



Environment and Climate Change - an Evolution of the SEQ Regional Plan

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In July 2009, the Department of Infrastructure and Planning released the South East Queensland Regional Plan 2009-2031. The Department's website notes that the new Regional Plan forms the "*Queensland Government's plan to manage* growth and protect the region's lifestyle and environment".

This paper examines the new Regional Plan policies, which are contained within Part D of the new Regional Plan, relating to:

- Sustainability and climate change Desired Regional Outcome 1
- Natural environment Desired Regional Outcome 2.

While the previous Regional Plan, the South East Queensland Regional Plan 2005-2026, considered the issues of sustainability and the natural environment, the new Regional Plan reflects the increasing community focus on environmental preservation and climate change. In the old Regional Plan, the term 'climate change' was given only a fleeting appearance in just one policy about minimising adverse impacts on the atmosphere. However, climate change has received an elevated status in the new Regional Plan, being the key challenge driving two principles – reduction of greenhouse emissions and climate change adaption. Regardless of whether one is a climate change believer or sceptic, the new Regional Plan forms an evolved species of planning document clearly focused on considering the impacts of climate change.

A draft South East Queensland Climate Change Management Plan, prepared in support of the new Regional Plan, has also been released for public consultation.

It is important to consider that planning schemes will need to be amended to align with the new Regional Plan. Accordingly, it will be interesting to see the way in which local governments go about responding to these new climate change policies.

Desired Regional Outcome 1: Sustainability and climate change

Desired Regional Outcome 1 (DR01) is that:

"The region grows and changes in a sustainable manner—generating prosperity, maintaining and enhancing quality of life, minimising the use of resources, providing high levels of environmental protection, reducing greenhouse gas emissions and becoming resilient to natural hazards including the projected effects of climate change and oil supply vulnerability."

The new Regional Plan builds on DR01 in the old Regional Plan. The reference to greenhouse gas emissions, oil supply vulnerability and climate change broaden the scope of this section. As a result of the expansion of issues in DR01, this Desired Regional Outcome is now supported by five principles, rather than just one as was the case in the old Regional Plan.

The document notes that the overriding intent of the new Regional Plan is to "*ensure the region grows and changes in a sustainable way*".

With respect to climate change, the new plan states the government must "move quickly to implement measures that reduce the effects of natural hazards and climate change, and secure the sustainability and prosperity of the region". It also notes that "Regional climate change actions for SEQ will... be influenced by statewide and natural climate change initiatives and policies including... the Australia Government's proposed Carbon Pollution Reduction Scheme".

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In terms of achieving sustainability, the new Regional Plan states that the overriding intent of the new Regional Plan is:

"to ensure the region grows and changes in a sustainable way. The challenge is to reduce the region's ecological footprint while enhancing the region's economy and people's quality of life."

This is in distinct contrast to the old Regional Plan, which contended that, despite sustainable development principles being incorporated throughout the legislative framework at the time, "*current trends and patterns of development in SEQ are generally not sustainable*". This change may be indicative that the drafters are satisfied that Councils, developers and the community have started to embrace sustainable development practices.

In support of DR01, the new plan outlines five sustainability principles:

1.1 Ensure ecologically sustainable development through the application of the Queensland framework for ecologically sustainable decision-making

This principle is about using the framework established for ecologically sustainable decision making.

To achieve this, the new Regional Plan notes that sustainable development should include:

- compact urban form that minimises need for travel by private vehicles;
- well-designed activity centres and transport services;
- buildings designed with the region's climate in mind;
- low levels of water, energy and material consumption;
- adequate and well-situated open space;
- total water cycle management to minimise impacts on the natural water cycle, including aquatic ecosystems; and
- protection from natural hazards, including the effects of climate change.

Essentially, the Regional Plan makes it clear that in order to provide ecologically sustainable development, it is necessary to take a holistic approach.

