

1. Introduction

1.1 Why monitor the state of the environment?

Under section 35(2) of the Resource Management Act 1991, local authorities are required to monitor the state of the whole or any part of the environment of its region or district to the extent that is appropriate to enable the local authority to effectively carry out its functions under the Act. The approach adopted in this report is outlined in the Whangarei District Council's Monitoring Strategy 2001 (the WDC Monitoring Strategy).

A state of the environment report:

1. Provides baseline information on the state of the district's environment, particularly in regard to the significant issues identified in the Whangarei District Plan (the District Plan).
2. Provides information on changing environmental conditions (and development pressures) over time, particularly in regard to the significant issues identified in the District Plan.
3. Identifies new issues and significant trends occurring in the district which require responses through district planning processes.

Baseline information about the state of the environment is essential for assessing what changes are occurring in the environment and whether those changes are detrimental (both to ecosystem functions and to human well being). Resource management and environmental policy directions can be instituted and reviewed accordingly.

Monitoring the state of the environment provides valuable information that can be used in the development of future resource strategies, and provides indications of the effectiveness of current strategies and policies by comparing results against baseline information. This report will establish some baselines by which future comparisons can be made.

The Ministry for the Environment (the MfE) describes state of the environment monitoring and reporting as encompassing systematic monitoring, gathering, and analysis of environmental data,

as well as the dissemination of reliable, scientifically based, and easily understood information about the condition (state) of the environment, the pressures on it, and the effectiveness of measures taken to correct any problems. The MfE outlines the basic steps as follows, and commentary has been added stating how Council has addressed these steps to date:

- *Regular standardised monitoring of the environment to detect environmental conditions and trends.* This is undertaken by Council in the form of annual Resource Consents and Complaints Monitoring Reports, as well as this state of the environment report.
- *Regular reporting of information to the public and other interested parties.* This has not been undertaken by Council at this stage; however stakeholders such as the Northland Regional Council (the NRC), the Department of Conservation (DoC) and other territorial authorities in Northland have been kept updated through regular communication via the Northland Regional Monitoring Forum hosted by the NRC.
- *Regular publication of a state of the environment report.* This report is Council's first attempt to produce such a report, although data is collected and reported in the annual Resource Consents and Complaints Monitoring Reports.
- *Compilation of a directory of sources of environmental information.* The Northland Regional Monitoring Forum, which is hosted by the NRC and includes the Kaipara and Far North District Councils, is currently putting together a directory of environmental information. The annual Resource Consents and Complaints Monitoring Reports also provide a major source of information.
- *Potential establishment of national (and possibly regional and local) resource accounts.* This may be undertaken in the future as a joint effort between local, regional and central government organisations.

1.2 Approach taken by this report

State of the environment monitoring responsibilities for territorial authorities are more limited than those of regional authorities, who are the major functionaries in respect to comprehensive environmental monitoring. In particular, state of the environment monitoring at a district level

has a more limited land based scope, with its primary focus being on land use activities and the effects of those activities on particular aspects of the environment. Monitoring duties for territorial authorities have the added complexity of considering amenity values, natural character and the quality of the urban environment.

Effective state of the environment monitoring for territorial authorities should be directed at those aspects of resource management and environmental regulation where outcomes can most clearly be linked to the responsibilities of territorial authorities. In this way, overlap between regional councils and territorial authorities can be reduced. (Additionally, this overlap is also addressed by the Northland Regional Monitoring Forum, which facilitates dialogue between the regional and territorial authorities and ensures that duplication of monitoring functions is avoided).

Nationally, there has been a trend to move away from large single-volume reports which encompass multiple aspects of the environment. For instance, environmental reporting at the Ministry for the Environment is moving away from single volume reports that cover the whole environment to smaller reports on specific topics related to the needs of its intended audience (MfE, 2006).

