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Coffs Harbour State of the Environment Supplementary Report

2010

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Welcome to Coffs Harbour's State of the Environment Report covering the period from 1 July 2009 to 30 June 2010. This is a supplementary State of the Environment (SoE) Report which should be read in conjunction with the 2009 Comprehensive SoE Report and the previous Supplementary Reports as well as the 2009/2012 Management Plan. This SoE is an important reference for key decision-making by Council and the community.

SoE reporting is part of a continuous improvement framework for the community and Council. It is designed to report on our ability as a community to look after our environment and our future. Apart from the first section (1.0), *the report does not solely reflect upon the performance of Council*, rather it reports on our performance as individuals and as a community.

The state of the environment is ultimately the responsibility of every citizen and is impacted upon by every choice that we as individuals and collectively as a community make, every day- from the consumer and food products that we purchase through to the size of our cars and houses and the kinds of lifestyles that we lead.

2009/10 Context

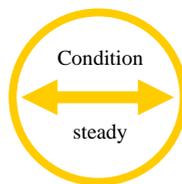
In February 2010 the *Who Cares about the Environment in 2009?* report was released by the Department of Environment Climate Change and Water. This shows us how people in NSW feel about the environment and how they are responding to environmental issues, now and over time. The results indicated that the environment remains a top priority for people with the environment ranking in the top five issues for government attention. Water related issues and climate change are the two top environmental concerns for the community. *Who Cares about the Environment in 2009?* provides us with information about community views. This helps us in democratically elected government to design programs that are responsive to community needs.

Trends

Apparent trends in relation to data collected over time are summarised in the “**Trends at a Glance**” tables found in the report. A \checkmark or \times denotes that the indicator trend is improving/ not improving when considering the average of the last three years of data. A ? indicates that information is unavailable or a trend is not yet clear. Overall theme trends have been based upon an average of all of the indicators used for that theme. Overall theme trends are described in terms of the following categories:



pressure declining



pressure steady



pressure increasing



information unavailable

Action

Actions have been taken from the 2009 Comprehensive State of Environment Report. A \checkmark indicates that the action is underway. An \times indicates this action has not yet been addressed.

How is our overall environmental performance?

In comparison to the previous reporting years (illustrated below), the majority of indicators suggest that the status quo remains unchanged, with the exception of three of the reporting areas- Sustainability and Council, Heritage and Human Settlements.

2005/06	2006/07	2007/08	2008/09	2009/10
Sustainability and Council				
Our Biodiversity				
Our Atmosphere				
Our Land				
Our Waters				
Our Heritage				
Our Settlements				



1.0 SUSTAINABILITY AND COUNCIL

There are ample opportunities for us to improve our performance in this area. As evidenced by many major corporations and Government agencies, acting with an understanding of sustainability principles leads to more efficient operations. This in turn can lead to numerous economic, social and environmental outcomes. In an era where we will continue to see the price of electricity increase and the advent of a carbon based economy we need to be seriously considering our earth footprint and placing ourselves in a position to benefit from being “green”.

Consumed energy and CO₂ emission

Environmental indicators	2003/04	04/05	05/06	06/07	07/08	08/09	2009/10
Consumed electricity KWH			14,981,247	14,220,097	15,373,820	15,731,897	17,617,559

Council has been monitoring its energy usage through Planet Footprint an environmental scorekeeper that independently monitors and reports the energy, water, fleet, waste and greenhouse performance of our organisation. During the reporting period Council significantly increased its energy usage. This can be partly attributed to the commissioning of the Karangi Water Filtration Plant and the Water Reclamation Plant at the start of the reporting period.

It is hoped that with the commissioning of the Rigby House Green Retrofit (*Coffs first PV solar public building*) in future years we will start to see Council's energy usage decline as we become more efficient, instigate further retrofitting and alternative energy production. Such actions will not only saves the organisation money but also significantly reduce our corporate footprint.

Transportation and CO₂ emission

Environmental indicators	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10
Petrol fuel use (L)						221,179	172,749
Diesel fuel use (L)					405,665	504,760	574,473
Fleet vehicle travel (km)	1,808,229	1,833,757	1,738,345	1,798,352	1,873,433	2,100,000	2,218,347
Air travel (km)							73,172
CO ₂ emissions from vehicle fleet (T)						2016	2097
CO ₂ emissions from air travel (T)							172
Total CO ₂ Emissions from corporate transportation							2,269
Single person car based commuting (staff)							40%
Walk, cycle, bus or carpooled (staff)							28%

Council has made some effort over the past few years to change its vehicle fleet to include more energy efficient leased vehicles. Just under half of our leased vehicle fleet are smaller cars (4-cylinder). However the vehicle kilometres travelled continues to grow, as the number of vehicles in the fleet grows. Under Fringe Benefit Tax laws there is an incentive for us to drive each car over 25,000km per year. In an era where fuel prices continue to increase it is now an opportune time to investigate whether the fuel and environmental costs associated with driving our vehicles extra kilometres outweigh the financial incentives associate with the FBT. This year we have reported on air travel as it is an important source for corporate carbon emissions.

This reporting year an independent organisation assessed how we get to work. The results of the survey indicated that 39% of CHCC workers live within 5kms of Council and 16% live within 6-10kms. These are both distances that could be easily covered by walking or bike riding. Reasons stated for not taking non car based transportation to work included- 12% indicating that they had a company car and the remaining respondents indicating that distance and weather were disincentives. However it was also indicated that 29% of CHCC workers were interested in carpooling and 25% were interested in walking/cycling. It was indicated that incentives for commuters not to drive cars to work included the need for better showering and bike storage facilities.

Waste and Water

Environmental indicators	2003/04	04/05	05/06	06/07	07/08	08/09	2009/10
Water usage (kL)							101,206
Recyclable Waste							
Organic Waste							
Garbage							

This is the first time that we have measured our water usage. In future years we hope to report on our wastage as well.

Responsible Consumption and Purchasing

Environmental indicators	2003/04	04/05	05/06	06/07	07/08	08/09	2009/10
Paper used (reams)	4,897	5,605	5,800	6,778		5,668	5,516

This year, the amount of paper that we used when laid flat, would stretch from Sydney to Brisbane (891.24 km). When we consider that the majority of bulk printing is NOT included in this figure (i.e. Rates notices) it becomes evident that this seems to be an area where the organisation could make savings by improving our performance.