1.2 Monitor the progress made in SEQ towards achieving sustainability

This principle is directed at assessing actions against key documents targeting sustainable outcomes for the region. As part of this, the new Regional Plan commits the State Government to publishing a State of the Region Report as part of the five-year review.



Targets that have already been established, or are in the process of being established are listed in the table below:

Table 1:	Description o	f targets	relevant to	the South I	East Queens	land Regional Plan

Target source	Description	Timeframe	Spatial scale
Toward Q2: Tomorrow's Queensland	Vision for Queensland around five ambitions: strong, green, smart, healthy, fair	2020	Queensland
<i>South East Queensland Natural Resource Management Plan 2009–2031</i>	Includes targets for air and atmosphere, coastal and marine, community, land, nature conservation, regional landscape areas, traditional owners and water	2031	South East Queensland
Rural Futures Strategy for South East Queensland	Includes targets for economic development, rural communities and rural land management	2020-2031	South East Queensland
COAG Closing the Gap commitment	Includes targets to close the gap in health, education and employment outcomes for Aboriginal and Torres Strait Islander peoples	10 years	National
SEQ Regional Plan	Includes dwelling targets for existing urban areas	2031	South East Queensland
Draft South East Queensland Water Strategy	Includes targets for water supply and water use	Immediate	South East Queensland
<i>South East Queensland Healthy Waterways Strategy 2007–2012</i>	Includes targets for waterway health	2026	South East Queensland
<i>Connecting SEQ2031: An Integrated Regional Transport Plan for South East Queensland</i>	Proposes to include targets for transport	2031	South East Queensland



1.3 Reduce greenhouse gas emissions from development, land management and other planning decisions in the region

This principle is directed at reducing emissions, rather than mitigating the impacts of climate change. That is, this principle is directed at slowing or preventing climate change, rather than responding to it.

The new Regional Plan states that regional planning can contribute to the reduction of greenhouse gas emissions through:

- reducing travel needs (especially by private vehicle) through consolidating urban growth by encouraging higher density, energy efficient residential developments and co-locating services such as schools and shopping centres;
- providing active and public transport infrastructure;
- increasing the efficient use of energy through siting, design and orientation of buildings;
- supporting the generation of renewable energy and use of low emission technologies;
- increasing the sequestration of carbon dioxide; and
- minimising emissions from landfill.

The new Regional Plan states that these regional initiatives will help to achieve the target in *Toward Q2: Tomorrow's Queensland* to cut Queensland households' carbon footprint by one-third.

The paper summarises the breakdown of key emitters in Queensland:

- 40 percent from industry;
- 22 percent from fuel consumed by road transport;
- 13 percent from fuel consumed by residential users;
- seven percent from agricultural emissions;
- three percent from clearing of woody vegetation; and
- three percent from waste disposal and treatment.

The new Regional Plan states that there should be deployment of existing low emission renewable technologies such as solar power, wind, geothermal and biomass (e.g. the waste from sugarcane milling). It also states that new regulations about housing energy efficiency will, in part, result in reduced greenhouse gas emissions.

Oddly, the new Regional Plan singles out primary producers and other rural industries in relation to their role in reducing greenhouse gas emissions, despite the fact they account for only three percent of all emissions.

There is reference in the new Regional Plan to the Climate Change Management Plan, which the new Regional Plan contends will provide an integrated framework for implementing regional policies to reduce greenhouse gas emissions and that it *"will describe programs and actions to reduce greenhouse gas emissions and support transition of the SEQ community to a low-carbon future"*.



1.4 Increase the resilience of communities, development, essential infrastructure, natural environments and economic sectors to natural hazards including the projected effects of climate change

This principle is directed at minimising the impacts of climate change. It states that this will be achieved by building community resilience, avoiding vulnerable development in hazardous areas and incorporating design measures that are suited to more varied climatic conditions.

