of sustainable development. Local authorities have proven that the currently available collection of instruments can be very effective if they are applied to the right set of goals and policies. It is therefore not a reasonable defence of poor environmental performance for the planner to blame the tools.

There is excessive concern with procedural (legal and administrative issues) and insufficient attention to the substantive content of planning systems and planning reform. Too few systems or plans are evaluated for their effectiveness in this regard. This is not to say that improvements in the integration of planning and impact assessment and the sharpening of the existing tools is not a worthwhile task. Pre-occupation with new instruments is not the highest priority - attention to policy priorities is.Governments at all levels especially local governments control substantial areas of land and water through the needs to carry out their servicing functions. Adoption of environmental guidelines in the operation of local authority's main operations for road construction and maintenance, water supply storage, treatment and distribution, drainage, parks and open space management, solid waste management, sewerage treatment and disposal is a high priority. Collectively these are some of the most significant environmental hazards. It is also essential that local governments set a good example.

PLANNING INSTRUMENTS AND THE ENVIRONMENT

EIA

THE ROLE OF EIA

Environmental impact assessment has long been an important tool in environmental planning - in fact for the modern era it was the first tool found in most planning systems in some form or other and is now relatively well understood. We can detect an evolutionary process in environmental planning methodology in this regard. (Sadler (1990), Asian Development Bank (1988))

Some of the major problems with EIA are:

- EIA is basically a reactive process of analysis and criticism rather than being creative - it does not create solutions but sets limitations on projects.
- Conventional EIA tends to focus on a limited range of projects and activities. Many other development decisions and resource management practices escape any form of assessment, even though their collective impact may be more than that of any individual large-scale or hazardous activities. Urban development, small scale forestry operations, most agricultural activities fall into this category.
- EIA is usually carried out too late and ends too soon - the need is to integrate environment and development whereas EIA tends to separate them.
- EIA tends to focus on the mitigation of impacts of proposed activities rather than determining their justification and siting. Coherent environmental management requires consideration of all three.
- Considerable administrative difficulties have been experienced with EIA, especially in determining what projects require EIA and what aspects should be investigated in depth. Clearly, all projects should be considered for assessment, some requiring no more than a tick in a box; others substantial investigation. EIA can easily be integrated into the development approval philosophy of local planning systems but has not been.
- Interjurisdictional problems and duplication

A new view of EIA is emerging that shifts from the traditional emphasis on impact minimisation during project development to a more strategic approach. It attempts to maintain the regional integrity of natural systems while meeting the other social and economic demands of sustainable development.

Cumulative impact analysis is one response to the structural inadequacy of the conventional project and site-specific application of the EIA process. The achievement of sustainable development requires a synoptic, ecosystem approach that relates the dynamics of natural variability and the effects of human intervention on key indicators of bio-diversity, productivity and hazards. This will require closer consideration of environmental baselines at the regional level against which individual projects and cumulative changes can be judged. This of course implies forward planning.

Equity issues will of necessity come to the fore in EIA done within a sustainable development framework due to the concern with future populations.

Creative experiments to empower communities to assume greater responsibility for assessing, monitoring and controlling development impacts and becoming involved in negotiated settlements of conflicts and long term visions for their communities will be necessary. Related to this is the need to tap ecological and social knowledge of local people, Aborigines, farmers, fishermen and others.

THE SITUATION IN QUEENSLAND

Current EIA legislation, especially under S29 of the State Public Works Organisation Act and S8.2 of the LGPE Act provides a framework for EIA in the State.

There is dissatisfaction with the current procedure at the local level due to the cumbersome nature of the designated development approach and the processes of preparing terms of reference and reviewing EIAs for developments. Many small projects are weighed down in unnecessarily costly and time consuming EIA processes, and developments such as subdivisions are excluded from assessment. Coordination of development approvals is a critical need as recognised by the State Governments proposed Integrated Development Approvals System. At the national level this problem has also been addressed but not yet proven to be resolved by the Intergovernmental Agreement on the Environment. Most importantly, EIA without the support of an adequate planning system overlooks critical cumulative impacts and is unable to make judgements on the regional significance of resources affected by projects and on the shifting baselines for evaluating impacts.