1.1 PRESSURE

What are some factors affecting Council's sustainability performance?

Following on from detail investigations across the State, the 2009 report by the UTS Institute of Sustainable Futures identified the following barriers to sustainability in Local Government-

i. Lack of organisational support

The report identifies that a lack of support in terms of General Manager, Elected members and Senior staff level can severely restrict a Council's ability to move towards sustainability.

ii. Theory versus practice

A common and related theme was a difference between what was espoused and what was practiced, and policies not being carried through to implementation. Resistance to change was also discussed, with the familiar example given of the sense of entitlement to company vehicles (and to particular sized vehicles) in some sections of council. As well there were some remaining prejudices towards those staff with a "green" agenda - condescending attitudes towards community development and social service activities still remain and undermine efforts to have social aspects of sustainability taken seriously.

iii. Inadequate systems for managing information

Even for councils with the right motivation and a range of good programs, there were challenges with putting in place systems that would best support their efforts and help with the planning, promotion, and monitoring and evaluation of initiatives. For many participating councils, data management and IT systems presented real challenges. The problems of complex and incompatible systems, or lack of automation, added to the time involved in planning, coordination and reporting.

iv. Competing priorities

Interesting examples were provided around the topics of economic growth versus protection of natural assets, and private car use versus public transport and cycling. These get to the heart of the triple bottom line decision making process, and would provide interesting case studies.

v. Internal and external funding

Most interview participants raised resourcing as a barrier to implementing actions detailed in sustainability plans. Several spoke about the current economic climate putting a strain on council budgets, with implications for staffing. In terms of council decision making processes, it was reported that councillors will often decide on projects that aren't itemised in existing plans and budgets, and so divert staff and budgets away from current priorities.

vi. Staff capacity and turnover

Staff with responsibilities for engaging their organisations with this area of work, felt the pressures of their wide ranging responsibilities and the types of skills required of them. It can be a barrier to try and do everything at once; it's easy to feel overwhelmed and end in inertia. It was also understood that what is being asked of everyone in the council is a different way of thinking and doing their work: Holistic thinking, and understanding what QBL and collaboration mean in practice, is difficult for many. Staff turnover was specifically mentioned as a barrier to making progress.

vii. Research and development challenges

There was a general acceptance that environment and sustainability positions required new knowledge and new ways of doing things, but time for reflection, reading and keeping up with developments was a real challenge. Associated issues were the costs involved in obtaining reliable data, and finding appropriate and affordable external assistance.

viii. The language of sustainability

While practitioners in this area understood that the word sustainability is convenient short hand for a set of well understood principles, the term often proved problematic when used more widely. The above comments indicate that it is not just the term sustainability that can be problematic. For example the term "triple bottom line", while convenient short hand to convey an important concept, proved a barrier in one council.

These barriers provide an excellent checklist for CHCC to review how sustainability is being addressed within our organisation and identify opportunities to strengthen drivers for change.

1.2 RESPONSE

What are we doing to improve our sustainability performance?

Sustainability should be a well-understood concept across CHCC as a result of many years of advocacy for, and application of sustainability principles to CHCC operations. There are some major internal and external drivers requiring CHCC to review our internal sustainability culture and rapidly move forwards:

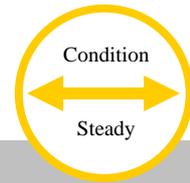
- *Waste and Sustainability Implementation Payment Program (WaSIP)*
- *Our Living Coast Regional Sustainability: grant-funded program*
- *Community Education and Engagement Driving Change for Sustainability in Local Government:(CEE Change Program): grant-funded program.*
- The Coffs Harbour *Vision 2030 Plan*
- The Integrated Planning and Reporting framework for NSW local government
- Grant funding from late 2009 to 2012 to support future sustainability implementation briefs.

Over the reporting period in partnership with Green Synergy Consulting, we have undertaken a detailed investigation entitled *Embedding Sustainability -Creating a More Effective Organisation*. This document identifies a model for strengthening the sustainability culture of CHCC so that we are able to meet the various requirements of our governing legislation and community needs.

FURTHER ACTIONS REQUIRED

The 2008/09 Comprehensive State of Environment Report identified the following actions that need to be undertaken to ensure that Council is walking our talk. These actions align with the Our Living City Settlement Strategy Interim Document.

Actions	Commenced Implementation
Continue to integrate Triple Bottom Line (TBL) and Sustainability Assessments into the decision making process.	✓
Develop TBL based Procurement Policy for the organisation as a whole.	✗
Develop education programs for staff awareness to reduce Council's in-house waste generation and increase separation practices.	✓
Audit energy usage and investigate alternatives across Council operations. Develop a systematic approach to the management of energy consumption by Council.	✗
Continue to develop and implement the Integrated Management System to ensure continuous improvement in all Council operations.	✓
Undertake a review of all herbicides and pesticides used by Council and identify quantities used and viable alternatives available.	✗
Assess which Council buildings could be fitted with rainwater tanks for landscaping, vehicle and plant washing and other uses. Continue to set an example to the broader community in relation to the use of rainwater tanks and to water reuse in building demonstration projects.	✗
Investigate options for sustainability focused demonstration projects at Council managed caravan parks.	✓
Undertake sustainability education programs for community engagement	✓
Ensure that land and water resources and catchments generally, are assessed in terms of their carrying capacity in developing future urban settlement strategies.	✓
Undertake focussed climate change education and awareness raising activities	✓
Build community capacity to take action for sustainable development through support and facilitation of community groups	✓
Develop a targeted internal Council sustainability leadership program	✓



2.0 OUR BIODIVERSITY

Coffs Harbour has many unique aquatic and terrestrial environments making it a region of high biodiversity. As identified under Council's Biodiversity Action Strategy, key threats to biodiversity are habitat loss and fragmentation, introduced species, poor landscape health, unhealthy waters, climate change, inappropriate fire management, ineffective regional coordination and what we don't know. Climate change poses significant risks to our local biodiversity, as described in Chapter 3 of this report.