The Regional Plan contends that there will be an increase in the frequency and severity of natural disaster events and that South East Queensland has been identified by the United Nation's Intergovernmental Panel on Climate Change as one of six 'hot spots' in Australia where vulnerability to climate change is likely to be high.

It notes that the region's local governments, along with the State, will implement relevant State planning policies and the State Coastal Management Plan and develop local disaster management plans to address the predicted impacts of climate change. Further, the new Regional Plan notes that planning for natural hazards will be informed by the projected sea level rise outlined in the Queensland Coastal Plan.

For land not already subject to a development commitment, a rise of 0.8m by 2100 must be taken in account, and for land already subject to a development commitment, the following projected sea level rise must be considered based on the asset life:

- 2050 0.3m
- 2060 0.4m
- 2070 0.5m
- 2080 0.6m
- 2090 0.7m
- 2100 0.8m

Again, reference is made to the Climate Change Management Plan. It is clear from this principle that coastal development is going to become increasingly difficult and that the State Government has earmarked sea level rise as a critical issue for the region.

1.5 Identify people, economic sectors and areas that are at risk due to oil supply vulnerability and increase their resilience to the effects of oil supply vulnerability

The new Regional Plan notes the predicted decline of global oil production likely to occur within the next five years and Queensland's reliance on imported oil products. South East Queensland communities and industry were established in a time of generally low oil prices and, as a result, are vulnerable to diminishing production and increased prices.

The key policy outlined by the new Regional Plan to address oil reliance is to reduce private vehicle travel and provide enhanced public and active transport networks. Additionally, the Regional Plan notes that retention of agricultural production areas close to population centres is also an important component of building resilience to oil supply chain variances.

The new Regional Plan concedes that there is no easy solution for reducing reliance on oil based fuels in the transport industry and the mining, agricultural and manufacturing sectors.



Desired Regional Outcome 2: Natural environment

Desired Regional Outcome 2 (DRO2) is that:

"A healthy and resilient natural environment is protected, maintained and restored to sustainably support the region's rich biodiversity and ecosystem services including clean air and water, outdoor lifestyles and other community needs that critically underpin economic and social development."

The new Regional Plan states that "SEQ is one of Australia's identified 'biodiversity hotspots" and that "SEQ's population growth and related urban and rural development are increasing the pressure on the natural environment".

The Regional Plan states that protecting and managing the natural environment is fundamental to achieving a sustainable future for the region. It is important, however, to remember that sustainable development is not merely about preserving the environment but achieving social and economic outcomes as well, which, at times, may be at the cost of the environment.

The new Regional Plan also notes that a new state agency, the Department of Environment and Resource Management, has been established to better coordinate environment and resource management across the state.

In comparison to the old Regional Plan, DR02 remains substantially the same in concept. However, one key difference is the inclusion of the concept of 'resilience'. This concept of resilience is repeated throughout the various principles which support DR02.

There is also mention of the Queensland Government's commitment to protect 50 percent more land for nature conservation statewide by 2020, as detailed in *Toward Q2: Tomorrow's Queensland*. It is unclear where this protected land will be located, but it may indicate further 'land grabs' intended by the State Government in the future.

In support of DRO2, the new Regional Plan outlines four principles:

2.1 Protect, manage and enhance the region's biodiversity values and associated ecosystem services and maximise the resilience of ecosystems to the impacts of climate change

This principle is supported by six policies and five programs, which include:

- Avoid impact on areas with significant biodiversity values in the Regional Landscape and Rural Production Area and avoid or minimise impacts on areas with significant biodiversity values in the Urban Footprint or Rural Living Area.
- Where impacts on areas with significant biodiversity values cannot be avoided, offset impacts in accordance with the principles of the Queensland Government Environmental Offsets Policy and relevant specific issue offset policies.