COMPREHENSIVE PLANS

THE ROLE OF COMPREHENSIVE PLANS

Comprehensive planning and related supporting information is an important means of determining what activities and installations already exist in an area, their size and intensity, the characteristics and locations of environmental constraints and problems and the scope for accommodating new activities. It is a means by which governments can test whether local implementation of their policies and initiatives is possible and permit a basis for licensing and allowing new activities in an area. For example in an urban context it is possible to see the numbers, types, locations and (if mapped) zones of influence of existing industries in an urban area or industrial estate to assess whether the carrying capacity of that locality can accommodate additional industries and of what type, or whether the local environment and its inhabitants are already industrially stressed. Mapping what is already in a given area and comparing these specific sites and their values to those of proposed new developments.

Environmental impact analysis of specific proposals almost always requires locating them in space and time relative to those components of the environment they may impact. These analyses relate to existing regional plans and assist with the development and improvement of new ones. EIA without planning is totally inadequate in any sphere, whether it be local industrial projects of concern at the local level, major infrastructure projects of concern at the state level or very large and potentially hazardous projects or resources developments (eg forests) relevant at the national level.Plans must spell out policies to be enforceable. There is ample evidence that Courts will uphold the environmental provisions of properly made local plans and that they will not uphold the capricious actions of councils attempting to use environmental reasons for opposing developments in the absence of such plans and policies.

THE SITUATION IN QUEENSLAND

(i) Strategic Plans

Local Authority Strategic Plans should be the flagships of environmental planning. As statements of policy and broad designation of preferred future uses, Strategic Plans are capable of making great contributions to achieving environmental objectives in Queensland. The essential feature of the Strategic Plan is that it can address the future form of development and take account of the cumulative impacts of development on the region's resources and ecosystems. It can set the scale and location of development in a manner not possible with other more detailed plans.

Strategic Plans to date have failed to reach their potential in meeting environmental objectives. In Kuiken's survey of Strategic Plans in Queensland, major shortcomings were found in incorporating the environmental dimension into Strategic Plans. Kuiken (1990)) Very few addressed the needs of conservation. Most did focus on ensuring that new development do not occur on inappropriate land for example land or on land valuable for other purposes for example agricultural, scenic or recreational land. None dealt with appropriate collection and disposal of solid and liquid wastes. None were based on adequate information about the conservation values of their areas or the carrying capacities of those areas for development.

It is possible to see the emergence of a new era of Strategic Plans. The new ones will pay much greater attention to the environment. In recent Strategic Plans including those for Moreton, Beaudesert and Mulgrave Shires, these issues are being addressed. There will be substantial improvements in the quality of the next generation of Strategic Plans. The issues and strategies are clear enough. Strategies for habitat conservation are being developed, new environmentally defined zones will appear and waste management will appear as an important policy area to avoid the conflict that has arisen in recent times. Douglas Shire's innovative Strategic Plan and DCP for the Daintree-Cape Tribulation area is an example of future planning to recognise environmental constraints and opportunities.

(ii) Development Control Plans (DCPs)

Most DCPs are forms of small area or restricted scope strategic statements (although there are exceptions) (See McDonald and Brown (1987) and Brown and McDonald (1990)).

The most environmentally progressive planning at the present time is being done in the production of DCPs. Of the 60 or so DCPs done to date, environmental objectives are central to approximately half. Planners have demonstrated that the DCP can effectively address questions such as

- protection of agricultural land resources
- protection of water supply catchments
- protection of wildlife habitat areas
- management of hazardous geological area
- containment of development in World Heritage districts.

