

NAMBUCCA

SHIRE

COUNCIL

State of the
Environment
Report
2009/2010



Discover it, Live it

www.nambucca.nsw.gov.au

Our Vision

Nambucca Valley ~ Living at its best

Our Mission Statement

'The Nambucca Valley will value and protect its natural environment, maintain its assets and infrastructure and develop opportunities for its people.'



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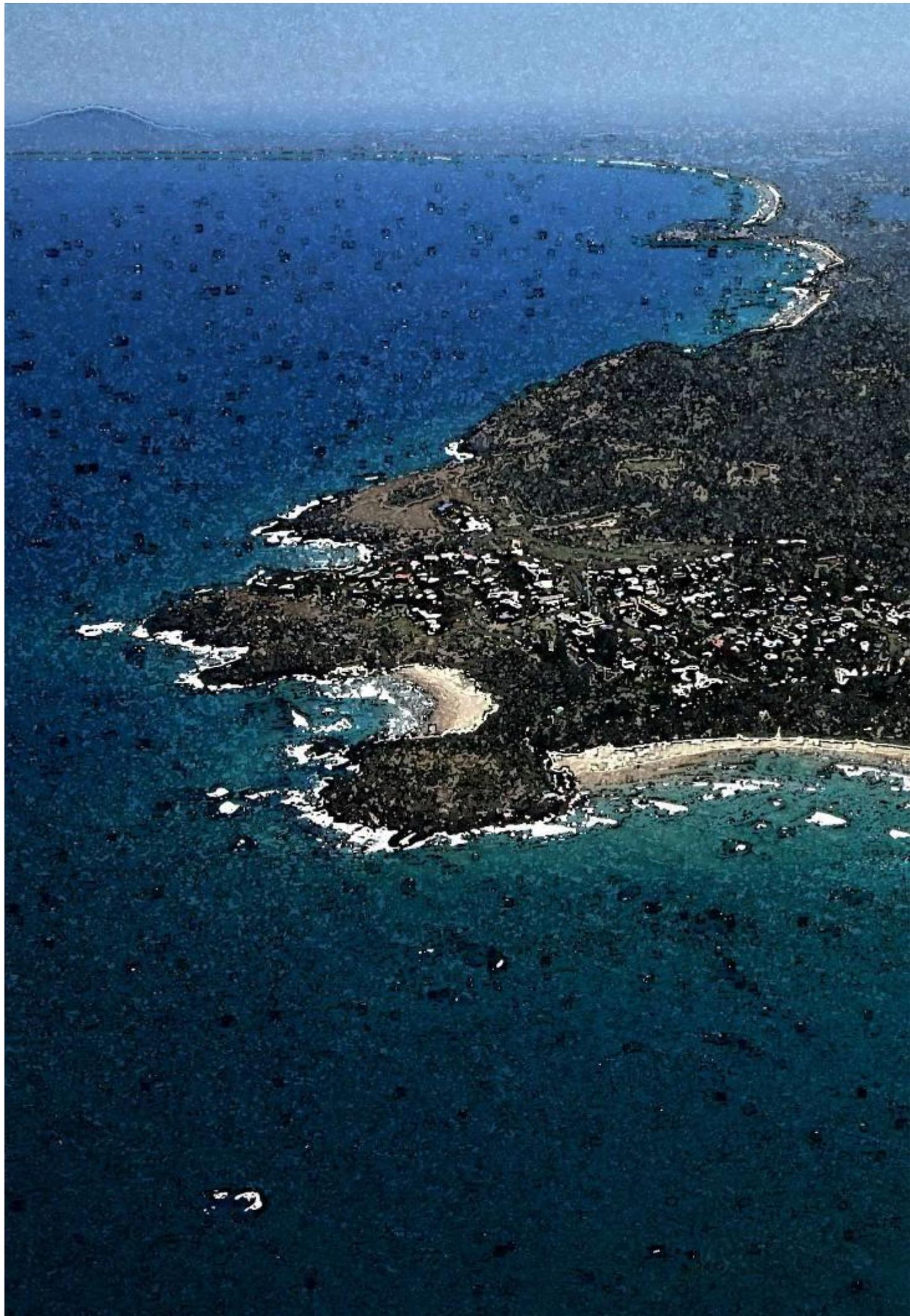
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1.0 Introduction

This is the sixteenth consecutive State of the Environment Report (SoE) prepared by Nambucca Shire Council for the Nambucca Shire Local Government Area. The report covers the period from 1 July 2009 to 30 June 2010. Being a supplementary SoE in 2010 it only includes trends since the last comprehensive SoE in 2009.

This report is a supplementary document prepared in accordance with the *Local Government Act 1993* that is designed to support the comprehensive document prepared for 2008 – 2009.

This supplementary report is an update of the eight environmental sectors: land, water, air, biodiversity, waste and resource recovery, noise, Aboriginal and non-Aboriginal heritage and also includes climate change and sustainability. This supplementary report is to be read in conjunction with the comprehensive State of The Environment Report from 2008-2009.

1.1 WHAT IS A SoE REPORT?

A State of the Environment (SoE) Report summarises the physical and social attributes of the Nambucca Shire environment while identifying the human impacts on our local environment in a financial year. It also provides information on activities conducted by council and the community to protect and restore the Nambucca Shire environment, and is essentially a mechanism for reporting on progress towards environmental sustainability.

Comparing SoE reports from year to year enables Council to see improvements and/or deteriorations and identify areas that need attention in all sectors of the local environment. This then assists Council to further protect the health and diversity of the environment for the benefit of current and future generations.

Pressures to the environment that have been added for 2009/10 are indicated in **bold** in each section. Individual pressures may or may not be addressed each year, but still

remain a pressure and therefore are listed.

1.2 TOWARD SUSTAINABILITY

In consultation with community, regional, state and national agencies 70 (22 regional & 48 Shire wide) environmental indicators were developed to best represent and measure Councils progress in these key areas year to year and monitor Council's movement toward achieving sustainability goals.

The legend positioned below shows the negative, positive and no progress towards sustainability for each of the indicators displayed throughout the SoE.

There are *NSW North Coast Regional Indicators* that are outlined throughout this report. These are Nambucca Shires data that can be measured against the same indicators in other local government areas in the north coast region.

Key to Sustainability Indicators	
↑	Positive movement toward sustainability
↓	negative movement toward sustainability
↔	No progress toward sustainability
ND	Not determined

1.3 INDICATORS THAT ARE USED HAVE MET THE FOLLOWING CRITERIA:

- They reflect something fundamental to the long term economic, environmental or social health of the community;
- They are statistically measurable – either the data exists or a practical method of data collection can be created;
- The indicator represents something that can be influenced by the community or government actions; and
- They are compatible with Council and community vision for Nambucca Shire.

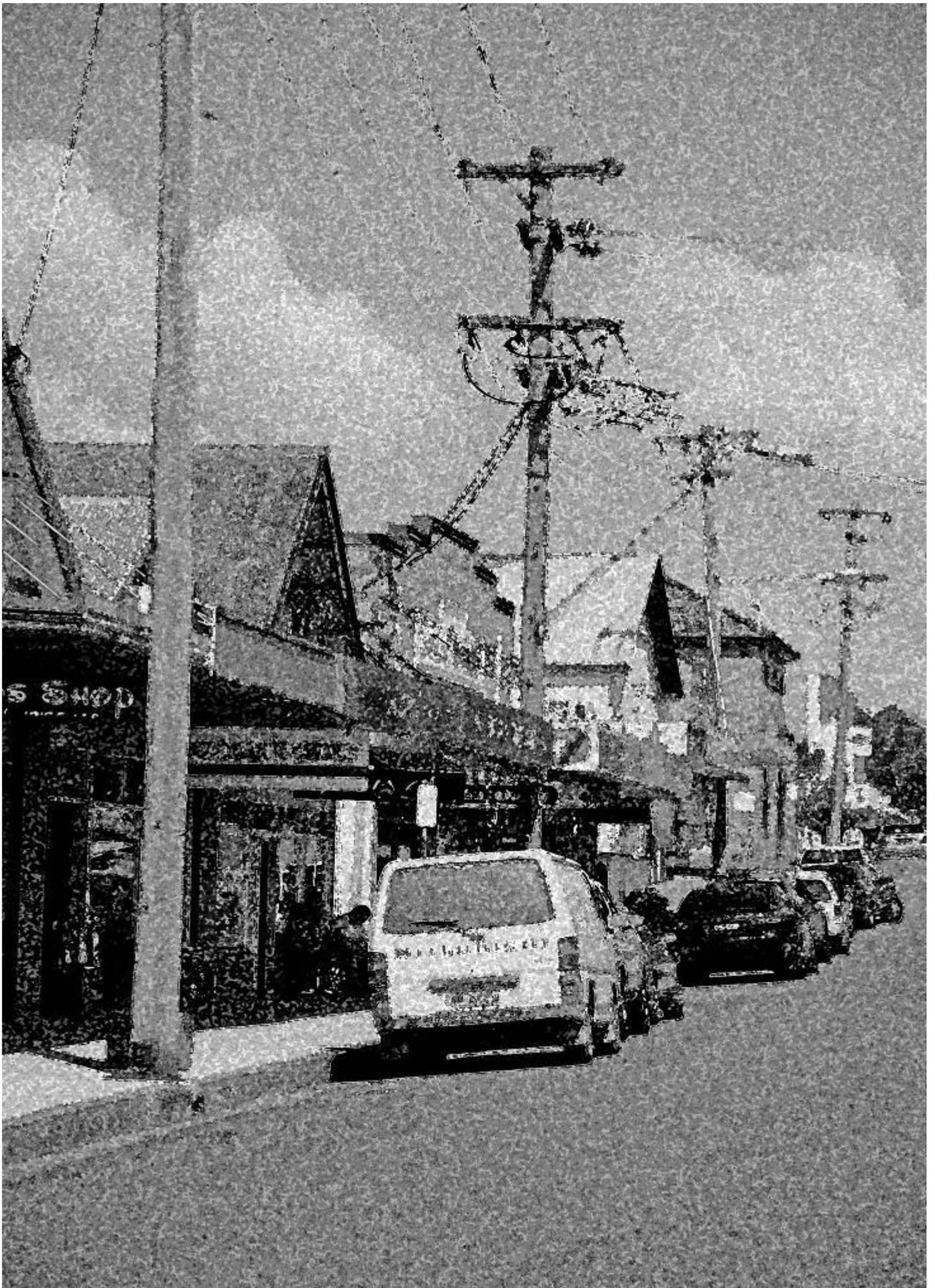
1.4 COMMUNITY VALUES

Community consultation is an integral component of SoE reporting. To assist with the development of this years SoE report, Council conducted a Customer Satisfaction Survey in November 2007, and called for submissions from community groups in July 2009.

