SOUTH EAST QUEENSLAND DATABASE LAUNCHED

A database of emissions in the south east Queensland region can now be accessed through the Internet.

The database was launched on 4 September 1998 by the then Federal Parliamentary Secretary for the Environment, Ian Macdonald, and Queensland's Environment Minister, Rod Welford.

There is information on the database from more than 125 emission reports from 70 companies in the region. Estimates of emissions from smaller companies, and mobile and household sources are also included.

A trial of the NPI has been held in south east Queensland over the past year to streamline the process for collecting and compiling the NPI data. The data collected in the trial has been entered into the NPI database so that its format can be reviewed and refined. The trial was held by the Queensland Department of the Environment on behalf of Environment Australia.

The database uses a state of the art *Geographic Information System* so that users can find out about emissions, not only in their region but right down to street level.

At the launch Senator Macdonald spoke about how Environment Australia's Environment Resources Information Network had pioneered using the Internet for disseminating environmental information and that this expertise had been directly applied to the NPI.

Senator Macdonald said that the Inventory with data from the south east Queensland trial will enable the community and industrial facilities to see what the NPI is capable of delivering and how it can be accessed.

Mr Welford praised the role that industry in south east Queensland industry had played in the trial. He said that 250 industry representatives had attended more than 30 workshops on the NPI over the past ten months.

The NPI database with data from the south east Queensland trial can be accesses through the NPI web site at:
www.environment.gov.au/net/npi.html

For more information:

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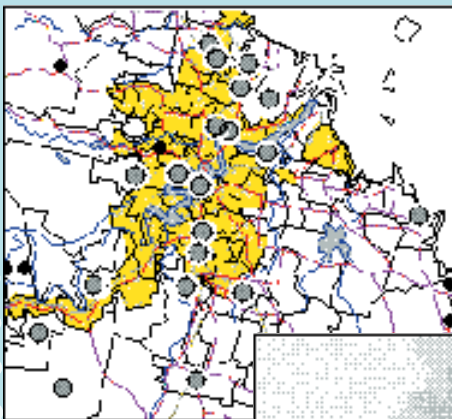
NPI DATABASE

STRUCTURE OF THE NPI DATABASE

The NPI database aims to answer three questions about the emissions to the environment. These are:
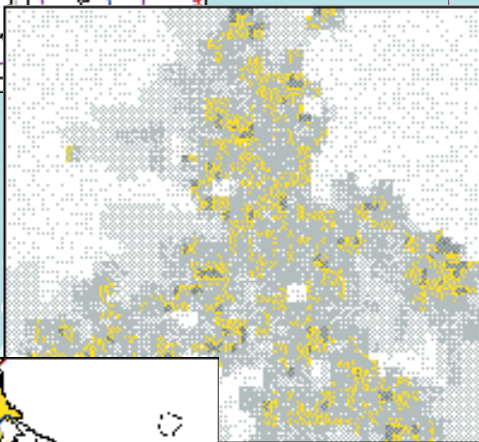
1. What substances are being emitted?

2. Where are the emissions occurring?

3. What are the sources of those emissions?

To answer these questions, the NPI database has been designed to be easy to access and use, searchable through map interfaces and provide reports on substances and sources.
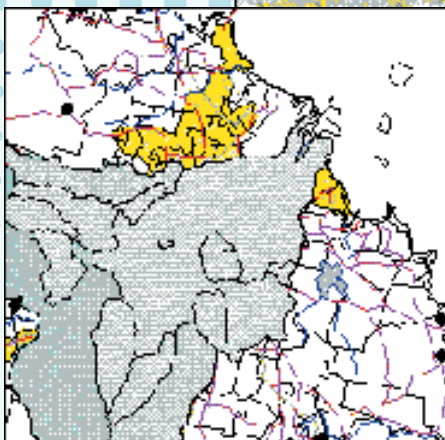
NPI data comes from a variety of sources including reports from larger industrial facilities and estimates of emissions undertaken by State and Territory environment authorities. The combination of data types is complex, so easy ways of comparing them are needed.