Habitat loss and fragmentation will continue to occur, to make way for development, infrastructure and agricultural activities. The framework for assessment and approval of land clearing activities is somewhat inconsistent and fragmented. In addition, legislative changes have been occurring. Some clearing is exempt from approval requirements, or falls under the responsibility of different State Government agencies depending upon the nature of the activity proposed and its location. Coffs Harbour contains exceptionally high levels of biodiversity (marine and terrestrial) when compared with other Local Government Areas in NSW. (*Biodiversity Action Strategy 2002*).

The overwhelming causes of the decline in Australia's biodiversity result from the human population, their lifestyles, technologies and demands on natural resources. The situation continues to deteriorate as population and demands on natural resources increase as a result of population growth particularly in the coastal zone. Many species are undescribed or poorly studied; of those that are described, many are lost or threatened. The loss of and decline in species continues and is cause for national concern the situation is deteriorating as threatening activities continue. (*Australian State of Environment Report 1996*).

Whilst vegetation continues to be lost due to land clearing, replacement planting has been continuing, involving Council, Landcare Groups as well as proactive residents. This is a positive step, however replacement planting does not fully compensate for the loss of mature and over-mature trees on a short-term basis in terms of providing habitat, carbon sequestration/sinks, or resilience against weeds and disease, loss of scenic/aesthetic values and broader ecosystem services. Replacement plantings are also vulnerable and may not survive over time.

Trends at a Glance

Environmental Indicator	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	Move towards sustainability
Threatened Flora Species	31	51	53	53	53	60	60	↔
Threatened Fauna Species	76	84	110	110	110	107	107	↔
Endangered Ecological Communities	2	9	9	9	9	11	11	↔
Endangered Populations	2	2	2	2	2	2	1	↔
Loss of Koala Habitat (ha)		648* (Corrected)	661 (Approx)	**	**	**	**	**
Number of trees planted (approx) (New indicator)			12,150 (Approx)	26,000 (Approx)	7500 (Revised)	8,200	6,940	√

Source: CHCC, DECCW 2010

* Clearing since 1995. 2005/06 figure represents clearing additional to 2004/05 rates.

** There has been no assessment of vegetation loss since 2006. As part of the new standard LEP Council is preparing a new vegetation map based on merged aerial photography and LIDAR structural information

2.1 PRESSURE

What is affecting local biodiversity?

- **Native vegetation clearing-** Native vegetation clearance remains a threat to land-based biodiversity in Coffs Harbour LGA. (State of Environment 2004: 38). Land clearing is occurring as a response to increasing urban development within the LGA. Land clearing also has an impact on aquatic health of our creeks and estuaries.
- **Lack of information-** Estimates of vegetation loss and regrowth are difficult to accurately qualify until mapping imagery is available over the whole LGA for the one “date stamp”. Vegetation information should be constantly maintained and updated.
- **Degradation of endangered ecological communities-** Under-scrubbing and grazing on private land are of concern. Pressure for private property protection from fires may result in more clearing and under-scrubbing. This includes areas of SEPP14 Wetlands that are located near buildings.
- **Large tree removals from urban areas-** Compensatory planting is often much smaller which can alter the local habitat.
- **Introduced plant invasion-** Very little information is available on levels of infestation, which may range from high levels of infestation through to occasional isolated occurrences in the areas reserves.
- **Vertebrate Pests-** The two main resident species of concern are the Indian Myna and the Fox. Pet owners who do not comply with the requirements of the Companion Animals Act also compromise the wellbeing of local biodiversity.
The Cane Toad is seen as a major threat to the biodiversity of the Coffs Harbour LGA. Individual cane toads have been recorded at several isolated sites, however, no recorded breeding events have taken place to date. Scenarios for climate change suggest that the cane toad’s potential range could extend south almost to the Victorian border by the year 2030.
- **Climate change-** Climate change will undoubtedly create changes in species distribution and ecosystem composition. Scientific evidence is rapidly mounting to indicate that we are already seeing the impacts of changes in climate on biodiversity in the form of changes in species ranges and life cycle events, with winners and losers emerging as conditions change. The most vulnerable ecosystems include coastal ecosystems, alpine areas, rainforests, fragmented terrestrial ecosystems and areas vulnerable to fire or low freshwater availability. The impacts of climate change on biodiversity can be reduced through mitigation and adaptation measures.
- **Science/management nexus-** a lack of science in decision making as well as science which targets key “knowledge gaps” in management, remains a continuing problem.

2.2 RESPONSE

What are we doing to protect biodiversity?

Programs currently underway that are aimed at preserving local biodiversity include:

Biodiversity Action Strategy – (under review).

- One of the major initiatives being undertaken by CHCC is the establishment of ‘Priority Habitats and Corridors’ which link both east-west and north-south vegetation. These corridors will be introduced to the new Standard LEP as a planning amendment following further public consultation in 2011.
- Implementation of Koala Plan of Management (KPOM) – 80% completion of the management actions within the KPOM by Koala Management Advisory Committee (KMAC) is noted with inclusion of corridor revegetation projects, conducted throughout Coffs Harbour City Council (CHCC) has adopted the Coffs Creek Flying fox Camp Strategy and site Vegetation Management Plan for West Coffs Harbour Camp. The restoration works have commenced on the core of the flying fox camp.
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- CHCC has worked to complete fish passageworks with NSW Fisheries in the Orara and is currently financially supporting LANDCARE & Rivercare through the Environmental Levy program across the LGA.
- Implementation of the Coffs Harbour Vertebrate Pest Management Strategy in line with the Northern Rivers Catchment Management Regional Strategy.
- Rural Lands Strategy has been completed and adopted by CHCC.

- CHCC has greatly improved its Biodiversity Information Systems providing increasing access to information internally, standards development on metadata is in progress.
- Improving general awareness of biodiversity values through development of key information booklets and development guidelines to help manage biodiversity information.

Vegetation Mapping

- CHCC has completed the LGA wide aerial photography at 1:15000 scale with thermal image bands and laser levelling (AAMHatch 2008).
- CHCC is currently preparing a new vegetation map (Class 5 mapping) based on merged aerial photography and LiDAR structural information. The updated vegetation layers will be included as planning amendments to the new Standard Instrument Local Environmental Plan which will identify areas of high conservation value.
 - Priority Habitats and Corridor mapping will be progressed in 2011.
 - Accurate identification of Endangered Ecological Communities in the LGA is dependant on the Class 5 vegetation mapping being finalised.