These findings will not only assist council with its reporting requirements but will also help Council to develop suitably targeted environmental programs for local residents.

The major issues identified by residents include:

- Estuary management
- Environmental monitoring
- Environmental protection
- Weed control
- Footpaths and cycleways
- Stormwater runoff/pollution
- River pollution
- Garbage and recycling
- Water supply
- Sealed roads
- Sustainable development, and
- Youth activities
- **Vegetation management**



2.0 Human Settlement & Living Sustainably

2.1 INTRODUCTION

Human settlements are in their own right, an environment, a human habitat, through their direct and indirect impacts on the physical environment. Therefore we must consider the internal environment and the settlements itself to deliver outcomes to its inhabitants, whilst minimising issues and problems that the settlement has on the physical environment.

Creating a sustainable community which meets the lifestyle needs of all existing and new members of the community requires careful planning so that accessible community services and facilities contribute to support Nambucca Shires social fabric. To achieve this Council must ensure planning processes and strategies continue to maintain and improve our social, natural and physical environments for everyone to enjoy.

The linkage between Environmentally Sustainable Development (ESD) principals and the social factors of the Nambucca Shire is important in relation to the environment of an area. The social and economic attributes of the Nambucca Shire population are linked to impacts that the population has on the environment and their understanding of, and participation in, environmental issues.

As well as ESD the Nambucca Shire community should be thinking and taking part in living sustainably, reducing our impact on the local environment and natural resources so the next generations have something to enjoy.

2.2 PRESSURES ON OUR HUMAN SETTLEMENT AND AGAINST LIVING SUSTAINABLY

- Increase in aging population
- Housing availability
- Lack of recreational facilities for young people
- Crime
- Community safety
- Mobility transport for senior citizens and the disabled
- Tourism
- **Food miles**

Table 2.1 Human Settlement Indicators

Human Settlement **	2005/6	2006/7	2007/8	2008/9	2009/10	Movement towards sustainability
Predicted Population**	18 618	18 735	18 829	18921	19053	↔
Population*	17 897	17 986	18 076	18203	18330	↔
Population Density (persons/km ²)	11.98	12.04	12.1	12.2	12.8	↔
Growth Rate %*	0.5	0.5	0.5	0.7	0.7	↔
Unemployment Rate %	18.3	11.6	10.4	11.5	9.9	↔
% of residents in urban areas	no data	no data	85.4	87.2	89.6	↔
Aboriginal and Torres Strait Islander %	5.4	5.7	6	6	6	↔
Non English speaking %	2.2	1.7	1.7	1.8	2	↔

* Denotes Regional Indicator ** Statistics from Australian Bureau of Statistics (ABS) www.abs.gov.au

Actual 2006 Census statistics

Predicted Population statistics from ABS that takes into account people who did not include themselves in the 2001 or 2006 census



Home vegetable growing
Photo: Google



Participants at the Financial Literacy workshop
Photo NSC



Youth homeless display – Macksville Library
Photo: NSC



Youth Week Art Competition
Photo: NSC

2.3 A SNAP SHOT OF 2009/10

- Council continues to host the 'Tree of Life' a community project to celebrate new beginnings and past roots for our multicultural community. This tree is displayed in the Council Administration building foyer.
- 23 people became Australian Citizens during the reporting year.
- On Saturday 5 September 2009 a meeting was held to form the Nambucca Valley Food Network.

The network focuses on connecting producers to local consumers directly through meetings, a website and eventually a market.

It was set up in response to the distance our food travels from where it is grown (food miles) and establishing a local market for fresh produce

<http://nambucca.ning.com/group/calfoodfuturesalliancennambuccasubgroup>

- The Nambucca Valley Youth Services Centre won grant funding to develop the (Frrresh) environmental education project at the centre.

The project involves establishing a food garden, installing green power and producing vegetable starter kits for young people who are living out of home.

Projects achieved to date include a recycling system at the centre, setting up of a worm farm, planting a grow your own pizza garden, establishing a bird-attracting garden, and creating environmental artworks, designs and a photographic exhibition.

- Council continued its Resilient Young Peoples Program (RYPP) in partnership with Reconnect. RYPP is a 6-7 week program targeting young people in Years 8 or 9 at school. Information is given to young people participating, on: Relationships, Drugs & Alcohol, Sexual Health, Sexual Violence, Conflict Resolution, Bullying, Self Image and Mental Health. The program is about harm minimisation.
- The Financial Literacy program for Year 10 students from the 3 local high schools is a one day highly interactive and engaging financial education workshop facilitated by trained YWCA NSW staff and Mentors.

- Council's Youth Service, in partnership with Reconnect and TAFE NSW, have now been running the Responsible Educated New Tenant (R.E.N.T.) program for young people 16-25 years old in the Nambucca Shire for 1 year.

In this time there have been 3 programs held with some great outcomes for young people

The aim of the R.E.N.T. course is to provide a free 3 day course for the target group.

The course has a maximum of 15 participants. Various business and organisations help with the content of the course, including: Mitre 10 (now Home Hardware) Macksville, Real Estates, Mid North Coast Tenants Advice Bureau, Anglicare Nambucca, Salvation Army, Crisis Accommodation, Community Housing and Centrelink. Referrals for the course are received from Youth organisations, real estates, housing organisations or self referral. The R.E.N.T. program will continue to be run 3 times per year.

- Council's Chill Out Space, for young people 12-25 years, at the Macksville Show was a continuing success. The Chill Out Space operated from 5 pm – 9 pm with free activities, information and water available to young people and was set up under a marquee. Activities were card making, beading and painting.

Approximately 175 young people came to the Chill Out Space and joined in the activities during the night

- Council held a very successful Youth Service's Network Luncheon with approximately 25 services from the Nambucca Shire represented. These luncheons, held twice a year, are a valuable opportunity for services to talk about their programs, issues and how we can help each other. Guest speakers are invited to talk about their individual programs, Council's Youth Development Officer and Aboriginal Community Development Officer provide an overview of what is happening and each service has an opportunity to provide information about themselves
- Youth Week 10-18 April 2010 commenced with the opening of the Art/Photography/Literature competition which attracted

approximately 70 entries. This was the official Launch of Youth Week 2010 with a barbecue lunch, held at Macksville Library, which attracted approximately 30 young people and parents. Other activities included a display about Youth Homelessness and Battle of the Bands, held in Bowraville, with 4 local young bands battling it out for some great prizes and approximately 200 young people in attendance.

- o Council, with funding received from Area Assistance, organised 5 very successful Skate Safe workshops at different locations around the Shire in January 2010 – Valla Beach, Scotts Head, Bowraville, Nambucca Heads and Macksville.

The Skate Safe workshops were designed to inform young people on skateboard maintenance, some basic moves and how to fall properly. NSW Police attended each workshop explaining the laws with skateboards on roads & footpaths, wearing of helmets, being respectful of the community when riding skateboards.

St John's Ambulance were also in attendance at each workshop explaining basic first aid to the participants and what to do in an emergency. Fruit, juice, water and a barbecue were provided at the workshops. The participants, 70 in total, each received a tool kit at the end of the day

- o An important strategy for Council regarding the access and moving around its streetscape is the implementation of the *Pedestrian Access and Mobility Plan December 2009 (PAMP)*. The PAMP is a strategic document that identifies pedestrian infrastructure and provides associated plans of action with pedestrian movement and safety at its core. The objectives of the PAMP are to:
 - 1 Increase the use of the pedestrian network for short trips (1.5 – 2 km);
 - 2 Reduce the number of missing links and severance within the pedestrian network;
 - 3 Reduce the number of pedestrian accidents
 - 4 Improve the connectivity with other transport mode, primarily bus and bicycle;
 - 5 Provide pedestrian facilities that cater for the needs of all pedestrians including people with disabilities, commuters, children, seniors and recreational walkers; and

6 Complement existing and planned pedestrian ways.

The Plan contains a detailed list of priorities for Macksville, Nambucca Heads and Bowraville which will improve the pedestrian infrastructure

In addition to the PAMP, Council has a *Street Furniture Audit* which is also a strategic document which provides recommendations regarding seat placement, shade, bus shelters, bins, picnic shelters and outdoor dining. The recommendations are related to the PAMP and within the context of key pedestrian routes and nodes of activity.

Improvements to the streetscape which have positive outcomes for older people have also resulted from development, for example the footpath widening and weather shelter for pedestrians and scooter users in Cooper Street Macksville

- o Council's *Cycleway Plan*, which was reviewed earlier in 2010, is another strategic approach which will assist with the provision of facilities for the ageing population, particularly by providing improved walking tracks and paths of travel for mobility scooters. The Plan is also important due to its overlap between transport and recreation. Appropriate pathways are important for older people due to their interest in walking for exercise and also the growing use of mobility scooters as a form of local transport. The Plan which is currently being reviewed will assist Council to determine a list of priority works for the future.

- o Other projects for seniors included Safe and Savvy Seniors – Make Sure You're Secure and Safe

Drives were also commenced to reduce the incidence of crime in the home, identity theft, fraud and elder abuse, as well as keeping older drivers safety independent

- o The *Safer Women Around Nambucca* project aimed to increase the safety of women in and around licensed premises, to raise awareness in our community of public safety issues and to help make the Nambucca Shire a safer community. The project was supported by a grant from the NSW Attorney General's Department and was coordinated by the Nambucca Shire Council, with assistance from the NSW Police.

Fourteen licensed premises participated in the program and safety audits (both day and night)



Chill-Out space at Macksville Show
Photo: NSC



Skate Safe
Photo: NSC



Skate Safe
Photo: NSC



Skate Safe
Photo: NSC



Macksville Library
Photo: NSC



Nambucca Heads Library
Photo: NSC



Nambucca Heads Christian
Community School
Photo NSC



Senior activities
Photo: Google

were conducted. Recommendations for safety improvements were then given to the premises owner or manager. Safer Bars Training for pub and club staff was also conducted.