Facility points

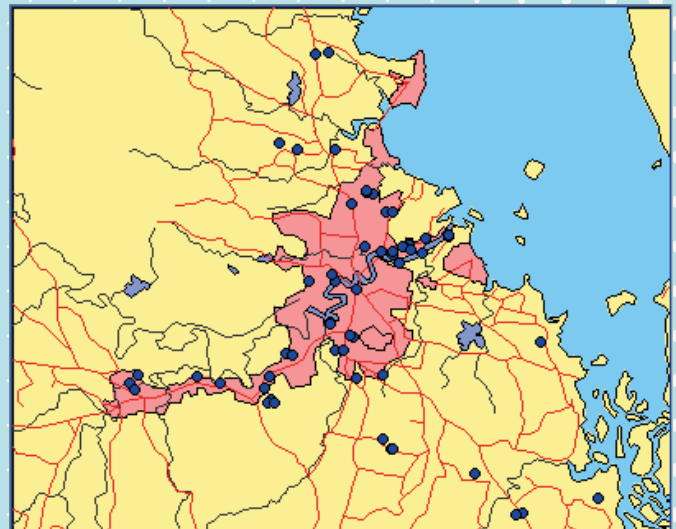*Grids of aggregated emissions*

Catchment areas showing emissions of nitrogen and phosphorus.

These three images show the same area on the map but highlight different emission sources.

GETTING STARTED USING THE NPI DATABASE

There are three major search paths for finding information from the database: geographic, substance type and source.

SEARCHING BY GEOGRAPHIC REGION

Click in the Map to:
○ Query Points
● Define Region

Click to:
Reset region

To search for emissions data from a specific geographic region users can zoom in by drawing a box on the map with their mouse or by typing in a place name which will take them directly to that place on the screen map.

Search [   ] Place Names ▼

Display Brisbane ▼

SEARCHING BY SUBSTANCE

Users can select a substance name from the list, or type in the substance they want to find information on. This feature will also be able to be used to conduct searches about the health or environmental effects, or the use, of particular substances.

Acetone
Ammonia (total)
Antimony and compounds
Arsenic and compounds
Benzene

Substance Report

SEARCHING BY SOURCE

Searching by source tells users how much, and what substances, are being emitted from a particular source. The database has separate search boxes for emissions from industrial facilities and for estimated emissions from other sources, such as cars, households and smaller industry. Before searching by source, one type of substance needs to be selected on the database, because emissions of only one type of substance from the chosen source can be searched for at a time.

WHAT OTHER INFORMATION IS ON THE DATABASE?

REPORTING DATA

Full reports are available on each of the substances listed on the database, emissions from individual facilities, facility profiles and emissions from other sources.
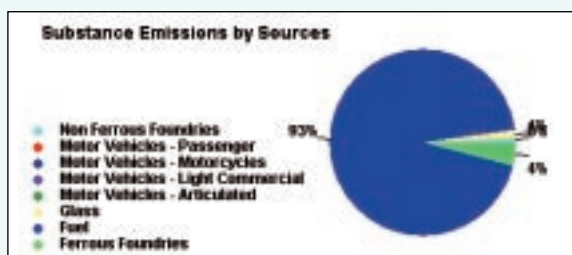
Users can select an option from the database and click on the report option.

By clicking on the 'Substance Report' button a report on benzene will appear.

The substance report provides a full listing on the emissions found in the defined geographic area, both from facility points and from aggregated sources. Emissions are shown to air, land and water, and amounts from the different sources are compared through a pie chart.

This report, compiled from the data collected in the south east Queensland NPI trial, shows that emissions of benzene are largely produced by vehicles.

CONTEXTUAL INFORMATION

The NPI database will include contextual information that is designed to give meaning to the raw emissions data. This information will be designed to help people understand where emissions come from, why they occur, and at what level they are harmful.

Environment Australia has engaged Aquatech, a group of environmental consultants, to develop this contextual information. They are currently conducting a needs analysis and consulting extensively with key stakeholders from industry, environmental organisations, and governments to develop options and recommendations for the format and content of this resource.

The contextual information on the substances will include:

- the Chemical Abstract Series Registered (CASR) number, as well as common synonyms and product names;

- the characteristics and properties of substances;

- health and environmental effects, including toxicity profiles, environmental impacts, and the likely fate and transport of the substances;

- information on common uses of the substances; and,

- the origins and sources of substances.

Aquatech has just completed a review of existing data on contextual information. It is interesting to note that no other database of pollutant emissions and/or transfers found on the Internet, currently provides contextual information in the comprehensive and easily accessible fashion that is being designed for the NPI.

Contextual information for six listed substances will be trialed with key stakeholders in December. If you are interested in participating please contact:

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TECHNICAL INFORMATION

The NPI database is stored in Oracle and uses ESRI's Spatial Data Engine to deliver on-line geographic layers through the web server. This is done mainly through executing server side javascript, which gives a user interface which is simple to use and responsive to changes in data selections.

The current version of the database gives basic information. More functions, such as the ability to download NPI data, will become available over the next few months.