Koala Plan of Management

- A major review of the Coffs Harbour Plan of Management is underway to align with the new Standard Instrument Local Environmental Plan.
- The koala habitat mapping will be revised in 2011 subject to completion of the Class 5 vegetation mapping for the LGA.
- CHCC is currently sponsoring a Koala Health Program and supporting WIRES in rehabilitations programs.
- CHCC & KMAC are developing a program promoting sustainable management of golf courses with the biodiversity “conservation in the rough” philosophy.
- Koala Warning signs installation on major koala blackspots are continuing.
- Fencing has been erected along Hogbin Drive near Harry Jensen Bridge. This fencing will help prevent Koalas from walking across Hogbin Drive and encourage them to walk under the bridge. It is hoped that this action will reduce the number of Koala deaths along this stretch of road. Stage 2 of the program is complete, which involved the construction of fencing near the Fred Henson Bridge. The fencing was part funded by the Environmental Levy and matched by philanthropic donations.

Tree Protection Order (TPO)

- The enforcement of the TPO has continued, although trees in a large proportion of the LGA are not protected under the requirements of the TPO. Changes under the Standard LEP are expected to be based around species, communities and size of trees as opposed to zoning and size of land parcels. This will further strengthen the protection of native vegetation in the Coffs Harbour LGA.

‘Environment’ Button on CHCC Website

- Council has a new environment button on the CHCC Website which provides readily accessible information on a range of subjects including biodiversity, sustainability and climate change.

Biodiversity Policy and Guidelines

- CHCC has prepared several new guidelines covering a range of issues including Aborist Assessment Reports, Compensatory Planting, Tree Removal and Planting on Private Land and Preparing Ecological Assessment Reports. These and other important guidelines are available through the CHCC website which are designed for consultants, developers and the general public to provide a better strategic focus for managing biodiversity within the LGA.

Coffs Harbour Regional Landcare (CHRL)

- Landcare groups within the Coffs Harbour area continue to demonstrate their dedication, persistence and hard work with some remarkable outcomes achieved again this year that often go unnoticed by the broader community. A modest calculation indicates that they contributed 6725 volunteer hours, which can be valued at \$201,750. Council’s Bush Regeneration team in the Coffs Creek catchment’s riparian areas planted approximately 6,940 plants over an area of approximately 12,511 sq m.

Vertebrate Pest Management Strategy (VPMS)

- CHCC has a Pest Management Strategy for the purpose of guiding future management of vertebrate pests within the Coffs Harbour LGA. It is intended that the management actions contained in the VPMS be incorporated into all existing Plans of Management for Community, Operational and Crown lands currently managed by the CHCC.

Weed Eradication Programs

- A number of excellent community and Council based activities continue to help repair degraded lands and tackle major infestations of weeds such as Camphor Laurel, Lantana, Bitou Bush and Cats Claw Creeper.

Environmental Levy

- Our Environmental Levy continues to fund a number of projects aimed at improving the condition of local habitats, and expanding the extent of native vegetation. For example, the Orara River project now coordinates the activities of 110 landowners and has lead to the rehabilitation of 2.2 ha and replanting in excess of 4 Ha over the past reporting year.

FURTHER ACTIONS REQUIRED

The 2008/09 Comprehensive State of Environment Report identified the following actions that need to be undertaken to protect biodiversity. These actions align with the Our Living City Settlement Strategy Interim Document.

Actions	Commenced Implemented
Implement and review the Biodiversity Action Strategy.	✓
Seek funding of the itemised strategy over each five-year period.	✓
Continue with collaborative studies on species and communities under threat.	✓
Investigate environmentally safe methods of pest species control, and monitor their movements within the Coffs Harbour LGA.	✓
Undertake enhanced mapping of all natural resource layers.	✓
Continue to undertake priority restoration works in conjunction with community Landcare, Dunecare, Rivercare groups.	✓
Work with North Coast Weeds (NCW) in prioritisation of weed management actions and to use the Environmental Levy to achieve more strategic or targeted weed management outcomes.	✓
Continue to amend zoning boundaries in LEP mapping to correspond with location of priority habitats and corridors.	✗
Make provisions in the Coffs DCP for all new developments to include plans to enhance and protect the biodiversity of the Coffs Harbour LGA, particularly near waterways.	✓
Assess the implementation of the revised Koala Plan of Management and its commitment to the ongoing protection of koalas in the LGA.	✓
Implement actions contained within the Draft Priority Habitats and Corridors Strategy.	✗
Devise a system for monitoring the extent of each vegetation type within the LGA and their representativeness in Conservation Reserves at a local and regional level. Ensure that the method enables repeatable measures to allow tracking of vegetation changes over time (e.g. 4 yearly intervals to correspond with SOE reporting periods).	✗



3.0 OUR AIR

Of greatest concern locally and globally is climate change associated with The Enhanced Greenhouse Effect. It is very difficult to measure changes in greenhouse gases in our area. However increases in the number of cars, the clearance of vegetation, increasing homes and industries using fossil fuel dependent products indicate that the level of greenhouse gases that we are contributing to the global atmosphere is increasing. Australia is the greatest per capita emitter of carbon dioxide, in the world. The average Australian emits about 28 tonnes of carbon dioxide per year, which is about four, or five times the world average. World scientists agree that greenhouse gas emissions must be reduced by 60% by the year 2050 to avoid disastrous consequences. (*Australian Greenhouse Office*).

Trends at a glance

Environmental Indicator	2002/03	03/04	04/05	05/06	06/07	07/08	08/09	2009/10	Move towards sustainability
Community equivalent CO ₂ emissions (T)	1,007,755					855,503			√
Air quality complaints received (Council)	46	45	56	53	44	68	38	98	X
Air quality complaints received (DECCW)	10	6	14	8	16	78	150	90	√

3.1 PRESSURE

What is changing our atmosphere?

- **Pollution Complaints.** There was a significant increase in air pollution complaints during the reporting period to Council, as well as a significant number of air pollution complaints made to DECCW. The major pressures on air quality in the Coffs Harbour Area over the reporting period continued to be from sources such as backyard burning, smoke from solid fuel stoves and heaters, vehicle emissions, dust particles from unsealed roads, and waste facility & landfill odours emissions.
- **Greenhouse Gas Emission Sources-** Climate change is expected to occur as a result of fossil fuel combustion from private and business related transport, electricity for heating, cooling and other uses, fires, agriculture and solid waste to landfill. The removal of vegetation also impacts upon Greenhouse Gas emissions by impacting upon carbon sinks and sequestration. (*Greenhouse Action Strategy 2002*).

