

	National Environmental Information Infrastructure Reference Group	Nov 15th, 2017
		Draft Minutes
		For Approval

MEETING #09 – MINUTES FINAL

Meeting	Meeting #09 – National Environmental Information Infrastructure Reference Group
Chair	Dr. Anthony Rea, General Manager Data Program
Meeting Date	November 15 th , 2017
Location	Bureau of Meteorology – Winyu Room, Treasury Building Parkes Place West, Canberra
Time	9.30 to 12.30

MEMBERS

Member	Organisation	Attending
Dr Anthony Rea	Bureau of Meteorology	Chair
John LaSalle	Atlas of Living Australia	Apology
John D Moore	Australian Bureau of Statistics	Apology
Adrian Burton	Australian National Data Service	Member
Serryn Eagleson	AURIN	Apology
Cynthia Love	CSIRO	Apology
Evert Bleys	Department of Agriculture and Water Resources	Member
Judi Dawton	Department of Prime Minister and Cabinet	Apology
Simon Gallant	Department of the Environment and Energy	Member
Neal Evans	Geoscience Australia	Member
Tim Moltmann	Integrated Marine Observing System	Apology
Michelle Black	Murray Darling Basin Authority	Stephen Sunderland
Ben Evans	National Computational Infrastructure	Apology
Jochen Schmidt	NIWA NZ	Member
Beryl Morris	Terrestrial Ecosystems Research Network	Guru Siddeswara

SECRETARIAT

Representative	Organisation
Andre Zerger	Bureau of Meteorology, Data Services

OBSERVERS

Representative	Organisation
Chantelle Doan	Bureau of Meteorology, Data Services
Vivienne Bordas	Bureau of Meteorology, Data Services
John Timermanis	Bureau of Meteorology, Data Services
Emma Hyland	Department of the Environment and Energy
Jeanette Corbitt	Department of the Environment and Energy
Nicholas Car	Geoscience Australia

MINUTES

Item 9.1	Opening & introductions
	Dr. Anthony Rea (Chair) welcomed participants attending in person and via the phone. He provided an overview of the newly formed data program and detailed how it aligns with the Bureau's new strategy.
Item 9.2	Minutes from Meeting #08 and actions
Minutes	Approved the minutes as a true and accurate record of the NEII Reference Group meeting #8 held on the 7 th June 2017. Minutes will be made public at www.neii.gov.au . Dr Andre Zerger provided an update on standing action items.
Actions	6.2 NEII Programme to create a mechanism to share technical learnings in regard to NEII implementation. CLOSED 6.3 NEII Programme to continue expansion of the framework to other information types including observations, monitoring sites and controlled vocabularies. IN PROGRESS (needs to be updated for NEMSR and Vocabularies) 8.1 NEII programme to circulate communique from Linked Data Working Group regarding persistent identifiers and invite Nicholas Car to the next meeting of the Reference Group. CLOSED 8.2 NEII programme to distribute Platforms for Open Data proposal to members CLOSED 8.3 Secretariat to circulate NEII Vocabulary Services options paper to members CLOSED 8.4 Members to review the superset of environmental monitoring sites prior to their publication on www.neii.gov.au and provide feedback to environment@bom.gov.au . CLOSED 8.5 Secretariat to invite NIWA NZ to join the reference group as observers. CLOSED