DATABASE WORKSHOP HELD

Participants at the first workshop on the NPI database have found that the simple format is generally easy to use and yields useful information.

Around 40 representatives from industry, community groups and government participated in a Brisbane workshop in August on the NPI database.

The data was collected in the south east Queensland trial of the NPI. Environment Australia's Environment Resources Information Network (ERIN) is responsible for developing and maintaining the technical side of the NPI database.

The workshop started with introductory talks from Environment Australia, the trial's Project Manager, and staff from ERIN.

The trial Project Manager spoke about how the data from large and small industry, and mobile and household sources had been collected and how the trial had contributed to the development of the database.

The ERIN staff outlined the history of the database and how it had evolved and gave a practical demonstration. Other features of the database which would be available in the future were also flagged.

Participants were then invited to use the database and give feedback through a survey form. Around 20 completed forms were collected and forwarded to ERIN and the contextual information consultants, Aquatech.

Much of the feedback centred on what contextual information should be made available with the emissions data.

Some suggestions were that information should be provided on:

- whether the emissions data reflects good or bad practice by the source, and details about best practice use of the substances being emitted

- comparison of what other sources in the same sector are emitting

- what happens to the emissions and what is being done to reduce potential harm

- any government controls on the substances being emitted

- the accuracy of the data.

Participants were asked to identify the type of contextual information they would use from the three options: health effects, environmental effects and uses of the substances. The most popular option was environmental effects with health effects closely behind. Less than half the people surveyed were interested in having information on the uses of the substance. The survey also gave people the opportunity to nominate other types of contextual information they would like to have available.

Many of those surveyed indicated agreement that the simple format of the database is appropriate. Some, however, suggested that the emissions data could be presented in a scientific format. The majority of people surveyed indicated that they would want to download NPI data from the Internet.

Other workshops on the NPI database have been held in south east Queensland and the findings from these with be highlighted in future issues of NPI Update.

NPI AT A GLANCE

The National Pollutant Inventory:

- is an Internet database designed to provide the community, industry and government with information on the types and amounts of certain chemicals being emitted to the environment.

- trial database can be found on the web at www.environment.gov.au/net/npi.html The first national database will be available in early 2000.

- data will come from industry and non-industry sources. This means that data on estimated emissions from household sources and small industry will be on the database alongside data from industrial facilities.

- requires industrial facilities using more than a certain amount of the substances listed on the NPI to estimate and report emissions of these substances.

- database will include contextual information to give meaning to the raw emissions data. This information is designed to help people understand where emissions come from, why they occur and what happens to them in the environment.

