

Australian River Assessment System: National Guidelines for AusRivAS Metadata

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AusRivAS Metadata Guidelines

Purpose

The purpose of this document is to provide a generic template as guidance for generating AusRivAS-related metadata in order to facilitate national access and storage of river health assessment results.

Background

Data sets containing AusRivAS information and maps depicting AusRivAS scores should be accompanied by an appropriate metadata file which is to be maintained by the relevant data custodian. An example (from the NLWRA 2001) of an AusRivAS map metadata file is set out below. Further examples are available from the Environmental Data Directory of the Environmental Resources Information Network (<http://www.deh.gov.au/erin/edd/index.html>) under the title of *Australian River Assessment System (AusRivAS) National River Health Database* and *SOE 2001 - Australian Rivers Assessment System (AusRivAS) Band (Observed:Expected) scores*.

AusRivAS Metadata Template

Category	Metadata
Summary:	
Title	Australia - Australian River Assessment System (AusRivAS) National River Health Database
ANZLIG Identifier	ANZCW0501009864
Custodian	Australian Government, Department of the Environment and Heritage, Water Policy Section http://www.deh.gov.au/water/rivers/monitoring.html
Publication Date	30 November 2004
Acknowledgements	<ul style="list-style-type: none">• State and Territory lead agencies: Qld DNRM, NSW EPA, Environment ACT, EPA Victoria, Tas DPIWE, SA EPA, WA DE and CALM, NT DIPE.• Water Policy Section, Department of the Environment and Heritage• Natural Heritage Trust• CRC for Freshwater Ecology• Land and Water Australia• Freshwater Systems Pty Ltd

Description:

Abstract:

The Australian River Assessment System (AusRivAS) provides a system for assessing the health or condition of Australian rivers and streams based on in-stream biota, water quality, and habitat. AusRivAS is a predictive, rapid biological assessment system that uses aquatic macroinvertebrates to provide an assessment of the ecological integrity of riverine ecosystems.

The National River Health Data Base is a relational data base developed using MS Access. The data base contains spatially referenced datasets describing site information, water chemistry, flow and in-stream habitat conditions, macroinvertebrate community assemblage data (based on family-level presence / absence data). AusRivAS Observed: Expected (O:E) scores and condition bands for test and reference sites, SIGNAL scores for test and reference sites, and some riparian vegetation data. The data base contains data and information on 4944 sites across Australia. The data set covers river health assessments conducted between 1990 and 2003, and includes results from 14909 separate site visits. Sites were selected on the basis of management concern and assessed by State and Territory agencies using standardised AusRivAS protocols.

A key concept underlying the assessment is the adoption of a reference approach. AusRivAS results are based on comparisons between individual test sites and a large number of similar reference sites. These comparisons are made using standardised AusRivAS predictive models and associated software. Using AusRivAS protocols and software, the macroinvertebrate community at a site can be rapidly assessed by comparing the observed community structure with that expected if the site were in "natural" or near natural (that is, best available) condition. The condition or health of a site is recorded in terms of its O:E ratio with a value of 0 (signifying a totally degraded site) and a value near 1 (signifying a site in reference condition).

Macroinvertebrate sampling, identification and analysis protocols were developed under the National River Health Program's (NRHP) Monitoring River Health Initiative (MRHI), First national Assessment of River Health (FNARH), and Australia-Wide Assessment of River Health (AWARH). Data is subject to on-going internal QA/QC assessment by State and Territory agencies, and to periodic Commonwealth-funded external QA/QC audits. Data is collected by trained and accredited AusRivAS operators.

States, Territories, Seas and Oceans

Qld, NSW, ACT, Vic, Tas, SA, WA, and NT.

Defined region

Australia
9° - 44° S; 112° - 154° E

Search words

ECOLOGY Community
ECOLOGY Ecosystem
ECOLOGY Habitat
FAUNA Invertebrates
WATER Hydrochemistry
WATER Rivers

Currency:

Beginning Date	1 January 1990
Ending Date	30 November 2004
Progress	Complete
Maintenance and update frequency	Irregular

Access:

Stored data format(s)	DIGITAL - Access Database
Available data format(s)	DIGITAL - Access Database
Access constraint(s)	Data is freely accessible on written request to Secretary, DEH. Data is distributed by user download from the DEH ftp site or on CD by surface mail.
Conditions of use	<p>Data was initially provided under the auspices of the NRHP for use in the 2001 State of the Environment Reporting and NLWRA 2001, and can continue to be used for these purposes. Data may also be used for other national reporting and research purposes on written request.</p> <p>Caveats apply to the data. A license agreement is required to use the data.</p> <p>All published uses require written request and approvals.</p> <p>All uses must include appropriate citations and acknowledgements of the Natural Heritage Trust and State and Territory agencies.</p>

Quality:

Lineage	The data is derived from data sets originally provided by State and Territory agencies under the auspices of the National River Health Program (NRHP). Data was collected on a seasonal basis from field surveys. Site attributes were recorded in the field, biological samples analysed in the field and / or the laboratory, and water samples were collected and analysed later in a laboratory. Field and biological data was entered manually into agency data bases. Data was then analysed using AusRivAS models and information entered electronically. Data and information were then provided to DEH for electronic collation and national reporting.
Numeric spatial scale denominator	1:100 000
Positional accuracy	Site positions were derived from State and Territory agency data. Positional accuracy for state-wide datasets was determined by map interpretation, or digitised from topographic maps. Sites locations were usually confirmed in the field using a hand-held GPS.
Attribute accuracy	Data collection and collation are subject to standard internal QA/QC assessment process by State and Territory agencies, and to periodic Commonwealth-funded external QA/QC audits. Data is collected by trained and nationally accredited AusRivAS operators.
Logical consistency	Data set is logically consistent. Further documentation can be accessed at: http://www.deh.gov.au/water/rivers/monitoring.html ; and

<http://ausrivas.canberra.edu.au>

Completeness Site scores and associated data exist for all states. Not all rivers and streams were included in the study. Data is available for 4944 sites throughout Australia assessed between 1990 and 2003. The sites were selected as being representative of river reaches of significant management concern in each State or Territory. They were selected on advice from state agencies, local governments, industry, catchment organisations and community groups.

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Additional Metadata:

Metadata Access	Public
Related web links	Australian River Assessment System Australian Natural Resources Atlas National River Health Program (Monitoring River Health Initiative) 2001 State of Environment Report National Land and Water Resources Audit - River Assessment Australia's Rivers and Catchment Condition Database (formerly Wild Rivers)

References and Supporting Documents

ANZLIC, 2001, ANZLIC Metadata Guidelines: ASDI / ASDD Core Metadata Elements for Land and Geographic Directories in Australia and New Zealand, [<http://asdd.ga.gov.au/asdd//tech/index.html#metadata>].

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