An Alcohol Free Zone was established in and around the Visitor Information Centre at Nambucca Heads

- In the past year a *Library Action Plan* has been developed. The Plan identifies strategies for addressing future demand for services. For example:
 - Education programs for seniors in basic internet access
 - History in Print project to enhance and preserve access to local history via the newspaper and microfilm reader
 - Improved signage
 - Collection development – moving from tape-based talking books to digital formats whilst maintaining a solid large print collection
 - Innovative ways to meet demand for more space by utilising the surrounding area more effectively eg outdoor furniture for outside activities in the breezeway at Macksville.

Also at the libraries are regular story-time for children, participation the national Simultaneous Storytime and special events in Children's Book Week. A special project was also conducted to promote reading to and by children. The "Rainbow Reader", a brightly dressed character, visited all preschools and playgroups to read stories and use craft to encourage children to read.

- Seniors Week 21 - 28 March 2010 "Live Life – It's On For Young And Old" was hosted by the Nambucca Heads High School which had several partnerships; Senior Citizens Clubs, combined Lions Clubs, Nambucca Shire Council, Busways, Heelis Bus company and Nambucca Heads High School staff and students.

150 seniors attended and was entertained by the 6 schools from Nambucca. Each school had a 3 – 4 variety acts that were very popular with the seniors; singing, dancing, poetry recitation and piano concerto.

3.0 Land

3.1 INTRODUCTION

The Nambucca Shire Local Government Area (LGA) is located between Kempsey and Bellingen Shire Councils on the Mid North Coast of NSW, approximately 500km north of Sydney and 480km south of Brisbane. The shire is 1492.8 km² and is situated between 30°30'S and 30°56'S and 152°18'E and 153°01'E. The terrain is steep intersected by small streams nestled between the foothills of the Great Dividing Range and the coastline of the Pacific Ocean. The rugged topography of the eastern edge of the New England plateau in the western part of the Shire is dominated by steep slopes and valleys, while the eastern portion of the Shire is characterised by the gentle slopes of the river floodplains. The Nambucca River drains the shire and is 47km long.

The Nambucca Shire is a highly modified environment altered from its natural state by human occupation resulting in the replacement of native bushland with agricultural lands and urban development (Figure 3.1) and in cases the exposure of soils to erosion.

The geology of the Shire is dominated

by slate, phyllite, schistose sandstone, schistose conglomerate and basic volcanics. Isolated outcrops of tertiary basalts, minor trachyte and dolerite occur at the headwaters of the Nambucca River. The remaining areas are generally alluvial, paludal and estuarine deposits consisting of sands, silts and gravels (Baker *et al* 1993).

Soils within the Shire consist mainly of lithosols and podzolics derived from the slates, phyllites, sandstones and conglomerates. Alluvial and estuarine soils are present in the valley and floodplains (Baker *et al* 1993).

The main localities of the Shire include Nambucca Heads, Macksville, Bowraville, Valla Beach and Scotts Head with many smaller villages and rural settlements. The Shire has a population density of 12.76 people per km².

Since the 1830's an increase in agriculture, logging and population has brought with it extensive land degradation in the floodplain and coastal zones from adverse impacts such as land clearing, destruction of native vegetation, wetlands and introduction of exotic weed and animal species, erosion and

increased urban and agricultural runoff.

In response to these pressures Council continues to develop environmental strategies within planning documents, policies and environmental planning instruments that will ensure these impacts are minimised and the state of our environment is preserved for present and future generations.

3.2 PRESSURES ON OUR LAND

- Urban development
- Rural residential development
- Agriculture
- Extractive industry
- Forestry
- Human use of coastal and estuarine foreshores
- Land degradation
- Contaminated sites
- Shoreline and river bank erosion
- Storm and flood damage
- **Fire**
- **Climate change**

Tables 3.1 & 3.2 Land and Forestry Indicators

Land Indicators **	2005/6	2006/7	2007/8	2008/9	2009/10	Movement towards sustainability
per capita of open green space (ha)	no data	no data	0.022	0.022	0.022	ND
Number of Development Applications submitted	321	305	301	233	210	↑
Number of Development Applications Approved by Council	no data	289	291	209	207	↔
Potentially Contaminated Land Sites	18	18	18	18	18	↔
Land Pollution Complaints	no data	no data	no data	8	27	↓
Population Density (persons/km ²) ***	11.86	11.98	12.61	12.67	12.76	↔

** Statistics from Councils Environment and Planning Department *** Statistics from ABS

Forestry Indicators **	2005/6	2006/7	2007/8	2008/9	2009/10	Movement towards sustainability
Area of LGA occupied by State Forest (ha)*	28 156	28 088	28 088	28 088	28 088	↔
% of LGA occupied by State Forest*	18.9	18.8	18.8	18.8	18.8	↔
Native Forest protected on State Forest land in LGA (ha)*	405	no data	120	8 415	7 556	↓
Area of State Forest selectively logged (ha)*	410	800	811	377	360	↔

* Denotes Regional Indicator ** Statistics from State Forests NSW



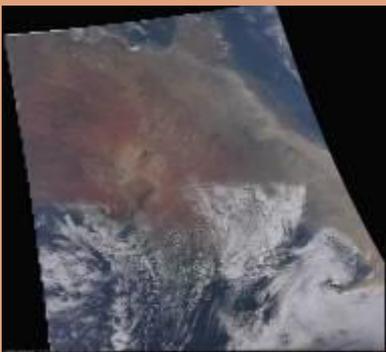
Macksville Bridge in the dust storm
Photo Google



V Wall in the dust storm
Photo Google



Macksville in the dust storm
Photo Google



Dust Storm from Space
Photo BoM (NASA)

3.3 SNAP SHOT OF 2009/10

- Residents of the Shire woke on Wednesday 23 September 2009 to a red haze likened to an apocalypse. This was one of Australia's biggest dust storms since the 1980's. 100km/h winds whipped up dust from the central region and formed a thick cloud stretching the length of the NSW east coast.

Extremely dry conditions throughout the interior of the country and the addition of gale force winds was all that needed to create the dust storm.

Dust storms also occur on a local level when farm land is arid and the soil is eroded by the wind.

- The 2009 storm/flood events severely eroded the coastline to the point that some dune systems are now vulnerable to collapse. Other beach areas are devoid of sand and there is extensive damage to infrastructure such as beach access ways.

The process of natural beach replenishment after storm damage occurs slowly, but if the coastline experiences more high seas and heavy onshore winds in a short amount of time this natural beach replenishment may be slowed even further creating more erosion of the dunal system.

- The Nambucca Shire Coastal Hazard Study final report was received in December 2009.

The report documents a detailed coastal hazard assessment of the beaches at Scotts Head, Nambucca Heads, and Valla, which has been undertaken using photogrammetric data analysis and analytical assessments. It describes the coastal processes affecting the beaches and the impact of these processes on the areas of the beaches where property is at risk.

The report quantifies the observed long-term beach changes, as well as estimating the beach recession that may be caused by sea-level rise as a result of climate change. The risk to property is defined in terms of the present day risk, the 2050 planning period and the 2100 planning period.

The development controls specified in the recommendations of this report have been incorporated into Councils consolidated DCP 2010 for the Nambucca Shire. The report is available on Councils website.

www.nambucca.nsw.gov.au

- Through grants and funding Nambucca Valley Landcare Inc, oversees many projects to help with land degradation in the Shire. Projects can include bank stability, major and minor erosion control.

Projects can be found at <http://www.nvlandcare.org.au/pages/preprojects.html>

- The *Contaminated Land Management Act 1997* (CLM Act) was amended on the 1 July 2009 and came into effect 1 December 2009. The general objective of the CLM Act is to establish a process for investigating and, where appropriate, remediating land that DECCW has reason to believe is contaminated, where that contamination is considered significant enough to warrant regulation under the CLM Act.

the former EPA publication 'Contaminated Sites: Guidelines on Significant Risk of Harm from Contaminated Land and the Duty to Report', published in 1999 has now been superseded by the new 'Guidelines on the Duty to Report Contamination under Section 105 of the Contaminated Land Management Act 1997'.

What this means is, if a person, a company or other knows their land is contaminated or has a suspicion that it may be contaminated they have to investigate the extent of contamination. To assess whether the contamination of a site should be reported, a review of the site activities and history, and a site inspection to look for indicators of contamination, should be undertaken. This will also include consideration of whether the site or adjacent sites may be associated with potentially contaminating activities, complaints about pollution or illegal dumping of wastes and whether there are gaps in, or doubts about, the site history. There may also be a need for a further, more detailed investigation by a suitably qualified and experienced environmental consultant. Notification triggers are contained in Appendix A of the Guidelines.

Council has tagged 10 sites that it owns or manages that need to be investigated further to establish the extent of the contamination. This investigation will be completed in the next reporting year.

- A grant was obtained by Nambucca Shire Council in conjunction with Kempsey and Bellingen Shire

Councils to look at the possible sea-level rises and impacts of climate change on the region.

The grant (Local Adaptation Pathways Program) is a government initiative designed to support local government climate change risk assessment and adaptation planning.

The report to be released in the next reporting year will provide Council with considerable information for future planning of development and operational expenditure.

Regionally specific climate change information was developed, extreme event analysis, historical analysis, climate variability review, and newly developed regionally specific economic modelling. The findings of the report will help council to manage its climate change information for planning, operations, maintenance and budgets.

- In the reporting year there was no clearing of registered private forestry plantations although there was 62.05 ha of new plantations and 333 ha of existing plantations.



Walkway at Bellwood
Photo NSC



Dune erosion at Scotts Head
Photo NSC



Illegal land clearing – Valla Beach
Photo NSC



Storm Erosion of the Fore dune
Photo Google



4.0 Aquatic Systems - Water

4.1 INTRODUCTION

Aquatic resources form an integral part of the environment in the Nambucca Shire LGA. Not only do these provide the scenic backdrop which is integral to the character of the Nambucca Shire, these resources also provide habitat for a diverse variety of flora and fauna species, provide water for urban and agricultural supplies and allow important economic and social activities to take place, such as aquaculture, fishing and boating.