3.2 RESPONSE

What have we done to help?

- **Pollution management.** Council continues to respond to individual incidents as they arise, and a pollution control officer is available 24 hrs a day for this purpose.
- **Energy Efficient Street Lighting Project-** The roll out of new energy efficient streetlights across the City in the period 2004 to 2007 has continued to yield significant energy savings and over 645 tonnes of equivalent carbon dioxide emissions per annum. This is an excellent result especially when considering that there has been an increase in the lighting infrastructure with the continued growth of the city & the inclusion of the Red Rock/Corindi area.
- **Landfill Gas Extraction-** In 2009 Council appointed AGL to install and operate a landfill gas collection and flaring system at the Englands Road landfill. The project was commissioned in December 2009. Gas monitoring has revealed that around 230,000 cubic metres of gas is being collected each month, with about 56% methane content. This equates to greenhouse gas abatement of over 20,000 equivalent CO₂ tonnes per annum.
- **Coffs Harbour Mitigation and Adaptation Action Plan-** The overall aim of this project was to prepare a Management/Action Plan that addresses both *Mitigation* and *Adaptation* to

future climate change within the Coffs Harbour LGA. The Plan focuses on the role of Coffs Harbour City Council to increase the resilience of the City to climate change, and in advocating and championing community measures that reduce overall greenhouse gases generation. Within the context of this project, the following milestones were achieved:

Milestone 1: Climate Change projections for the Coffs Harbour LGA

Milestone 2: Risk Analysis Report

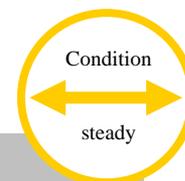
Milestone 3: Mitigation and Adaptation Action Plan

- **Integrated Transport Plan-** the Road Hierarchy Plan is complete and we have some Our Living Coast funding (with Nambucca and Bellingen Shire Councils) which will be used to publish a network map of cycleways and footpaths, particularly highlighting significant areas such as biodiversity. All bus stops have been mapped and infrastructure has been installed and will continue to be improved. The Transport Working Group are focussing on promoting active transport modes including cloning the Northern Rivers car pooling website (nrcarpool.org) and promotion of the RED (Regional Excursion Daily) bus ticket.
- **Light Rail-** Investigations have commenced for a light rail connecting Macksville to Glenreagh.
- **Walkways and Cycleways-** Council continues to build walkways and cycleways, which promote healthy lifestyles as well as a means of transport in the local context, which do not contribute CO2 to the atmosphere.
- **Backyard Burning Restrictions-** Council continues to enforce backyard burning restrictions under the Protection of the Operations Act.
- **Legionella-** There are currently 16 premises with cooling towers or thermostatic mixing valve systems registered in the Coffs Harbour area. Council maintains extensive records on each system that could harbour Legionella in the Coffs Harbour LGA and each system has a specific maintenance routine designed to minimise the ability of Legionella to grow to problematic levels.

FURTHER ACTIONS REQUIRED

The 2008/09 Comprehensive State of Environment Report identified the following actions that need to be undertaken to protect our atmosphere. These actions align with the Our Living City Settlement Strategy Interim Document.

Actions	Implementation Commenced
Promote the use of public transport, bicycle use and walkways to reduced reliance on private vehicles.	✓
Continue to enforce measures to ensure greater regulation of burning off, including prohibitions on burning off in urban areas.	✓
Develop mechanisms to raise funds to provide for continued sealing of rural roads as finances permit.	✗
Review the Greenhouse Action Strategy and finalise the Climate Change Action Plan	✓
Continue to promote energy efficient urban designs, including street layout and building design.	✓
Identify where Council operating costs can be reduced through increased energy efficiency measures and better management practices	✓
Develop an understanding of, and manage the effects of, climate change on the coastal strip.	✓
Upgrade GIS to reflect projected sea level, flood lands, storm surge and coastal recession scenarios.	✓
Undertake modelling to ascertain projected impacts on existing infrastructure and development and assess.	✓
Ensure the LEP, planning policies, development control plans and infrastructure design factor in climate change	✓
Investigate the development of a more efficient vehicle fleet.	✓
Continue to implement education programs	✓
Finalise and implement the Integrated Transport Plan	✓



4.0 OUR LAND

The clearing of vegetation remains a significant challenge to the integrity of the land and landscape as vegetation removal influences catchment management, water quality, soil integrity, weed infestations, carbon sequestration, air quality and biodiversity. The protection of vegetation has been addressed by Council in various ways, however, balancing demand for land with environmental values has continued to be challenging.

Trends at a glance

Environmental Indicator	2003/04	04/05	05/06	06/07	07/08	08/09	2009/10	Move towards sustainability
Approved clearing under Native Vegetation Act (ha)	24.30	115.18	108.31	0	0	0	0	↔
Development Applications Received	2038	1939	1442	1369	1459	1180	1296	↔
Land Management Complaints received by Council	77	70	22	22	29	34	49	X
Private Land Reserved for Conservation Total (ha)	138.5	1,379	1,379	1,379	1,397	1,397	1,539	√

Source: DECCW, CHCC 2010.

There was no clearing of vegetation under the Native Vegetation Act (NSW 2003) since the last reporting year. However Private Native Forestry approvals were given for 3,087 hectares in Coffs LGA but these are exempt under the Native Vegetation Act. Native vegetation continues to be removed illegally and as routine agricultural management activities across the local government area, however, it is not possible to provide an accurate picture of the amount removed. Information is only available for approved vegetation clearing as provided above, but there are significant limitations to the veracity of data provided. The above information therefore only applies to the subset of clearing activities for which permission is sought by landholders under the legislation.

The number and type of development applications received provides a measure of the development pressure in the local government area. These figures suggest a slight increase in the number of applications received and approved from the last reporting period. In addition several large scale development proposals (for residential subdivision) have recently been approved, or are being pursued, via the Part 3A assessment process, with the NSW Department of Planning. These are within the sensitive coastal zone and are likely to place additional pressures on these areas. Pollution incidents continue to occur within the area with the majority of complaints regarding rubbish dumped illegally on public and private lands. There continues to be a significant reduction in complaints regarding illegal vegetation clearing.