The advantage of the DCP is that it can address detail of development at a scale appropriate for development control. The DCP can be prepared relatively quickly and the issues addressed specific enough that complexity is contained. (cf Strategic Plans)

Zoning Schemes and Provisions

THE ROLE OF ZONING SCHEMES

There is a tendency to see zoning schemes as statements of use rights and means of development control and approval, but there are a great variety of steps that local government can take within their zoning schemes for environmental objectives not appropriately dealt with at the strategic level. In zoning schemes local governments can determine the specifics of uses set out in general terms in Strategic Plans. The zoning scheme may determine very explicitly uses permitted and prohibited in the area and the performance criteria for those uses.

A recent survey of the environmental activities of local governments in Canada (McClaren, 1992) provided a compendium of examples relevant for environmental planning, including:

- relaxing zoning to allow more home occupations
- increasing suburban densities by density criteria
- parking regulations that minimise the amount of long-term parking to discourage car commuters
- waste management requirements on uses
- environmental guidelines for developments
- minimise impervious surfaces for residential and other uses
- maximise the amount of trees and shrubs
- guidelines and performance criteria that promote energy efficient buildings and subdivisions. regulations that encourage the development of vacant land.

Through the requirements for specific uses in the zoning scheme planners have a strong instrument to control the impact of any particular activity. Requirements on the dimensions, activities, layout, services requirements, waste disposal practices, water management, natural vegetation management etc all can be used to achieve environmental objectives.

THE SITUATION IN QUEENSLAND

Under the LGPE Act, local governments can use their zoning schemes constructively to place conditions on developments to achieve environmental objectives if they wish. Most do to some extent although the intent of most controls is to minimise local incompatibilities between uses rather than broader environmental concerns.

Local governments are using conditional approvals under zoning schemes to allow greater consideration of local environmental factors in approving re-zonings. In the future, zones will probably be based more on objectives and performance criteria rather than the table of zones.Other more specific environmental applications of zoning schemes include the Tree preservation by-laws that are in force in 15 local authorities in the State. Redland Shire's Habitat Zone for koala habitat conservation is a good example of the application of zoning for an environmental objective.

SUBDIVISION CONTROL

THE ROLE OF SUBDIVISION CONTROL

This is perhaps the most poorly used tool in the planners tool box and yet one of the most significant in controlling development from an environmental perspective. In approving sub-division plans, the planner sets the framework for the future pattern of settlement because it is extremely difficult to reverse ill-conceived property layouts once approved.

The size of allotments in both rural and urban areas is the critical parameter in defining the environmental impact of settlement, population densities, habitat destruction, services requirements and feasible property and road layouts. Inflexible practices allowing and requiring minimum lot sizes rather than designed with the environment in mind are undesirable. Sensitive natural areas such as watercourses, riparian habitats and bushland corridors can be conserved at the sub-division stage through more flexible and informed sub-division practices, negotiated sub-division and rezoning, and through group titles. The continued viability of other resources such as agriculture and extractive materials can be assured.

THE SITUATION IN QUEENSLAND

This is one of the most controversial area of local planning, especially in south-east Queensland where large amounts of sub-division of rural land has occurred. This land is in rural zones with the usual minimum allotment sizes. Subdivision has occurred without the need for EIA despite the potentially very large long term environmental impacts. Much more research needs to be undertaken on the environmental effects of rural residential subdivision given the amount of land now passing into rural residential uses throughout Queensland.

REGIONAL AND STATE PLANNING

THE ROLE OF REGIONAL AND STATE PLANNING

Where matters affect areas beyond a single local government (eg catchment management, arterial roads) there is need for a planning system that is coordinated from the national to the state to the regional and local levels. The relationship between these levels of planning can, potentially be difficult. The solution adopted in NSW is worth special mention because it shows how these plans might be integrated. The state government is responsible for co-ordinating and controlling development with impacts of regional and state importance using State Environmental Planning Policies and Regional Environmental Plans in addition to the traditional local (environmental) plan.

The Department of Planning prepares State Environmental Planning Policies and sets guidelines for specific issues of importance to the whole state. The policies cover a wide diversity of issues such as rainforest logging, coal mining, housing, multiple occupancy in rural areas and planning standards for different types of development. Regional Environmental Plans cover matters of regional significance and give guidance to local councils and developers in the region on issues such as transportation, protection of mineral, agricultural and agricultural resources, subdivision of land; protection of scenic areas and tourist development.