There is a diverse range of aquatic systems that occur naturally in the Nambucca Shire, these include the Pacific Ocean and associated coastline and beaches, the Nambucca River and its tributaries, intermittently closed and open lakes and lagoons (ICOLL's), wetlands and groundwater aquifers.

The Nambucca River drains its 1,330km² catchment that is mostly contained within the Nambucca Shire LGA. Warrell Creek and Taylors Arm are the 2 main tributaries of the Nambucca River.

There are several smaller catchments that are essentially ICOLL's, north of the Nambucca

River. These are, Swimming Creek and Beilby's Creek both in Nambucca, Deep Creek that drains an area south-west of Valla and Oyster Creek that drains a small area north-west of Valla Beach.

Since the commencement of European settlement, the Nambucca River has been altered substantially, the entrance and main channel have been trained with breakwalls and some dredging. The majority of the waterways have been affected by the process of accelerated erosion and deposition, gravel extraction and riparian vegetation removal.

One of the greatest pressures on aquatic systems is urban and agricultural stormwater run off. Stormwater is the untreated run off from hard surfaces and agricultural lands. The stormwater traditionally contains pollutants such as nitrogen, phosphorous, metals (lead, zinc, copper), hydrocarbons, faecal bacteria and grease, not to mention the sediment loads from denuded areas and eroded banks. This all has adverse impacts on the health of the aquatic systems including direct affects on the fishing and oyster industry of the Nambucca River.

Human impacts within the catchment have increased the amount of litter, nutrients, bacteria, heavy metals and sediment being discharged into the receiving waters, thus degrading the quality of our local aquatic systems.

4.2 PRESSURES ON OUR AQUATIC SYSTEMS

- Degradation of Shire waterways
- Estuarine and coastal issues
- Macksville, Nambucca, Scotts Head and Bowraville Sewage Treatment Plants
- Septic overflows
- Environmental impacts from businesses
- Quality of stormwater
- Increased development and reduction of pervious surfaces
- Loss of Riparian Vegetation
- Pollution incidents
- Groundwater issues
- Flood events
- Potential Acid Sulfate Soils
- Water supply
- **Tourism**

Table 4.1 and 4.2 Aquatic System Indicators

Gross Pollutant Traps (GPT's) **	2005/6	2006/7	2007/8	2008/9	2009/10	Movement towards sustainability
Number of GPT's in Nambucca Shire	no data	no data	11	14	14	↑
Amount of waste diverted from the Nambucca River (tonnes)	no data	no data	30	47	52	↑

** Statistics from Councils Engineering Department

Source of Water Pollution **	2005/6	2006/7	2007/8	2008/9	2009/10	Movement towards sustainability
Construction (sediment, gravel, mud)	0	1	1	6	6	↔
Chemicals (pesticide spills, other spills)	1	2	4	2	0	↑
Biological (septics, animals, offal)	3	4	9	12	1	↑
Total Complaints	4	7	14	20	7	↑
Complaints to DECCW ***	no data	no data	11	21	3	↑

** Statistics from Councils Customer Service Requests ***Statistics from Department of Environment and Climate Change and Water (DECCW) www.environment.nsw.gov.au



Estuary Projects tour
Photo Nambucca Guardian



Johns Bridge after the 4th 2009 flood
Photo NSC



Soil and sediment course
Photo NSC



Wai Ora Bridge – Missabotti Creek
Photo Kim Honan

4.3 A SNAP SHOT OF 2009/10

- Local residents were given the opportunity in July 2009 to express their views on the health of the Nambucca River estuary as part of a survey for future program development. The results of the survey were compiled and will be used to guide program development to assist in maintaining the health of the estuary.

The survey found that the shires residents had a fair understanding of the extent of the Nambucca River estuary and its values. Most people value the river systems natural environment and the recreational opportunities it provides including the contribution to the local economy through tourism. Wake-boarding, skiing, jet skiing and the impact of professional fishing on the estuary attracted the most negative feedback.

The survey identified that there is a lack of understanding as to who, as in what department or level of government, had responsibility in managing the estuary. DECCW has the responsibility over the estuary.

The survey also identified that there is a low level of awareness of current estuary management activities, not just bank erosion works but an over all holistic management.

A third of respondents indicated that they would like to be more involved in estuary programs and activities.

- Community, state and local departments and groups came together on the 28 August 2009 for a tour of the Nambucca Estuary and the projects that have been completed through the NSW Environmental Trust, hosted by Damon Telfer.
- The Lower Nambucca Estuary Water Quality Study was concluded in October 2009. The purpose of this study was to identify the causes of diffuse source water pollution entering the lower Nambucca River.

The results showed that Watt Creek (Lumsdens Lane and Wrights Corner) had the highest concentrations of Total Nitrogen. Watt Creek and Beer Creek had the highest bacterial contamination and Beer Creek had the highest sediment loading. Gumma Gumma Creek had the highest acidity levels and there was some indication that Watt Creek may have an ASS issue. More testing is being done in the next reporting year.

- On Tuesday 27 October 2009 the Nambucca Valley experienced its 4th flood in 8 months. This flood took with it Johns Bridge in Missabotti.
- A week later on Friday 6 November the Nambucca Valley along with Bellingen and Coffs Harbour was declared a natural disaster area for the 5th time since February again due to flooding.
- Councils Rainwater tank rebate continued through the reporting year.
- Council was represented with 4 delegates attending the 18th annual Coastal Conference in November 2009 in Ballina.

The conference theme 'Staying afloat – Rising to the Challenges' was aimed at sea level rise and the implications of the DECCW and NSW Planning draft guidelines on adapting to sea level rise.

Other topics of discussion included; estuaries, ICOLL's, shoreline risk and protection, remediation of eroded coastlines after the May 2009 storm event, tsunamis and increased occurrence, climate change vulnerability, threatened species, water quality and planning innovations. Of note is the DECCW Snapshot of future sea level photographing the king tide photo journal 12 January 2009 available www.environment.nsw.gov.au/resources/climatechange/09722KingTide.pdf

- After several inquiries by Macksville residents over the inconsistencies of the RTA's flood study for the new hwy upgrade, the RTA has admitted they overlooked some important flood data.
- Once again Nambucca Shire Council has rejected a proposed partnership with NRCMA to share management of the valleys natural resources. The partnership would have sealed an MOU between the parties that was designed to facilitate the effective management of natural resources and land management.
- As part of the recommendations in the Nambucca River Estuary Management Plan, NSC and DECCW ran a sediment control training workshop on 24 June 2010 to help combat sediment entering the waterways. The course was run for Council staff and shire businesses. It is hoped that building sites in the shire will be better managed with respect to sediment.

- Ongoing provision of 'doggie poo' bags and waste bins at popular parks and Shire walks to reduce the amount of dog waste entering the Nambucca River.



Nambucca River Estuary
Photo J.Ashby

Table 4.3 and 4.4 Aquatic System Indicators

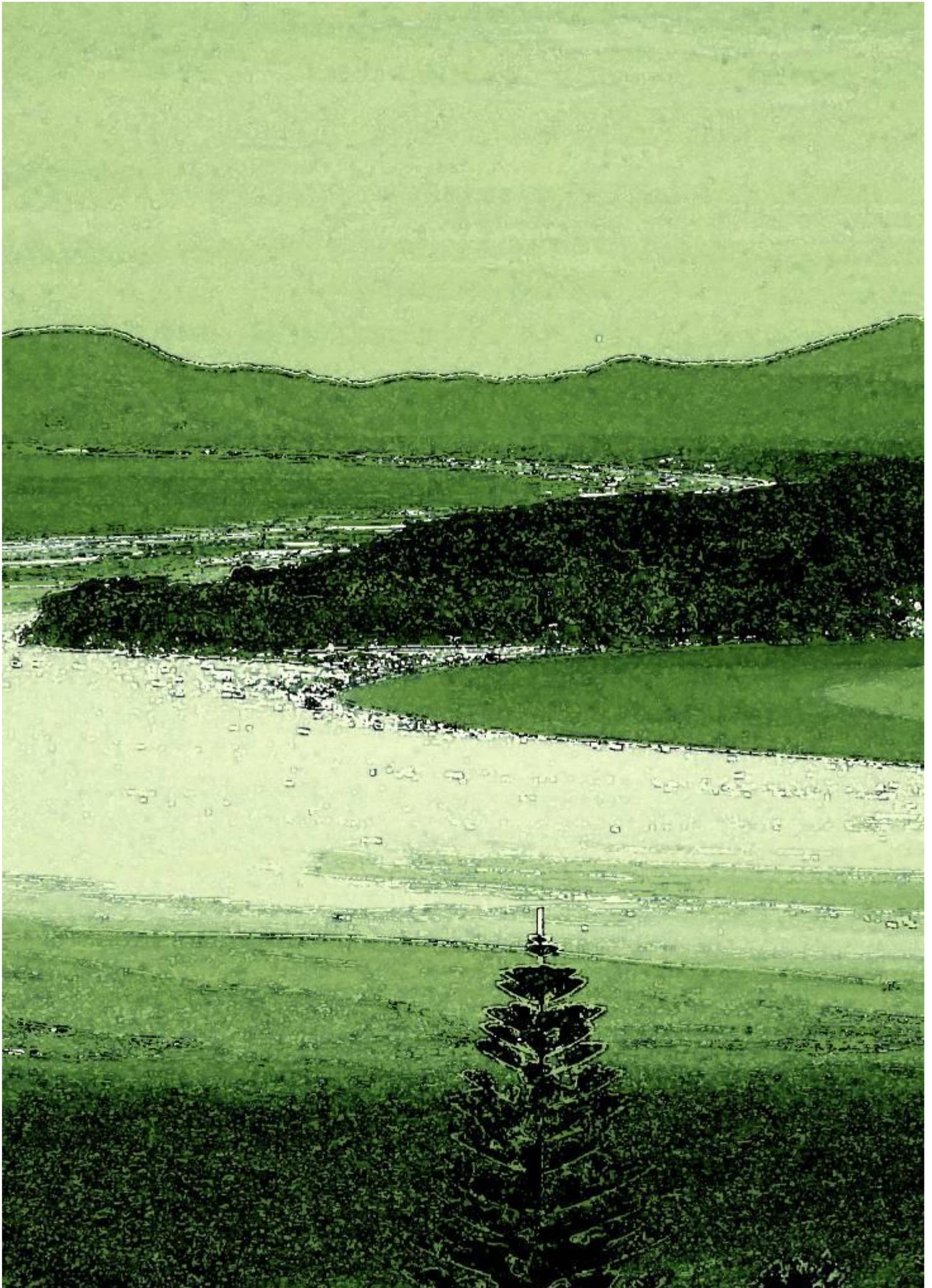
Regional Indicator - Water Consumption	2005/6	2006/7	2007/8	2008/9	2009/10	Movement towards sustainability
total reticulated water consumption in LGA (ML)* **	1 750	1 806	1 658	1 446	1 615	↓
per capita reticulated water consumed in LGA (kL/person)* **	145.1	145.1	122.2	125.28	113	↑
daily per capita reticulated water consumed in LGA (L/person)* **	397.5	397.5	335	343.2	309	↑
reticulated water daily demand peak (KL)* **	6 700	7 928	6 600	6 870	7 522	↓
Population % connected to reticulated water* **	67	68	72	61	73	↔
total reticulated water consumption by Council (KL)**	27 288	19 543	20 310	15 300	18 340	↓
Number of surface water licences***	no data	193	197	193	201	↔
Number of bore water licences***	no data	546	562	569	585	↔