4.1 PRESSURE

What is changing our Landscape?

- **Land uses-** Development and transport corridors will continue to place pressure on the wellbeing of our lands as the area becomes more popular. For the Pacific Highway this includes the recently completed Bonville Deviation, the Sapphire to Woolgoolga Upgrade, Woolgoolga Bypass and the Corindi to Halfway Creek upgrade.
- **Future urban development** - Biodiversity, water quality and local aesthetic values will have increased pressures from human activities, of concern include potential urban expansion at Hearn's Lake, Moonee, and Bonville. Urban development generally involves pressure to remove/modify of stands of native habitat, including mature and over-mature trees, nectar producing, fruit-producing trees or species with edible foliage, Endangered Ecological Communities and rare vegetation types.

- **Land degradation-** Clearing of native vegetation, erosion, chemical/pesticide use and land contamination.
- **Natural processes-** Flooding and coastal processes are becoming increasingly concerning as global climate shifts in response to the Enhanced Greenhouse Effect. Flooding, and changes in coastal processes need to be considered more carefully in planning and development if we are to avoid severe community impact as a result of climate change.

4.2 RESPONSE

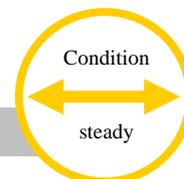
What are we doing to protect and restore our land?

- **Vegetation Management Plan-** A Draft Vegetation Management Plan has been in preparation since 2003. This plan identifies areas of significant vegetation and addresses the issue of vegetation clearing. Some modifications are required prior to the finalisation of the plan, which is linked with the LEP.
- **Planning Controls-** The Local Environment Study for Red Rock/Corindi has been exhibited; however internal work needs to be completed before the draft LEP is forwarded to Department of Planning for gazettal. This plan will bring the landuse zoning of the former Pristine Waters into the Coffs Harbour LEP.
- **Our Living City Settlement Strategy –** Endorsed by Council in July 2007 and by Department of Planning (DoP) on 11 November 2009. DoP's endorsement carries some minor exceptions, being lands not contained within the growth area boundaries of the Mid North Coast Regional Strategy (for example, lands in North Boambee Valley and West Coffs, ex-Coffs Harbour zoo site and possible long term future investigation areas).
- **Rural Lands Strategic Plan-** The plan continues to be implemented by Council.
- **Tree Protection Order-** Refer to the Biodiversity section for details.
- **Community Actions-** Further environmental restoration works were undertaken by a range of Community groups, funded through the Environmental Levy during 2008-2009. These included Dunecare/ Landcare works and the Orara River Restoration works that have assisted in improving the condition of local lands.

FURTHER ACTIONS REQUIRED

The 2008/09 Comprehensive State of Environment Report identified the following actions that need to be undertaken to our land. These actions align with the Our Living City Settlement Strategy Interim Document.

Actions	Commenced Implementation
Ensure the Sustainable Agriculture Strategy (when written) addresses land management practices.	X
Develop strict controls across the entire Coffs Harbour LGA to limit the possibility of pre-emptive clearing.	X
Develop education and interpretation programs aimed at reducing impacts on natural areas by neighbours and visitors.	X
Develop strategies to ensure rehabilitation of degraded banana lands, and revegetation of visually significant areas.	✓
Provide a schedule to minimise impacts from Acid Sulfate Soils in development areas	✓
Ensure any future Sustainable Industry Strategy deals with contaminated land by using minimum tillage, permaculture, biodynamics and contouring.	X
Prepare detailed mapping and investigation into potential acid sulfate soils and potentially contaminated sites in the Coffs Harbour LGA.	✓
Incorporate results of the 2005 Coffs Creek Floodplain Management Study into strategic planning documents.	✓
Complete floodplain management studies for other development areas as they become available.	✓



5.0 OUR WATERS

Our rivers, creeks and estuaries maintain a steady condition with only minor changes in the indicators of aquatic health from the previous reporting year. As illustrated in the maps on the following pages, many of our sites are considered as being in “excellent” condition with the rest being in “good” condition. This is a great result.

Our rivers, coastal creeks, estuaries and the sea are highly indicative of the broader state of the environment in the sense that these waterways are the receiving body for most of the activities in the catchments. Their health in terms of water quality, biological integrity and structure provide us with a reasonable picture of the integrity of relevant catchments and the state of liveability of our city.

5.1 PRESSURE

What is impacting our coastal creeks and estuaries?

Water quality and aquatic biodiversity continue to be subjected to the pressures of urbanisation through water pollution (sediment, nutrients and industrial pollution such as oils), changes to natural features, and vegetation removal.

The major pressures on aquatic ecosystems in the inland waters of the Coffs Harbour area are extraction for town water supplies, the issue of irrigation licences, harvestable water rights, domestic stock rights, aquatic weed infestation, erosion (sediments), nutrients, oil spills as well as bacterial contamination from sources such as failing septic tanks and animal faeces.

Riparian vegetation is important for stabilising banks, providing a filter for pollutants and as a flora and fauna habitat area. The consent process for clearing riparian vegetation provides some degree of control and protection of riparian vegetation in rural areas. Camphor laurel, cats claw creeper, privet and honey locust infestation, however, is a continuing problem.

5.2 RESPONSE

What are we doing to protect and restore our waterways?