The Queensland Government Environmental Offsets Policy provides an "*integrated, consistent and transparent approach to using environmental offsets in Queensland*". Environmental offsets are used "*to replace the value of environmental features inevitably lost in development that supports a growing economy and population*". There are currently three specific issue offset policies:

- Vegetation Management Policy for Vegetation Management Offsets (2007)
- Marine Fish Habitat Mitigation and Compensation for Works or Activities Causing Marine Fish Habitat Loss (2002)
- Koala Habitat Offsets for Net Benefit to Koalas and Koala Habitat (2006)

The Environmental Offsets Policy notes that the existing specific issue offset policies should be revised to ensure that they align with the Policy.

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2.2 Koala populations in the region are enhanced through the protection, management and the achievement of a net gain in bushland koala habitat and through managing conflict with urban development

The new Regional Plan notes the decline of the koala population, particularly at Pine Rivers and the Koala Coast. This decline is attributed to urban development destroying koala habitat and a high mortality rate as a result of car collisions, domestic dogs and stress-induced disease. As a result, the State Government has committed to increasing koala habitat by 2020 and implementing other measures to support koala populations.

The key outcome sought to be achieved is to maintain all current major koala populations across the region at viable levels.

The new Regional Plan notes that a State planning policy for koala preservation will have offset requirements, which include acquisition of additional koala bushland, rehabilitation of koala bushland habitat areas outside the Urban Footprint and implementation of measures that will reduce koala deaths.

In comparison to the old Regional Plan, the policies which support this principle in the new Regional Plan appear to be more strongly worded.

These provisions in the new Regional Plan squarely lay the blame for declining populations on urban development. However, regard should be had to other impacts such as drought, which may be impacting on koala populations. Further, it would almost appear from the new Regional Plan that koala preservation prevails over the needs of residents of South East Queensland seeking affordable housing by ensuring that vast tracts of land remain undeveloped or, alternatively, that offsets be required.

2.3 Protect and manage the air and acoustic environments to maintain the health and wellbeing of the community and the natural environment

This principle aims to protect these natural assets to ensure the health of the community is preserved. The new Regional Plan notes that eliminating the impacts of air and noise emissions is not always possible and that providing separation distances between industry and other sensitive land uses will help reduce any adverse impacts.

2.4 Maintain, protect and enhance the values of the region's coast, including the foreshore, coastal wetlands, dunes, coastal processes, marine ecosystems, significant coastal values and marine waters

This principle is directed at protecting the South East Queensland coastline, which is noted as having a diversity of resources valuable to different sectors of the community – for example, biodiversity, scenic amenity, outdoor recreation, economic activities and cultural heritage.

It also seizes upon projected sea level rises and notes that development, other than maritime infrastructure, should avoid erosion prone areas, storm tide inundation hazard areas, and undeveloped sections of tidal waterways in accordance with the Queensland Coastal Plan.

The new Regional Plan notes that development on the coast or in tidal waters should avoid disrupting the natural physical coastal processes as these coastal processes (including both erosion and accretion) protect coastal values.

South East Queensland Climate Change Management Plan

In July 2009, the Department also released the South East Queensland Climate Change Management Plan in draft form for public consultation. The Foreward, provided by The Honourable Stirling Hinchliffe MP, Minister for Infrastructure and Planning, states that the Climate Change Management Plan is a "*bold step to ensure we implement the climate change policies of the SEQ Regional Plan with clarity and commitment*".

On first reading, the Climate Change Management Plan reads like an action list of the studies and reports that the State Government will be commissioning and then implementing to address the issue of climate change.

As with the provisions directed at climate change in the new Regional Plan, the Climate Change Management Plan accepts the phenomena of climate change and its links to carbon emissions. Referring to "global climate models



developed by international centres for climate excellence", the Climate Change Management Plan notes that "while the quality of evidence of climate change is rapidly evolving, the following changes are likely occur in SEQ over the next 100 years:

- Increased inundation as a result of more intense weather systems, associated storm surges and higher mean sea level;
- Reduced water availability for cities, industries, agriculture and natural ecosystems; and
- An expected increase in high temperatures and the number of days over 35°c, potentially affecting human health and peak energy demand."