* Denotes Regional Indicator ** Statistics from Councils Engineering Department *** Statistics from Department of Natural Resources (DNR) www.naturalresources.nsw.gov.au

Regional Indicator - Waste Water **	2005/6	2006/7	2007/8	2008/9	2009/10	Movement towards sustainability
Wastewater treated at STP's (ML)*	1 567.8	1 385.8	1 424.0	1 946	1 534.3	↑
waste water treated to tertiary level (ML)*	1468.2 (93.6%)	1308.1 (94.4%)	1340.0 (94.1%)	1652 (84.9%)	*404.5 (26.4%)	ND
wastewater treated at treatment plants to secondary level (ML)*	99.2 (6.4%)	77.9 (5.6%)	84 (5.9%)	294 (15.1%)	*1 129.8 (73.6%)	ND
population % serviced by sewage system*	64	64	64	60.4	61	↔
population serviced by on-site effluent disposal systems*	36	36	36	39.6	39	↔
Number of approved on-site effluent disposal systems*	576	37	636	642	527	↑
Number of existing on-site effluent disposal system inspections*	958	449	643	665	881	↑

* Denotes Regional Indicator ** Statistics from Councils Engineering Department

* Tertiary level is when it passes through a UV system, and only Macksville STP had UV treatment



5.0 Biodiversity

5.1 INTRODUCTION

'Biodiversity' is defined as the variety of life forms found within an area, such as the different plants, animals and micro-organisms, the genes they contain, and the different ecosystems in which they are found and form part of.

The biodiversity of an area is constantly changing and is enhanced by genetic change and evolutionary processes, and is reduced by extinctions and habitat degradation.

It is important to conserve biodiversity to protect the life-support systems on earth. These systems include; fresh water provision, climate regulation, the creation of soils, and the natural disposal of pollutants. They are fundamental to our quality of life and our economy.

The climate and geographical lay out of the Nambucca Shire results in a diverse range of sub-tropical and temperate faunal and floral communities, and the conservation of this biological diversity is essential to the health and productivity of the LGA.

Clearing for agricultural purposes since the 1800's has greatly altered the Shire's vegetation. The main

areas are along the flood plains and the coastal fringe. The riparian zones are vital to the functioning of stream ecosystems, however the majority of these areas of emergent aquatic, semi-aquatic and over and understorey plants within the Shire have been extensively altered since European settlement.

Due to their accessibility, the riparian zones of the region were originally cleared for their high quality timber, particularly red cedar. The Cedar getters were followed by the pioneers who extensively cleared the alluvial floodplains for agriculture.

Weed infestation into remnant vegetation communities in the Nambucca Shire are of an increasing concern. The main source of these weeds are from urban gardens, where they establish, dominate and then escape into neighbouring green space land where they once again dominate the native vegetation.

The loss of essential sea grasses in the Nambucca River and Deep Creek from sedimentation and damage from boats is cause for concern as these seagrass beds are essential fish breeding and nursery grounds.

5.2 PRESSURES ON OUR BIODIVERSITY

- Noxious weeds
- Land clearing
- Stormwater pollution
- Fragmentation and **degradation** of remnant bushland
- Changes to native vegetation
- Garden escapees
- Illegal dumping
- Feral animals
- Climate change impacts
- Anchoring by boats
- Invasive aquatic flora and fauna
- Overfishing
- **Tourism**
- **4WD on beaches**
- **Fauna hit by cars**

Table 5.1 and 5.2 Biodiversity Indicators

Status of Flora and Fauna in Nambucca LGA **	2005/6	2006/7	2007/8	2008/9	2009/10	Movement towards sustainability
Number of Threatened Flora Species*	17	16	16	21	19	↑
Number of Threatened Fauna Species*	65	67	53	74	65	↑
Number of Endangered Ecological Communities	no data	no data	7	9	10	↑
Number of Native Fauna Species in Shire	no data	no data	421	441	446	↑
Number of Native Flora Species in Shire	no data	no data	1018	1086	1140	↑

* Denotes Regional Indicator ** Statistics from Department of Environment and Climate Change and Water (DECCW) www.environment.nsw.gov.au

Declared Noxious Weeds under the Noxious Weeds Act 1993 **	2005/6	2006/7	2007/8	2008/9	2009/10	Movement towards sustainability
Number of Noxious weeds reported for Nambucca LGA*	99	98	104	101	103	↓

* Denotes Regional Indicator ** Statistics from Department of Industry and Investment www.dpi.nsw.gov.au



Illegally cut trees – for a view
Photo NSC



Members of Nambucca Heads
Dunecare
Photo NVLandcare



Feral Species
Cane Toad Frog or Toad?
Photo DECCW



Beach Stone-Curlew
Photo Byronbuddies.com

5.3 A SNAP SHOT OF 2009/10

- Nambucca Valley Landcare Inc. hosted many field days, workshops and fairs during the reporting year.
 - In July 2009 was the Native Propagation Workshop that covered seed collection, extraction, treatment and potting up.
 - Nambucca Valley tree Fair in September 09
 - Farming for Climate Change workshop also in September run by Industry and Investment.
 - Wetlands Information field Day in March 2010.
 - Tree Fair at Bowraville April 2010
 - Workshop – Understanding Native Vegetation Legislation and how it affects you, run in April
 - Legumes and Herbs Field Day in May 2010
 - Farm Machinery Field Day also in May
 - Presentation on Micro bats
 - Rabbit and Parramatta Grass Control day at Utungan

Nambucca Valley Landcare received approx \$300,000 in funding in the reporting year aimed at projects dealing with regeneration and education for the Nambucca Valley.

Projects can be found at <http://www.nvlandcare.org.au/pages/preprojects.html>

- National Tree day was on Sunday 2 August 2009 and was celebrated by the Nambucca Valley Community Services Council Inc and Macksville Community Gardens giving away native plants for your garden. Plants included, White Cedar, radiata pine, flowering ash, old man banksias, hakeas, flame trees and many more.
- There has been an increase in wild dog attacks in the shire and sightings of what appear to be pure bred dingos that may have been released into the area.
- In August 2009 the NSW Scientific Committee made a final determination to list the:
 - Beach Stone-curlew *Esacus neglectus* as a critically endangered species in part 1 of schedule 1A of the Threatened Species Conservation Act.
 - Red Goshawk *Erythrorichis radiatus* as a Critically Endangered Species in part 1 of Schedule 1A.
 - Little Lorikeet *Glossopsitta pusilla* as a Vulnerable Species in Part 1 of Schedule 2 of the Act

- in NSW North Coast Bioregion as an Endangered Ecological Community (EEC) in Part 3 of Schedule 1 of the Act.
- Hunter Valley Vine Thicket in the NSW North Coast and Sydney Basin Bioregions as an EEC) in Part 3 of Schedule 1 of the Act.
- Hybridisation by Feral Dogs (*Canis lupus familiaris*) as a threatening Process in Schedule 3 of the Act
- Pied Oyster Catcher *Haematopus longirostris* as an Endangered Species in Part 1 of Schedule 1 of the Act.
- Flame Robin *Petroica phoenicea* as a Vulnerable Species in Part 1 of Schedule 2 of the Act.
- Little Eagle *Hieraetus morphnoides* as a Vulnerable Species in Part 1 of Schedule 2 of the Act.
- Scarlet Robin *Petroica boodang* as a Vulnerable Species in Part 1 of Schedule 2 of the Act.
- Spotted Harrier *Circus assimilis* as a Vulnerable Species in Part 1 of Schedule 2 of the Act.
- Varied Sittella *Daphoenositta chrysoptera* as a Vulnerable Species in Part 1 of Schedule 2 of the Act.

- There has been a spate of tree poisonings in the Park Street area of Nambucca Heads. Selfish people have poisoned several key trees in the Crown Land reserve that Council oversees. Dept of Lands have erected signs as have Council to remind people of the vandalism and the reward offered for a successful conviction.

The land on which the poisonings are occurring is very unstable and the area needs the vegetation to keep the slope from slipping onto the houses below.

For the sake of a view someone could get killed if the slope fails.

- On 21 September 2009 a cane toad was found in Nambucca Heads. The community is urged to contact National Parks and Wildlife Service if they suspect cane toad is sighted.
- A second cane toad was found at the Headland Caravan park in December.
- A Short Finned Pilot Whale washed up on Main Beach Nambucca Heads after a week of heavy seas. NPWS took samples for research and to investigate how it died. It is the second Short Finned Pilot Whale that has washed up on the Australian shoreline in the last 10 years.

- In December 2009 a Dunecare group was formed in Nambucca Heads and their first project was the Shelly Beach headland. So far over 100 hrs of work has been put into weed and rubbish removal and a noticeable improvement in the condition of the bush surrounding the walking track from the White Albatross Caravan Park to Shelly Beach.
- The Bowraville Flying Fox maternity camp swelled in December 09 causing the nearby residents grief. The maternity camp usually starts being occupied in September/October when the females come to give birth to one pup. The pup stays with the mother for 3 months until it is strong enough to fly. The males start to inhabit the camp from late December and the camp odour increases. This odour is the Flying Foxes love musk, which the females are attracted to. Mating season occurs between March and May.