- **Orara Valley Rivercare Restoration Project-** There are approximately 100 Landholders involved, forming about 25% of Landholders along the Orara River and its major tributaries within Coffs LGA. Landholders are working on approximately 40km of stream length and carrying out bush regeneration activities over a total area of approximately 60ha. The Orara River Rehabilitation Project Officer has completed GIS mapping of bush regeneration areas, and approximately 18km of fencing to exclude stock from the riparian zone, on 30 project sites. At least 60 project sites in total have fencing in place to protect the riparian zone from stock impacts.
- **Sewage Treatment Plant Performance-** All sewage overflow incidents have been dealt with swiftly and effectively. However, such incidents do impact upon local waterways.
- **On-site Sewage Disposal Systems-** Council continues to inspect and monitor on-site sewage management systems (OSSM) to ensure compliance.
- **Sediment Pollution-** While sediment and erosion control is generally a part of consent conditions for developments, in practice, these are not always complied with.
- **Gross Pollutant Trap Works-** Council continues to install and maintain a number of Gross Pollutant Traps around the city.
- **Coastal Zone Management Plan-** The Coffs Harbour Coastal Processes and Hazard Definition Study is complete and will be adopted by Coasts Estuary Management Advisory Committee (CEMAC) by the end of 2010. The Coffs Harbour Coastal Processes and Hazards Definition Study project investigates the coastal processes occurring on the Coffs Harbour Local Government Area (LGA) coastline (the Coffs coastline) and the extent of the coastal hazards arising from these processes. This report documents a summary of coastal processes, methodology used to assess the coastal hazards, approach to hazards definition mapping, and a detailed beach by beach summary of analyses and outcomes. The Coastal Zone Management Study and Plan will commence late 2010.
- **Clean-Up Australia-** Schools and community groups were involved in this year's event.
- **Water Quality Monitoring-** Council continues to regularly monitor water quality throughout the Local Government Area.

- **Estuary Management-** Moonee and Hearn's Lake Estuary Management Plan's have been adopted by CEMAC and Council and actions are currently being implemented. Pipe Clay Lake Estuary Management Plan is almost finalised and is currently being prepared for CEMAC and Council adoption. GHD have completed the Processes study for the Boambee/ Newports Creek and are currently finalising the Draft Estuary Management Study and Plan. Geolink have been engaged to undertake the Woolgoolga Lake Estuary Management Plan.
- **Floodplain Management-** Coffs Harbour City Council has agreed to take out a \$6 million loan to help fast-track flood works. The loan will help fund a city-wide flood mitigation, stormwater and drainage works programme. Three of the major components will be the completion of Coffs Creek Detention basins at Upper Shephards Lane and Bennetts Road (\$5.1 million), creation of an early flood warning system, and drainage works across the LGA (\$400,000).

FURTHER ACTIONS REQUIRED

The 2008/09 Comprehensive State of Environment Report identified the following actions that need to be undertaken to protect our waterways. These actions align with the Our Living City Settlement Strategy Interim Document.

Actions	Commenced Implementation
Implement WSUD Policy	✓
Continue to undertake regulatory and educational responses to pollution incidences.	✓
Expand monitoring of water quality to all waterways within the Coffs Harbour LGA (for example, use of school campaigns).	✓
Ensure the continued implementation of Council's Onsite Sewage Management Strategy	✓
Finalise and implement Council's Water Action Plan	✗
Ensure strict enforcement of sediment erosion measures on development sites during and after construction	✓
Continue the development and implementation of estuary management plans in consultation with relevant government agencies	✓
Develop a strategy for sustainable agriculture in conjunction with a future Sustainable Industry Strategy	✗
Undertake an Environmental Repair Program for all creeks and rivers in the Coffs Harbour LGA	✓
Continue to undertake priority restoration works in conjunction with community Landcare and Rivercare groups.	✓
Provide incentives for riparian reestablishment for private holdings.	✓
Ensure stream and riparian area management is addresses in the Sustainable Agriculture Strategy.	✗
Continue to implement Councils water quality program.	✓
Incorporate erosion mitigation programs and review Council's sediment and erosion controls.	✓
Continue to promote water awareness and to provide opportunities and incentives for the community to decrease their water usage.	✓
Assess what Council buildings could be fitted with rainwater tanks and water conserving devices for landscaping, vehicle and plant washing and other uses.	✗
Monitor the impacts of climate change and the rate of change annually.	✓
Continue to undertake priority restoration works in conjunction with community Landcare and Dunecare groups.	✓



6.0 OUR HERITAGE

Heritage includes natural and cultural sites, structures, areas or regions that have “aesthetic, historic, scientific, social significance or other special value for future generations as well as for the present community.”

The increase in the number of Aboriginal Sites identified is difficult to interpret, as the identification of sites does not guarantee their preservation. Assuming that these sites can be preserved, over time it may be possible to interpret this indicator to imply that when uncovered, heritage items are being acknowledged and reported to the relevant authorities.

Trends at a Glance

Environmental Indicator	2003/04	04/05	05/06	06/07	07/08	08/09	2009/10	Move towards sustainability
Number of identified Aboriginal Sites	211	223	235	256	277	536	554	√
Number of licences (DECCW) to alter, destroy, and damage Aboriginal sites.	4	7	1	5	0	13	1	X**
CHCC Listed Heritage items altered/ demolished/ destroyed	0	0	1	2*	0	0	1	X**

Source: DECCW, CHCC 2010

(* Heritage items altered ** As heritage is a finite resource the loss of heritage items is seen as an unwanted outcome. However, in the case of Aboriginal heritage items, an increase in licences may indicate that people are getting correct approval/management for site change rather than destroying items covertly.)

7.1 PRESSURE

What is threatening our heritage?

- **Lack of knowledge, appreciation and recognition.**
- **Erosion or damage to sites-** through neglect, natural forces and tourism.
- **Development-** Land use changes through the expansion of urban areas and related infrastructure can be an immense source of pressure on heritage items.
- **Vandalism and destruction of sites-** This often occurs as a result of vegetation clearing activities being undertaken without proper investigation into potential heritage values.

7.2 RESPONSE

What are we doing to conserve our heritage?

- **Planning-** Although Council only embarked upon the heritage programme in 2003, commitment to the process has been reinforced by the allocation of resources in the Management Plan and in the Studies undertaken to date. The current Local Environmental Plan (LEP 2000) now lists 72 individual items in the Heritage Schedule. The forthcoming Standard Template Local Environmental Plan proposes to increase this number to 93 items.
- **Aboriginal Heritage Preservation- Yandaarra** Coffs Harbour City Council’s Aboriginal Consultative Committee continues to provide advice and management for local heritage items.
- **Local Heritage Fund-** Council has established a heritage fund to assist in protecting and restoring heritage items. The fund has successfully operated for seven years and has just been approved by the Department of Planning to continue to operate for a minimum further three years.

FURTHER ACTIONS REQUIRED

The 2008/09 Comprehensive State of Environment Report identified the following actions that need to be undertaken to protect aboriginal and non-aboriginal heritage. These actions align with the Our Living City Settlement Strategy Interim Document.