THE SITUATION IN QUEENSLAND

(i) Regional Planning

In recent years the Queensland Government has made a commitment to regional planning and established the Regional Planning Advisory Group (RPAG) to supervise regional planning activities in the State's two most rapidly growing areas - SEQ2001 and FNQ2010. In addition the Government initiated CYPLUS (Cape York Land Use Study) in conjunction with the Commonwealth.

The environmental importance of these initiatives is extremely high but it is too early to make an assessment of their outcomes. From an environmental perspective critical regional issues include:

. transport. nature conservation
. waste management
. coastal management
. water supply.

A regional planning perspective means that regional plans in each of these sectoral areas will be required, based on assessment of regional resources, commitments and opportunities. State government agencies are predominantly responsible for these plans. Many of these plans exist in draft form but there is still an enormous amount of work to be done before the regional perspective is defined in the key growth regions. Integration of the various regional sector plans with local plans is a critical step yet to be faced.

The process has produced considerable benefits resulting from the high degree of public participation in the process. An elaborate working group structure has allowed many people from across community sectors to express their views and hear others, appreciating the development conflicts and gaining understanding of environmental issues. The data collected and the experience gained through participation will produce tangible benefits for better planning but many difficult administrative problems remain that have yet to be resolved, especially the relationship between the state and the local governments.

(ii) State Planning Policies

In 1992 the Queensland Government announced two State Planning Policies that are binding on local government plans:

. Prime Agricultural Land
. Airports

These two policies have environmental significance in their own right (especially the commitment to protect prime farmland from urban subdivision). As the first of what has been rumoured to be many, these policies set the precedent for the identification of issues of statewide significance and their incorporation in the planning system despite the general disapproval of local government.

CONCLUSIONS

Some other issues of significance to environmental objectives include:

. the need to revise appeal procedures to separate merit from legal issues so that courts are not arbiters of technical merit issues (judges are the real town planners at present);

- integration of the environment into all areas of council activities
- fear of injurious affection claims is an enormous barrier to the implementation of good environmental plans in Queensland. New legislation should clarify this matter further and shift the balance more towards the public interest.

The Queensland planning system has steadily improved in the incorporation of environmental issues. Continued progress is inevitable with the creation and passage of a new local planning bill during the life of the current government.

More important than procedural changes is increasing the awareness of the community as to the importance and relevance of environmental issues to good planning including all stakeholders - land speculators, planners, decision-makers. Local government can then continue to make substantive progress towards the achievement of environmental goals and to adopt long term visions. Even without changes in planning law, and to a large extent whether they occur or not, existing planning instruments can deliver good results if the policy commitment is there in the local communities and their representatives.

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REFERENCES

Asian Development Bank. Environment Unit, 1988: Guidelines for Integrated Regional Economic-cum-Environmental Development Planning. Manila. Asian Development Bank.

Australia, Ecologically Sustainable Development Working Groups, 1992: Final Report.— Canberra. Australian government Publishing Service.

Brown, A. L., and McDonald, G. T., 1990: "Development control plans in Queensland to 1989" Queensland Planner, 30, 1, 14-22

Kuiken, M, 1990: "Strategic plans in Queensland: A Review of Gazetted plans." Queensland Planner,— 30, 1, 31-36

McClaren, Virginia, 1992: Sustainable Urban Development in Canada: From Concept to Practice. Toronto. ICURR Press.

McDonald, G. T., and A. L. Brown, 1987: "Development control plans in Queensland 1981-1986" Queensland Planner, 27, 1, 23-33

Saddler, B., 1990: "A key to tomorrow: On the relationship of environmental assessment and sustainable development." in Jacobs, P., and Saddler: Sustainable Development and Environmental Assessment: Perspectives on Planning for a Common Future. Ottawa. Canadian Environmental Assessment Research Council.