The Grey Headed Flying Fox is listed as Vulnerable under the commonwealth Environmental and Biodiversity Conservation Act 1999 and harming them or their habitat can attract large penalties.

Council applied for funding to develop a strategic management plan for the Bowraville camp.

Council in conjunction with Nambucca Valley Landcare sort to enhance the existing camp and create a buffer zone between the camp and nearby residents. Two permits were obtained to modify the area and remove noxious weeds including Camphor laurel from the area.

A community bush care group was set up under the auspices of Landcare and weeding and planting has begun. Several large Camphor Laurels have been felled and a staged planting will begin in the following reporting year.

The aim is not to move the flying foxes but to isolate the camp from intrusions and ultimately keep the camp quiet.

For more information:
www.environment.nsw.gov.au

- The local Ibis survey was on again on Sunday 7 February 2010. For Information
www.environment.nsw.gov.au/surveys/WhitelbisSurvey

- Encroachment of gardens and buildings onto crown land is a continuing problem. Caravan Parks in the Shire are the main offenders allowing dwellings, sheds, awnings and gardens on the public land over a number of years. Houses that back onto crown land are the second offenders that illegally readjust their boundaries or dispose of garden refuse over the back fence.
- The Nambucca State Forest was selectively harvested between February and May 2010. This was done to ensure eucalypt regeneration and creation of new forest. Successful regeneration of eucalypt forests require ground disturbance and space to ensure seed germination and seedling development.
- On the 23 April 2010 Gaagal Wanggaan (South Beach) National Park was formally Gazetted, becoming NSW and Nambucca's newest National Park.

The park begins just north of Scotts Head township and stretches north along the dune system adjacent to Warrell Creek to the mouth of the Nambucca River to cover 634.87ha.

The area is native land under guardianship of the Gumbaynggirr traditional custodians, and will be managed by DECCW (NPWS division).

The park contains significant sites demonstrating the continuous use of the area by Aboriginal people. The park also protects undisturbed coastal dune systems, patches of rainforest, palm forests, heath and estuarine communities of mangroves, salt marsh and seabeds along Warrell Creek.

More information
www.environment.nsw.gov.au

- The Nyambaga Green Team have been responsible for many projects in the Shire the 2009/10 projects included:
 - Congarinni River Reach – weed control and rubbish removal.
 - Pacific Hwy between Macksville and Nambucca Heads – weed control and rubbish removal
- The Indian Myna project continued throughout the reporting year with 56 volunteers undertaking myna trapping, with a total of 365 birds trapped and euthanised. Two rounds



Short Finned Pilot Whale on Main Beach Nambucca Heads
Photo NSC



Gaagal Wanggaan National Park
Photo J. Ashby



Grey Headed Flying Fox
Photo Bruce Thompson
Auswildlife.com



Saddleback Mountain, South Arm
Photo J.Ashby



Swamp sclerophyll forest on coastal floodplain
Photo DECCW



Feral Species - Indian Myna
Photo Jamberoomynas



Diamond Python makes a meal out of pigeon
Photo J. Ashby



Green Team on the job
Photo Nambucca Guardian

of community workshops were run, as well as numerous other targeted workshops.

The first Volunteer Network Meeting took place in July 2010. This was an opportunity for the Volunteer Coordinators across the 3 LGAs to meet up and discuss how the group could continue to build on our progress and better service the community in their trapping efforts.

- o The Mid North coast Wildlife Information and Rescue Service (WIRES) rescued 1753 animals in the Nambucca Shire in 2009/10. There are 24 volunteers caring for injured or sick wildlife in the shire.

If you hit a kangaroo or wallaby make sure you check the pouch as these species breed all year round.

Many baby birds are found on the ground below their nests and are usually learning how to fly and can't get back to the nest. If you see a chick on the ground put it in on a branch and leave it, making sure the parents are still around.

WIRES also asks if you see a koala in the shire to ring them and log your sighting. You can do this by calling **6564 8661**.

- o The DECCW Pollution Hotline **131 555** received 14 calls from concerned shire residents about removal of native vegetation and 2 calls about threatened species in the reporting year. Only one call was forwarded to Council for action.
- o Weeds are one of the greatest threats to areas of high conservation value ecosystems throughout the Nambucca Valley. Various weed control projects have been performed during the reporting year, with excellent results.

A large infestation of Groundsel bush was controlled in a wetland in the Valla Beach area that involved five individual landholders working co-operatively to manage this Class 3 Noxious Weed.

The biological control agent, *Cyrobagous salviniae* has been extensively released into Salvinia infestations throughout various areas of the Shire with excellent results

A rust, *Prospodium tuberculatum*, has been released on various Lantana infestations in the Nambucca, and follow up monitoring has shown this agent has spread from the initial release sites. Unfortunately this biological control

agent only affects the less toxic pink variety of Lantana.

An extensive management program has been performed on all Council owned or managed coastal reserves, targeting the Weeds Of National Significance, Bitou bush and Lantana as well as other threatening weed species.

Glory Lily (*Gloriosa superba*) is one of the most threatening species to the Coastal ecosystems within the region and extensive management programs have been implemented on all known infestations within the Coastal reserve system. Other weeds that are pose a threat within these systems include Broad Leaf Pepper trees, Winter Senna, Molasses Grass, Turkey Rhubarb and Asparagus fern, with many of these species introduced as ornamental species.

Private landholders were provided advice and extension material throughout the Nambucca Shire throughout the reporting year on weed identification and management techniques.

No Class 1 or 2 weeds were identified to be established within the Shire throughout the reporting year.

One new species to the Shire was discovered in the Taylors Arm area, Long Leaf Willow Primrose (*Ludwigia longifolia*), a class 5 Noxious Weed within NSW. The landholder will be encouraged to manage this weed to prevent spread downstream from this infestation.

Other weed threats in the Nambucca include vine weeds along riparian zones, with isolated infestations of Kudzu, Balloon Vine, Cats Claw Creeper and Mysore Thorn.

Maderia vine is the most threatening vine weed in the Nambucca Valley and has varying levels of infestation along riparian vegetation in the majority of creek systems.

Woody weeds including Camphor laurel and Privets are a continuing threat to the biodiversity of the Nambucca and many land holders struggle with the costs involved with the management of these species, although Landcare has funded some very successful control programs especially in the Deep Creek catchment in the Valla area.

6.0 Atmosphere

6.1 INTRODUCTION

Air pollution typically results from a range of human activities. The primary source of air pollution in Nambucca Shire is burning vegetation followed by motor vehicles and woodfire heaters. Other sources are industrial processes, construction and demolition, incineration, solid waste disposal and domestic heating.

The effect of air pollution can be far reaching and may impact on climate, human health, visibility, property, flora, fauna and water quality.

Nambucca Shire's air quality is perceived to be quite good, although during the winter season (low fire risk) the air quality is lower with rural burning and extensive bushfire hazard reduction in rural areas.

It is the urban and rural residential areas that are increasingly subject to air pollution associated with illegal

backyard burning, bushfire hazard reduction and internal combustion heaters.

Other areas of concern are from the dust disturbance from unsealed roads in the shire, particularly after a long dry spell.

Air pollution issues may increase in the shire in direct correlation with population increase and the already heavy dependence on the motor vehicle for transport.

6.2 PRESSURES ON OUR ATMOSPHERE

- Urban air pollution
- Wood fire heaters
- Backyard burning
- Rural burning
- Motor vehicle emissions and road dust
- Commercial business operators (saw mills, quarries, food shops)
- Construction and demolition
- Greenhouse Gasses

Tables 6.1 and 6.2 Atmosphere Indicators

Source of Air Pollution **	2005/6	2006/7	2007/8	2008/9	2009/10	Movement towards sustainability
Smoke	17	8	13	8	3	↑
Odour	10	8	9	2	5	↓
Dust	3	3	2	0	7	↓
Total Complaints	30	19	24	10	15	↓
Complaints to DECCW ***	20	6	13	12	17	↓

** Statistics from Councils Customer Service Requests ***Statistics from Department of Environment, Climate Change and Water (DECCW) www.environment.nsw.gov.au

Greenhouse Indicators **	2005/6	2006/7	2007/8	2008/9	2009/10	Movement towards sustainability
Council electricity usage (GJ)	no data	8550	9012	23 442	11 122	↑
Total greenhouse (CO2) emissions produced by Council operations (tonnes)	no data	3 989	4 168	4 058	3 996	↑
Number of Vehicles in Council's Fleet	no data	68	68	69	69	↔
Number of Vehicles that are powered with gas/hybrid	no data	4	4	4	1	↓
Total greenhouse (CO2) emissions produced by Council fleet (tonnes)	no data	900	793	867	690	↑
Number of vehicles registered in Nambucca Shire Council Area ***	15 788	16 142	18 401	17 475	17 963	↓
Total km of cycleways in LGA	no data	no data	3	3.4	5.4	↑

** Statistics from Councils Engineering Department *** Statistics from NSW Roads and Traffic Authority (RTA) www.rta.nsw.gov.au



Clouds
Photo Google



New Cycle/walkway at Bellwood
Photo NSC



Car burnout smoke
Photo Google



Food Shop Exhaust Odour
Photo Google

6.3 A SNAP SHOT OF 2009/10

- Council reviewed its Cycleway plan in May 2010. Funding has led to extensions of the existing cycleway from Bellwood south along the Hwy to just north of Kingsworth Estate, Nambucca Heads and River Street in Macksville. Cycleways are an alternative commuter choice to travel to work and link schools, shops, sport centres and town centres.
- The Nyambaga Green Team have been working on the continuation of the Nambucca Heads to Macksville cycleway through Bellwood to Kingsworth Estate. A wooden walk bridge was built across Teagues Creek to enable the concrete cycleway to continue adjacent to the Pacific Hwy.
- Nambucca sawmill has been operating smoke free for over a year with the introduction of a chipping machine. The chipper chips all the off cuts and logs instead of burning them. The high grade wood chips are exported and the lower grade chips and wood butts are purchased by sugar cane refineries. This activity has improved air quality within the local area. It is hoped that more saw mills will look at this alternative to burning.
- The Shire residents have an average vehicle fleet age of 13.2 years, Bellingen 13 yrs, Kempsey 13.5 yrs and Coffs Harbour 11.6 yrs as apposed to Sydney with 7 years (youngest). The oldest fleet is in Weddin LGA with 14.3 yrs (RTA 2010).
- There are 1.3 vehicles for every licensed driver in the Nambucca Shire.
- Council is gradually improving its vehicle fleet by replacing the 6 cylinder vehicles with 4 cylinder models or replacing the vehicle with a more fuel efficient one. All the models comply with the Green Vehicle Guide.
- In the 2009/10 reporting period Council outlaid approximately \$100,000 in energy efficient works to reduce Councils environmental footprint, these works included:
 - Skylights for the Nambucca Entertainment Centre,
 - Skylights, window tinting and energy efficient lighting for the Administration building, and
 - Solar hot water service for Missabotti Hall

7.0 Waste & Resource Recovery

7.1 INTRODUCTION

As people buy and consume more products, the rate of waste generation increases. This general trend places pressures on the environment and Council's waste management systems.