- is being cooperatively implemented by the Commonwealth, State and Territory governments. It was developed as a National Environment Protection Measure, through the National Environment Protection Council.
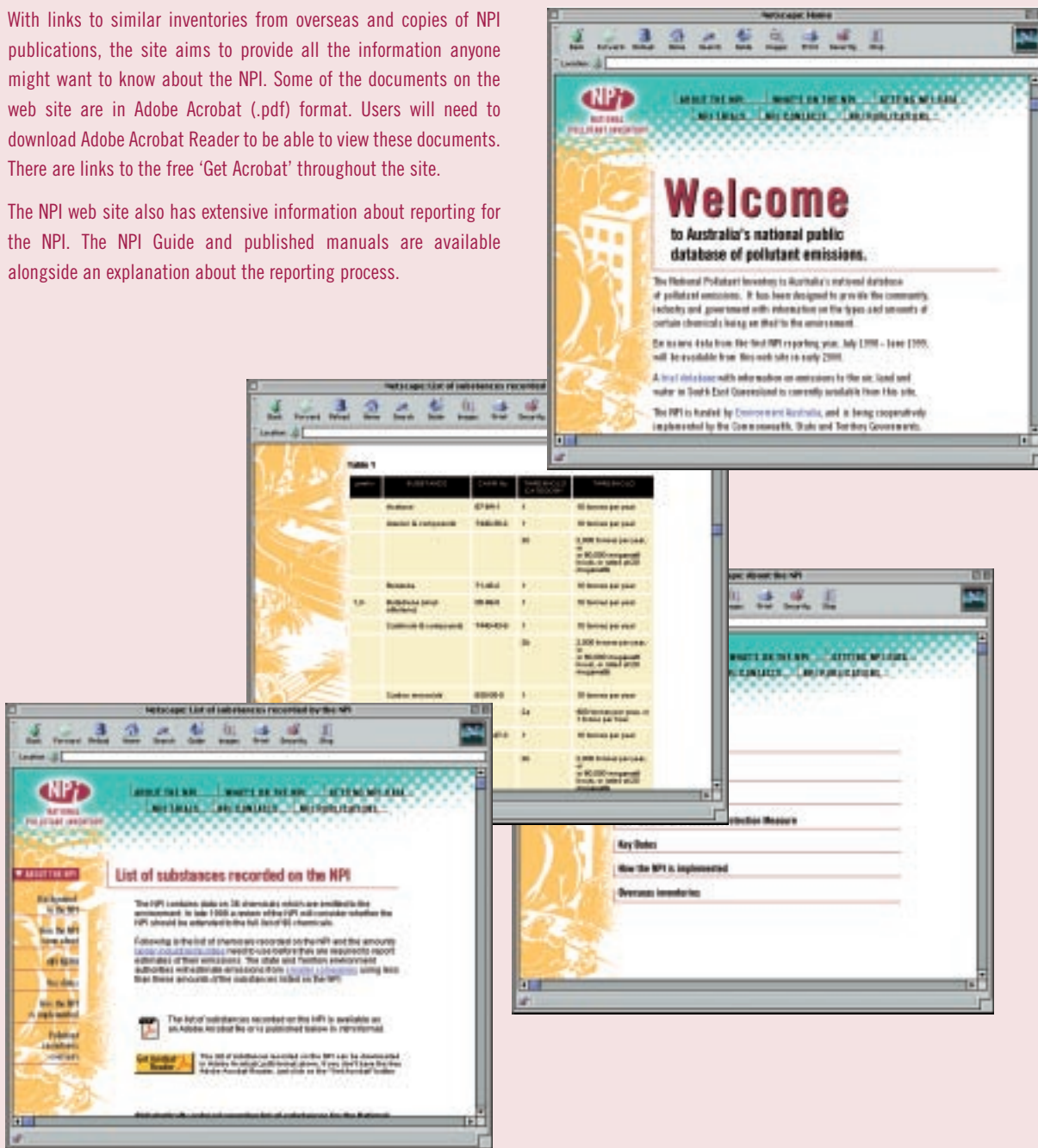
NPI WEB SITE REVAMPED

The NPI web site has been expanded and redesigned to include more information.

Log on to **www.environment.gov.au/net/npi.html** for information about the NPI including a history of how the Inventory came about, an explanation about how governments implement it and the key dates for stakeholders. It also has the list of substances which are on the NPI as well as a page about contextual information.

With links to similar inventories from overseas and copies of NPI publications, the site aims to provide all the information anyone might want to know about the NPI. Some of the documents on the web site are in Adobe Acrobat (.pdf) format. Users will need to download Adobe Acrobat Reader to be able to view these documents. There are links to the free 'Get Acrobat' throughout the site.

The NPI web site also has extensive information about reporting for the NPI. The NPI Guide and published manuals are available alongside an explanation about the reporting process.

Arising from the trial of the NPI in south east Queensland, a new database has recently been uploaded to the site (see cover story). This database shows some of the features that the national database will have. The first national database will be uploaded to the web in early 2000.

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HANDBOOK UPDATES

The first eight industry reporting handbooks were agreed to by the Chief Executive Officers of environment authorities on 25 June 1998 and have been published by Environment Australia.

These handbooks are now being issued by the State and Territory environment authorities to the relevant reporting facilities.

Industry handbooks are complex to produce and require extensive national consultation. This has led to handbooks which are comprehensive, detailed and accessible to industry.

Update 2, which was issued in September, included an indicative timetable for industry handbook development. The timetable has been updated since that time to allow for more extensive public consultation and to allow us to produce industry handbooks for more sectors.

The development of these other handbooks have been called for by government, community and industry. They will enable the following industries to estimate emissions and report on the NPI in the 1999-2000 financial year. The following additional handbooks will be produced by June 1999:

- Lead Smelting
- Copper Smelting
- Zinc Smelting
- Intensive Livestock Production and Saleyards
- Gas Manufacturing (non petroleum products)
- Chemical Product Manufacturing
- Other Non Ferrous Metal Ore Smelting and Refining
- Ferrous Alloy Production
- Structural, Sheet and Fabricated Steel Manufacture

- Rubber Product Manufacturing
- Non Metallic Mineral Manufacturing
- Appliance Manufacture
- Pet Food Manufacture
- Softdrink Manufacture
- Tobacco Product Manufacturing
- Confectionery Manufacturing

To get a copy of the new timetable or to register interest in any of the handbooks:

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