Consequently, this report focuses specifically on development trends in the district. Development trends are of particular concern as the district has experienced significant growth during the last five years. To date, with the exception of the NRC's State of the Environment Report 2002, there has been no in-depth analysis of this development. The only attempt at examining this matter and the issues surrounding it to date has been the annual Resource Consents and Complaints Monitoring Reports produced by Council. These reports have collected data on development in the district, and this data has been used in this report on development trends. Further analysis will be required in the future.

This report examines certain indicators which are specified in the WDC Monitoring Strategy. These indicators refer to: population, population growth, broad development trends, density, and land use. The report contains graphs of relevant data and provides images that are used to examine trends in resource consents, new lots created, densities, and changes in growth in the district over time. Additionally, three areas are specifically targeted for a "future view" of the effect of development from a birds-eye perspective. These areas were selected as they have experienced some of the densest subdivision in the district. All aspects of the data are discussed, and a picture of the growth of the district during the last five years is obtained.

Additionally, this report will also examine, in a very preliminary way, the role of the District Plan in terms of development. The objectives, policies and rules of the District Plan effectively determine how development should take place. Whether or not the District Plan is working in this regard can be examined in this report, although a District Plan Monitoring Report will be produced in the future which specifically examines its performance, and will recommend improvements where needed. There is a statutory requirement under the RMA to produce such a report five years after the District Plan has been made operative

1.3 Indicators and state of the environment reporting

An indicator is something that is measured regularly to show trends or sudden changes in the state of a system, population or individual (MfE, 1997). The power of an indicator lies in its ability to tell us how a specific condition is changing over time. The WDC Monitoring Strategy states that indicators need to be policy relevant, analytically valid, cost effective, simple and easily understood (see Appendix A for the excerpt).

The indicators used by MfE for national state of the environment reporting are, in the main, not suitable for reporting on the state of the environment at the territorial authority level. Instead the indicators used here are outlined in the WDC Monitoring Strategy, and form the basis for this report.

As stated previously, this report focuses specifically on development and more particularly on land development. While the WDC Monitoring Strategy lists many indicators associated with state of the environment monitoring, this report only provides information on a selected set of these indicators, all of which are associated with development. For instance, while education statistics and ethnic profiles are quoted as state of the environment indicators in the WDC Monitoring Strategy, they do not link very well to land development. Additionally, indicators that do link to development such as storm water and waste disposal are not specifically included as data in this report, because they are influenced by other factors than just development alone (e.g. heavy rain events or closing of the Pohe island landfill).

The following indicators from the WDC Monitoring Strategy are analysed in detail in this report, and are listed below:

- *Population and population growth for the district as a whole.* Information on the present population along with past and future trends could be useful for planning for development in the district, resource use, environmental pressures, provision of services and infrastructure, etc.
- *Broad development trends for the district.* The broad development trends for the district are indicated by the number of land use, subdivision and building consents issued over time, together with the spatial distribution of each type of consent issued. In other words, the spatial arrangement of development – where development is occurring at present, and where it is expected to occur in the future, is mapped and quantified.
- *Density, consolidation, sporadic subdivision and ribbon development.* Information on development density, consolidation, sporadic subdivision and ribbon development is obtained by analysis of the existing land use and development pattern together with the broad development trends indicated above. Trends relating to density, consolidation, sporadic subdivision and ribbon development over time are established.

1.4 State of the environment reporting and the annual Resource Consents and Complaints Monitoring Reports

This state of environment report on development trends ties together the five annual Resource Consents and Complaints Monitoring Reports that have been produced by Council since 2002. These reports analysed trends in land use and subdivision consents, as well as monitoring and conservation. In particular, each report contains data pertaining to resource consents (both land use and subdivision), building consents, new lots created, and monitoring information, some of which is correlated to underlying Environments (e.g. number of subdivisions or lots created in different Environments). The reports also presented images of the spatial distributions of land use consents, subdivision consents, building consents, building consents for new dwellings and conservation covenants. These pictures allowed for a spatial analysis of where development is occurring in the district, and assist in predicting future trends.