The Climate Change Management Plan acknowledges that the key tool nationally for reducing greenhouse gases will be the Federal Government's proposed carbon pollution reduction scheme. However, it notes that urban and regional planning can also contribute to reduction efforts. It states that providing public transport, designing efficient settlement patterns and construction measures will contribute to reducing carbon emissions. Additionally, the Climate Change Management Plan states that urban and regional planning has a role to play in building resilience to natural hazards and climate change.

Like the new Regional Plan, the Climate Change Management Plan differentiates between reducing emissions and adapting to climate change.

Some of the actions the Climate Change Management Plan proposes in relation to reducing emissions are as follows:

Transport

- Prepare "*Connecting SEQ 2031: An Integrated Regional Transport Plan*", which provides a plan for the region in terms of transport including transit corridors, park-and-ride facilities and incentive to increase use of public transport.
- Increase adoption of leading practice design of transit oriented communities and concentrate planning efforts and infrastructure investment in priority locations.

Energy efficiency

- Prepare leading practice energy-efficiency guidelines for multi-unit housing.
- Increase proportion of energy derived from low-emission sources for example, the Queensland Solar Hot Water program.

Renewable energy

• Increase proportion of energy derived from low emission and renewable energy sources by identifying and mapping significant sources of renewable energy in South East Queensland.

Carbon storage

• Increase stored carbon by retaining or planting trees.

Waste emissions

• Reduce methane lost to the atmosphere from landfill and sewage works.



Additionally, the Climate Change Management Plan also addresses measures for adaptation to climate change including:

Coastal hazards

- Prepare a new Queensland Coastal Plan and supporting guidelines, which will provide policy direction on storm tide, sea level rise and coastal erosion.
- Update the current guideline "*Mitigating the adverse impacts of storm tide inundation*" to incorporate current climate change science.

Riverine flooding, bushfires, high temperatures and other natural hazards

- Review and update "*State Planning Policy (SPP) 1/03 Mitigating the Adverse Impacts of Flood, Bushfire and Landslide*" and develop supporting guidelines to incorporate the expected increase in severity and frequency of extreme weather events that cause natural hazards.
- Develop guidelines for the preparation of hazard and risk maps including projected effect of climate change on natural hazards.
- Prepare local-scale climate-resilient urban planning and design guidelines and performance criteria for sensitive areas.

Biodiversity conservation

- Improve understanding of the vulnerability of ecosystems to the impact of climate change in South East Queensland.
- Prepare regional and local adaptation strategies and programs to mitigate the impacts of climate change on natural ecosystems in South East Queensland.

Conclusion

DRO1 and DRO2, along with the Climate Change Management Plan, proceed on the basis that climate change is a proven phenomenon and that the impacts outlined, such as sea level rises, will occur. While none of the provisions relating to environmental issues or climate change have been translated into regulatory provisions, given the topical nature of climate change and its extensive coverage in the new Regional Plan, it appears likely that we will see further policy documents and, in time, regulatory requirements relating to urban planning and climate change.

While operating on the assumption that climate change will occur generally accords with the precautionary principle, it is difficult, in the face of continued debate, to accept that some landowners may face severe restrictions in the future on development potential of their land as a result of a contested scientific concept.

Further, with respect to reducing greenhouse gas emissions, it is interesting to note that the new Regional Plan has little to say about how Queensland's largest group of emitters, industry, will be required to reduce their emissions. Although this sector may be impacted upon by the Federal Government's proposed carbon pollution reduction scheme, the State Government has not addressed this issue in the new Regional Plan.

However, that being said, the new Regional Plan proposes actions which will not only lead to greater sustainability, but better, more climatically suitable building designs (which harness the benefits of the natural environment) and solutions which address the issue of South East Queensland's increasing population.

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