People who reside, visit or work in Nambucca Shire, can reduce this impact by taking more responsibility for their waste. This involves actively avoiding waste generation, recycling more, and disposing of non-recyclable materials responsibly. This includes utilising councils green waste service as opposed to illegally burning off in urban and rural – residential areas which increases air pollution.

Council is constantly improving its capacity to handle waste effectively and to reduce the initial generation of waste by implementing various plans, policies, strategies and education programs.

Council regards a large percentage of waste as a valuable resource, and is constantly increasing efforts to divert waste from landfill by improving resource recovery throughout the LGA.

The landscape, streetscape, mix of housing types and the characteristics of residents, visitors and businesses are not uniform across the Shire, neither are the waste avoidance and resource needs and challenges.

Nambucca Shire Council has various responsibilities regarding the management of a range of waste products throughout the Shire. The form of these wastes is variable and includes the solid waste products generated in households and local industries and the liquid waste treated by the local wastewater treatment plants and on-site effluent disposal systems. In conjunction with other State Departments, Council is also responsible for monitoring and collecting data from a number of sites classified as potentially contaminated or contaminated.

7.2 PRESSURES ON OUR WASTE SYSTEMS

- Population increase
- Littering
- Illegal dumping
- Decrease in availability of landfill
- Disposal costs
- Managing negative environmental impacts from landfill sites (leachate, greenhouse gasses)

Table 7.1 & 7.2 Waste Indicators

Environmental Indicator **	2005/6	2006/7	2007/8	2008/9	2009/10	Movement towards sustainability
Municipal waste disposed to landfill (tonnes)	13598.14	12459.3	9578.55	8954.86	2427.63	↑
Recyclables diverted from landfill (tonnes)	no data	no data	123.3	232.5	316.2	↑
Greenwaste diverted from landfill (tonnes)	613.98	335.35	671.85	662.23	350.8	↓
Scrap metal diverted from landfill (tonnes)	437.78	276.78	194.64	252.69	280.4	↑
Batteries diverted from landfill (tonnes)	8.17	6.81	8.12	4.99	3.28	↓
Motor oil diverted from landfill (litres)	2500	1600	7500	5300	5500	↑
Hazardous Materials diverted (tonnes)	no data	no data	no data	6.213	2.922	ND
Dumped Rubbish Complaints	no data	no data	no data	10	27	↓

** Statistics from Councils Engineering Department

Nambucca Shire LGA Generated Kerbside Waste* **	2005/6	2006/7	2007/8	2008/9	2009/10	Movement towards sustainability
Recycling (tonnes)	no data	no data	1984.5	2006.82	2116.54	↑
Organics (tonnes)	no data	no data	2668.86	2754.44	2940.8	↑
General Waste (tonnes)	no data	no data	2127.08	2472.74	2718.16	↓

* waste is processed at the Coffs Harbour transfer station **Statistics from Coffs Coast Waste



Weighbridge at Waste Facility
Photo NSC



Batteries diverted from landfill
Photo NSC



Organics diverted from landfill
Photo NSC



Waste Facility Fees and Charges
Photo NSC

7.3 A SNAP SHOT OF 2009/10

- 250,000 L of effluent was collected from the sale yards in 2009/10. The effluent was re-used as fertiliser on agricultural land in the Shire.
- The Nyambaga Green Team cleaned up the riverbank between Nambucca Heads and Macksville of all rubbish. Refuse included; cans, plastic bottles, glass, tyres, car parts including truck batteries and foam coffee cups.
- National Recycling Week 2009 started 9 November 9. The week focused on our 3 bin system of recycling with Coffs Coast Waste cracking down on bins containing unacceptable levels of contamination. Cameras in the trucks makes it easy to identify those bins (and owners) who are not doing the right thing.
- Up to 30 Volunteers helped clean up the Bowraville Mission in February 2010 and continue to get together and help clean houses, yards and parks in and around the mission. At the end of the day they are rewarded with a free BBQ and drinks courtesy of Miimi Mothers House.
- Clean-Up Australia Day 2010 marked the 20th anniversary of the campaign. The Nambucca Valley River Users Group (NVRUG) organised this years clean up day on 7 March and focused on the local estuaries and waterways. A total of 1.2 tonnes of rubbish was collected by community groups, individuals and school groups. The worst area this year was South Beach across from the V Wall. This could be attributed from careless campers.
- Students for the bronze Duke of Edinburgh Award scheme paddled up Warrell Creek from Nambucca Heads to Scotts Head exploring the States newest national park, Gaagal Wanggaan. The students stopped at Boultons Crossing Camp area and whilst they were there picked up 3 canoes full of other peoples rubbish.
- Drum muster was run in May 2010.
- A clean up of Aboriginal land by Nambucca Shire Council, Nambucca Heads Land Council and the Ngambaga Green Team with help from the Gaagal Wajaar crew has lead to removing much household material, including car bodies, white goods, shopping trolleys and general garbage from several sites around Nambucca and the Nambucca River. This was grant funded from DECCW.
- There has been an increase in the number of illegal dumpings in the Shire. This can be attributed to the increased costs of disposing rubbish at the Nambucca Heads transfer station. Council's ranger continues to investigate dumpings and issues clean up notices regularly.

Persons found to be dumping rubbish illegally can be fined up to \$1500.00 on the spot and made to clean it up.

8.0 Noise

8.1 INTRODUCTION

Noise pollution can be defined as unwanted or offensive sounds that unreasonably intrude into our daily activities. It has many sources, most of which are associated with urban development such as roads, air, transport, industrial noise, neighbourhood and recreational noise. The impact of noise in our community can reduce public amenity, and adversely affect health and communication.

Noise pollution can cause a major reduction in the quality of life. However, some unavoidable activities, such as demolition, construction and excavation, are inherently noisy and need to be well managed rather than prevented.

The Department of Environment and Climate Change (DECC), the NSW Police Service, and Council all play a part in monitoring and regulating noise control.

The *Protection of the Environment Operations Act 1997* and the *Protection of the Environment Operations (noise Control) Regulation 2008* are the principal legislation applied throughout NSW to address environmental noise issues.

The regulation of noise falls on many different departments, such as DECC, NSW Police, Local Government, RTA, Commonwealth Government and RailCorp.

There are various Acts and Regulations, both Commonwealth and State to govern noise. For example Nuisance dogs.

8.2 PRESSURE ON OUR ENVIRONMENT FROM NOISE

- Increased population
- Barking dogs and crowing roosters
- Traffic and transport
- House and car alarms
- Swimming pool pumps
- Mechanical ventilation systems (air conditioners)
- Parties
- Off Road Vehicles
- Construction noise
- Industrial estate noise
- Garbage collection
- Licensed venues

Table 8.1 Noise Indicators

Source of Noise **	2005/6	2006/7	2007/8	2008/9	2009/10	Movement towards sustainability
Commercial & construction	2	4	10	28	6	↑
Dogs	35	31	26	14	35	↓
Roosters	5	10	11	10	11	↓
Other	4	14	16	5	13	↓
Total Complaints	49	59	63	57	63	↓
Complaints to DECCW ***	6	7	0	1	21	↓

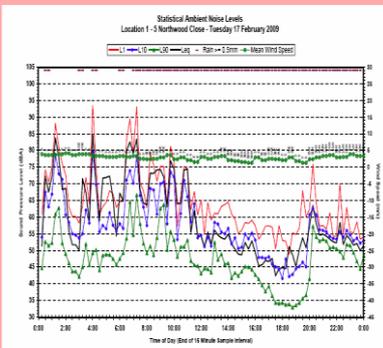
** Statistics from Councils Customer Service Requests *** Statistics from Department of Environment and Climate Change and Water (DECCW) www.environment.nsw.gov.au



Truck noise
Photo Google



Dance Party
Photo Google



Reading from acoustic meter for
Macksville Industrial area



Rooster
Photo Google

8.3 A SNAP SHOT OF 2009/10

- In the reporting year there were 63 noise complaints received by Council. Council responded by carrying out inspections and taking the appropriate regulatory action. Most complaints were resolved at this stage.
- Over half of all noise complaints were attributed to barking dogs (35). This is a significant increase from last years reporting period of 14. Dogs bark usually due to insufficient space, provocation, lack of exercise or adequate shelter, ill, or an unstable diet. The majority of these complaints were resolved through mediation and negotiation. However, in the case of ongoing problems, Notices of Intent to issue Nuisance Orders, and Dog Nuisance Orders were issued under the *Companion Animals Act 1998*.
- Complaints about roosters crowing have been steady. The custom of keeping fowl for eggs and meat in previous years is now creating a nuisance in the built up urban areas. Roosters create problems of noise in the early hours of the morning. To abate the crowing, owners must build completely dark chook pens or dispose of the rooster all together.

Council's 'Keeping of Animals Policy' states that the keeping of roosters in residential, urban or village areas is prohibited.

- There has however been a dramatic increase in trail bike noise in large lot residential (rural residential) in the reporting year. Many of the complaints stem from children riding along their property boundary after school and on weekends. Other issues are when large dirt bike tracks are built for the family to use and noise is not taken into consideration when they are designed.

Most complaints were dealt with through mediation of the two parties.

- Council commissioned an acoustical assessment of Macksville Industrial estate in February 2009 and the final report was released July 2009. The report concluded that several companies operating in the Macksville Industrial Estate were exceeding NSW Industrial Noise Policy Guideline levels.