Actions	Being Implemented
Develop a protocol to identify and protect areas of Aboriginal significance, in consultation with Aboriginal elders, the Local Aboriginal Land Council and DECCW	✓
Prepare a GIS mapping layer for internal use only to identify buffers for significant indigenous cultural sites.	✓
Consult with the community and individual landowners to prepare clearer guidelines for heritage provisions.	✓
Identify exempt and complying provisions for heritage lands.	✓
Continue to source additional funding to assist with implementing heritage conservation projects.	✓
Update Council's LEP to include items that have been identified for conservation.	✓



7.0 OUR SETTLEMENTS

As our population grows so do the pressures that we place on our local environment. Coffs Harbour's unique natural setting, our 'green mountainous backdrop' and our 'pristine beaches', continue to be identified as significant community assets culturally and economically. Care must be taken in the way that we allow for a growing population to ensure that these assets are protected and enhanced, and that we focus on quality of life both now and in the future. (SoE 2009). This year we saw a deterioration in the indicators for the condition of our human settlements. This resulted from a continued increase in waste to landfill and water consumption.

Trends at a glance

Environmental indicator	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	Move towards sustainability
Water consumption per year (KL)	5,919,819	5,808,672	5,784,000	5,702,000	5,052,841	5,458,000	5,798,000	X
Total waste generated (tonnes)	100,000	81,197	76,357	71,255	66,485	124,065	119,935#	X
Total waste landfilled* (tonnes)	39,000	41,291	35,603	35,060	27,711	31,679	52,570**	X
Noise complaints	427	470	514	471	495	519	423	√

Source: CHCC 2010

(* This does not include clay/soil/sand fill) (#Of this Total Waste Generated, 14340 tonnes were generated from the Nambucca and Bellingen LGA's) (**Includes some waste from Nambucca and Bellingen LGA's)

Total water consumption has increased this year to be on par with 2006/07 rates which is disappointing. However, consumption rates per capita are still lower than seven years ago.

Total waste generated has increased slightly over the reporting year however it still remains at almost double the rate of two years ago. Total waste landfilled has also significantly increased. These results indicate that despite the new Coffs Coast Waste Services and Materials Recovery Facility we need to reduce our consumption of materials to really begin to manage our waste issues. In addition to this there exists an opportunity to encourage further waste sorting which will be pursued in 2010/11.

Noise complaints have decreased significantly over the last year. Complaints about noise can reflect an important aspect of perceived liveability in the community. The majority of complaints related to barking dogs, which is consistent with other years.

8.1 PRESSURE

What influences the state of our city and towns?

- **Population growth-** The population problem is not one of how many people, but how much we consume. Coffs Harbour has been one of the fastest growing areas in the State, with our lifestyle and resource demands also growing. There has not yet been a study into the carrying capacity of the Coffs Harbour region- in terms of defining limits to the growth of settlements based on what the land/environment can support, before a serious decline in the areas liveability.
- **Settlement patterns-** Settlement continues to be focused on the coastal areas, which are highly sensitive and compromised by imminent climate change.
- **Release of further urban settlement areas-** A settlement strategy that accommodates population growth through urban consolidation rather than through the development of new townships would reduce pressures on environment and social values.
- **Resource use-** Resource consumption continues to increase in line with an increasing population. Unfortunately many of these resources are finite and nearing exhaustion.

- **Waste generation and disposal-** Solid waste generation continues to put pressure on the local environment, with problems associated with litter and illegal dumping.

8.2 RESPONSE

What are we doing to make our city and towns better places?

- **Water Efficiency Programs-** Coffs Harbour Water continues to manage demand through water restrictions as well as water efficiency programs. The Showerhead Replacement Program has been extremely popular.
- **Water Restrictions-** Council continues to manage water supply through permanent level one water restrictions and higher as required.
- **Water Reuse Scheme-**Coffs Harbour Water continued to work with the community to maximise re-use on; road construction, sporting fields, irrigation of bananas and other crops, hydroponics, Council landscaping, and other uses.
- **Water Conservation in Coffs Harbour-** A number of incentive and rebate schemes are continuing including: New for Old Showerheads, Rebates for AAA showerheads; Replace old single flush toilets with a dual flush system, Water Audits and water meter exchange program. Coffs Water has a strong emphasis on community education such as Waterwise Schools Program, WaterWise Demonstration Garden, Karangi Dam tours, A Team School water audits, membership with Savewater Alliance, including promotion of Mission H2O.
- **Coffs Coast Growers Markets-** This community initiative has continued with great success. It offers an opportunity to buy local produce, reduce food miles (the distance from paddock to plate), diversify the local economy and keep money in the local economy.

FURTHER ACTIONS REQUIRED

The 2008/09 Comprehensive State of Environment Report identified the following actions that need to be undertaken to protect human settlements. These actions align with the Our Living City Settlement Strategy Interim Document.

Actions	Commenced Implementation
Work collaboratively with DWE to develop and implement a Groundwater Strategy for the Coffs Harbour LGA.	✓
Provide groundwater monitoring to high-density industrial areas.	✗
Consider the impact of likely groundwater contamination when assessing new development applications, particularly in proximity to the Solitary Islands Marine Park.	✓
Undertake a review of the Companion Animals Management Plan regarding noise complaints from barking dogs.	✗
Ensure development consents promote acoustic measures to limit noise disturbance.	✓
Maintain membership with relevant organisations, with a view to implementation of best practice controls for water consumption and efficiency.	✓
Undertake a continued education campaign through the entire Coffs Harbour LGA, promoting water efficiency.	✓
Provide continued incentives to reduce water consumption and increase efficiency	✓
Promote the installation of rainwater tanks and/or grey water reuse in all areas of the Coffs Harbour LGA.	✓
Develop a policy for mandatory fitting of water conservation showerheads in all holiday accommodations throughout the Coffs Harbour LGA.	✓
Implement actions contained within the Waste Resource Action Strategy.	✓
Provide strict enforcement of dumping legislation.	✓
Provide continuing waste education.	✓
Implement actions in the Peak Oil Report	✓

FURTHER INFORMATION

For further information about the State of Environment please consult the 2008/09 Comprehensive State of Environment Report. The report can be found on Council's website www.coffsharbour.nsw.gov.au or by calling 6648 4000.

The website also has copies of other relevant environmental management strategies.

Acknowledgements

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Coffs Harbour City Council, November 2010