The recommendations from the report have been included in the new Development Control Plan 2010. and includes:

- Consideration of the type of industry and the type of building in which it will be housed.
- Position of the openings, such as roller doors.
- Heavier noisier industries housed in the centre of the estate with quieter ones along the industrial/residential zone.
- Processing buildings should be fitted with acoustical enclosures.

9.0 Aboriginal & Non-Aboriginal Heritage

9.1 INTRODUCTION

Heritage is defined as a place, object, custom or culture that has historic, scientific, cultural, social, archaeological, aesthetic, natural or Aboriginal significance. Heritage consists of those places and objects that we as a community have inherited from the past and wish to hand on to the future generations.

Our heritage gives us a sense of living history and provides a physical link to the work and way of life of earlier generations. It enriches our lives and helps us to understand who we are today.

Nambucca Shire's heritage is diverse and includes buildings, objects, monuments, Aboriginal places, gardens, bridges, landscapes, archaeological sites, shipwrecks, relics, bridges, streets, industrial structures and conservation precincts. Lists of heritage items are listed in the comprehensive SoE chapter 9 Tables 9.1, 9.2 and 9.3.

Aboriginal sites are the physical remains of a culture that is more than 40,000 yrs old. It is important that Aboriginal sites are recorded, studied and preserved as part of the cultural heritage of the Aboriginal people in the Nambucca Shire and as part of the wider communities historic and cultural heritage.

Aboriginal culture is about a deep belief of all living things and beyond, are connected. It's about a spirituality that stems from ancestors that practiced, listened, understood and preserved beliefs, language and customs. With these traditions there is a profound sense of respect for Elders and their knowledge.

Most Aboriginal sites have significance to Aboriginal people for the reasons that they were visited, ceremonial, tracked, births, deaths, burials and therefore stories connect us to that land. Depending on who used the site, men or women, has particular significance because of certain 'business' that had been performed there. These are the sites that are imperative to the life and death of all Aboriginal and non Aboriginal people and should be recorded and respected as such.

Aboriginal culture and heritage in the Nambucca Valley still exists and as yet not all sites have been located and recorded. Aboriginal culture is not as simple as this all sounds, there are parts of Aboriginal culture and heritage that are complex yet, has never been written, but has been handed down, orally, for over 40,000 years.

9.2 PRESSURE ON OUR ABORIGINAL AND NON-ABORIGINAL HERITAGE

- Lack of enforceable maintenance provisions for listed sites and Insufficient expertise in dealing with listed items
- Lack of understanding and recognition of Native Title rights and interests
- Erosion and damage of sites from wind, water, sun and human activities

Table 9.1 Heritage Indicators

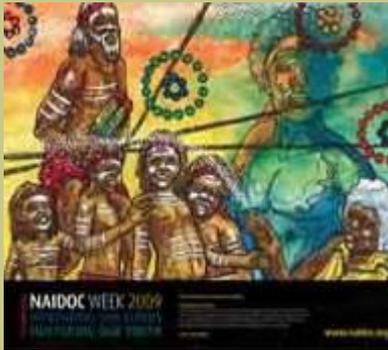
Heritage Sites	2005/6	2006/7	2007/8	2008/9	2009/10	Movement towards sustainability
Aboriginal Heritage Sites **	154	169	173	249	251	↑
Aboriginal sites altered, destroyed or damaged **	0	0	0	0	2	↓
Non-aboriginal Heritage Sites ***	37	37	37	40	41	↑
Conservation Areas ***	2	2	3	3	3	↔

** Statistics from Department of Environment and Climate Change and Water (DECCW) www.environment.nsw.gov.au

*** Statistics from NSW Heritage Dept. www.heritage.nsw.gov.au



Youth Photography Exhibition
Photo NSC



NAIDOC 09 Poster



Dawn Service, Scotts Head
Photo Guardian News



'Nambucca' beached
Photo Courtesy State Library NSW

9.3 A SNAP SHOT OF 2009/10

During the year there were many historic and cultural events both Aboriginal and European that involved the community.

- NAIDOC 2009 "Honouring Our Elders, Nurturing Our Youth" ran from the 5-12 July 2009 was filled with many activities. A NAIDOC week march along Bowra Street in Nambucca Heads marked the start of NAIDOC week. The march was attended by local elders, community members and school children on 3 July.

At Macksville there was a traditional smoking ceremony and the opening of the photography exhibition.

Other NAIDOC week events included:

- Concert at Bowraville theatre
- Gumbaynggirr Elders Choir
- Bush tucker catering at Miimi Mothers
- Elders Olympics at Valla Resort
- Community awards
- The Frank Partridge VC Military Museum in Bowraville recognised 64 years on 24 July since Frank Partridge's bravery for action on Bougainville Island 4 weeks before the end of the second World War was awarded with a Victoria Cross, with free entry.
- In the Council meeting of 6 August 2009 Council voted to include the features of the Gordon Park historic Pioneer Well on its heritage list. This is now reflected in the Council's new LEP.
- The Frank Partridge VC Public School celebrated the schools 20th anniversary on 15 August. Claude Brown who served with Frank Partridge VC opened the time capsule and showed off the contents inside, which included a newspaper, bottle of port and anecdotes written by past students.
- The Rusty Iron Rally once again revved up on 5 and 6 September 2009 with the special feature display of Dave Brown tractors and Cooper engines.
- National Heritage Week was welcomed on 12 September with a display of over 120 historical photographs at the Nambucca Heads Headland Museum. Photos included steamships, shipwrecks, river craft, log droghers, old buildings, transport, pubs, sports, holiday venues, the breakwall and street scenes around Nambucca Heads from the 1880's through to the 1950's.
- 24 September 2009 marked 100 years since the official opening of the Valla Hall in 1909. The hall has been an important link for the Valla Community's history. The hall had a \$41 047 refurbishment which will provide the community with an improved space featuring upgraded electrical and flooring work, roofing, guttering and landscaping.

The 100th anniversary party kicked off on the 26 September with wood chopping demonstration, old machinery display, junior farmers reunion and an old tome dance and the cutting of the centenary cake. On the Sunday an ecumenical church service was run with a morning tea and followed with an old fashioned game of cricket.

- Nambucca Heads Railway Station on Foxes Road, Nambucca Heads was added to the National Heritage database on the 18 March 2010, in the category of Railway Platform/ station in the collection of Transport – Rail. More information on the heritage website www.heritage.nsw.gov.au
- At the end of March 2010 Bowraville central School students joined local Aboriginal elders to recognise and celebrate the day past Prime Minister, Kevin Rudd said sorry for the stolen generation. The children listened to the elders stories and experiences about the stolen generation at the Giingan Darrunday Marlaangu Health Clinic.

By recognising the apology and sharing the experience the children would better understand the Gumbaynggirr culture and history that they are learning at school. The program taught at the school focuses on language training for yr 7 and 8 students who undertake 100 hrs of study.

- Many of the Valleys citizens that served in WWI, have no record of their heroic deeds recorded for prosperity. Graham Allen researcher from the Frank Partridge VC museum has started a project to find and honour those 'lost souls'.
- A new memorial site was selected in Scotts Head above Little Beach on the grassy patch below Ocean Street for a new memorial. The site was used for the 2010 Anzac Day service. This was the first service for Scotts Head. A cenotaph will be erected in the near future.

10.0 Glossary

ASS	Acid Sulfate Soils
AHD	Australian Height Datum
ALLUVIAL	A deposition of sediment over a long period of time by a river; an alluvial layer; pertaining to the soil deposited by a stream (alluvium)
ANZECC	Australian and New Zealand Environment and Conservation Council.
CONGLOMERATE	is a rock consisting of individual stones that have become cemented together.
DECCW	Department of Environment, Climate Change and Water
DNR	Department of Natural Resources.
DOLORITE	is a mafic, holocrystalline, intrusive igneous rock equivalent to volcanic basalt
DL	Department of Lands
ELEOCHARIS	is a genus of 250 or more species the Cyperaceae (sedge family). They are known commonly as spikerushes
ELEOCHARIS WETLAND	wetland dominated by spikerushes
EPIPHYTIC ALGAE	algae existing on the surface of a plant or plant organ without causing infection (epiphyte)
EUTROPHICATION	is an increase in the concentration of chemical nutrients in an ecosystem to an extent that increases in the primary productivity of the ecosystem
ESD	Ecologically sustainable development
ha	Hectare
HACC	Home and Community Care services
ICOLL	Intermittently closed/open lakes and lagoons.
kl	Kilolitre.
L	Litre.
LAB	Liquor Administration Board.
LALC	Local Aboriginal Land Council
LEMP	Landfill Environmental Management Plan.
LEP	Local Environmental Plan.
m	Metre.
mg/L	Milligrams per litre.
ML	Megalitre.
mm	Millimetres.
NPWS	National Parks and Wildlife Service.
NRCMA	Northern Rivers Catchment Management Authority
NSC	Nambucca Shire Council
OFFENSIVE NOISE	means under POEO, noise: (a) that, by reason of its level, nature, character or quality, or the time at which it is made, or any other circumstances: (i) is harmful to (or is likely to be harmful to) a person who is outside the premises from which it is emitted, or (ii) interferes unreasonably with (or is likely to interfere unreasonably with) the comfort or repose of a person who is outside the premises from which it is emitted
PALUDAL	pertaining to marshes, marshy, palustral, especially designating a plant's habitat
PASS	Potential Acid Sulfate Soils
PHYLLITE	is a type of foliated metamorphic rock primarily composed of quartz, sericite mica, and chlorite

Glossary Continued

POEO	<i>Protection of the Environment Operations Act 1997.</i>
PSR	Pressure-state-response model.
RIPARIAN	is the interface between land and a stream. Plant communities along the river margins are called riparian vegetation
RTA	Roads and Traffic Authority.
SANDSTONE	is a sedimentary rock composed mainly of sand-size mineral or rock grains
SCHISTOSE	laminated; having a formation resembling a schist - schists form a group of medium-grade metamorphic rocks
SLATE	a fine-grained metamorphic rock that can be split into thin layers
SEPP	State Environmental Planning Policy.
TERTIARY BASALTS	solidified lava from a geologic period 65 million to 1.6 million years ago
TRACHYTE	is an igneous, volcanic rock with an aphanitic to porphyritic texture

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