Item 9.3	NEII Vocabulary Service – Product Release
	<p>Andre Zerger introduced the historical programme context, the NEII Reference Architecture and ICT components delivered to-date under the programme noting the Environmental Vocabulary Service is the key 17-18 deliverable and last major component to be delivered by the programme.</p> <p>The Environmental Vocabulary Service was built over 12 months, upon initial release contains environmental 18 vocabularies provided by six data providers. The service adopts a federated approach that uses a common data structure and provides a public single point of truth for each environmental vocabulary that can be accessed by both people and systems through an API.</p> <p>The Environmental Vocabulary Service uses ANDS PoolParty infrastructure to create, edit and manage content, while an instance of NEII SISSVoc and RVA both publish the vocabularies. The critical role of ANDS was noted in addition to project collaborators including IMOS, GA, DoEE, Department of Agriculture and Water Resources and teams within the Bureau. The programme is grateful for the role these teams played in ensuring the success of the project.</p> <p>Evert Bleys from the Department of Agriculture and Water Resources formally launched the NEII Environmental Vocabulary Service.</p> <p>Adrian Burton commented that it was a fruitful collaboration as it has allowed ANDS and NEII to establish an effective partnership around a common national goal to improve discovery, access and re-use of environmental vocabularies.</p> <p>The programme's focus now moves to on-boarding more vocabularies and supporting systems and people to use the infrastructure.</p>
Discussion	<p>Jochen Schmidt commented that he would like to better understand how to achieve buy-in from the wider science community, institutions and policy makers around such infrastructure (both development and content contributions). Members discussed vocabulary content integration, development of new vocabularies and the need to now commence integrating content into various environmental information systems and workflows. GA remarked on the lessons learnt and the successful approach of NEII in stepping beyond the boundaries of any one organisation to develop shared infrastructure.</p>
Recommendations	<p>Noted the release of the NEII Environmental Vocabulary Service.</p> <p>Considered additional vocabularies for inclusion in the service.</p>
Item 9.4	Australian Government Linked Data Working Group
	<p>Nicholas Car (GA) provided an introduction to the Australian Government Linked Data Working Group (http://linked.data.gov.au) and its work around developing persistent identifiers for digital resources and supporting linked data approaches to data discovery. The group was established in August 2012 to meet the Linked Data challenges facing the Australian government and has been challenged in recent years around its mandate. The group is aligning more closely with the Digital Transformation Agency which provides an opportunity to commence offering an operational service to Australian Government. Nicholas discussed the need to develop a system for managing URI's suggesting that URIs should not be used for agency or programme branding. Ideally moving forward the data.gov.au domain should be used as the basis of most URIs for electronic resources across government. However committing to such common naming approach requires significant buy-in from across government.</p>

Discussion	Reference Group members discussed URI branding versus organisational and programme identity in federated networks and the relative merits of both. Members also explored the reliability of the current persistent identifier service offered by the linked data working group and it was agreed that it may not yet have the operational and support robustness to be applied to operational use cases. This may change depending on ongoing engagement with the DTA.
Action 9.1	The Linked Data Working Group requested to provide a written brief on progress ahead of the next meeting of the reference group
Item 9.5	Essential Environmental Measures Program and State of the Environment Reporting – Department of the Environment and Energy
	Emma Hyland provided an overview of the 2016 State of the Environment Report and the Essential Environmental Measures Programme. In 2016, SOE was released in digital format for the first time and this provides an opportunity to consider incremental updates for future reports. The Essential Environmental Measures program, brings together experts to identify measures essential for tracking change in the state of our environment and to improve the availability of measure-related data to support processes such as SoE. The measures program is supported by scientific advisory groups and technical working groups to ensure measures are relevant for a variety of users, credible, measureable and enduring.
Discussion	Reference Group members discussed the options for extending on the current digital approach of SoE and generating elements of the report dynamically. It was noted that both SoE and Essential Environmental Measures program are aligning closely with the emerging environmental accounting work being led by the Department and ABS. Jeanette Corbitt commented the 2016 SoE has been a well-received report and the Department would like it to be used more at regional scales with the ability to aggregate up and drill down from the current national context. Jochen Schmidt noted that in New Zealand the national statistical agency supports much of the data analysis component of national environmental reporting.
Item 9.6	NEII Programme update
	Chantelle Doan provided an update on the NEII Programme noting major deliverables and achievements since the last meeting of the group including the following: <ul style="list-style-type: none"> • Update to neii.gov.au to incorporate the environmental vocabulary service and the supporting information • NEII technical documents are now available for Reference Group members at neii.gov.au through the secure area • Under the Digital Earth Australia program NEII is collaborating with GA and Data61 to extend the current NEII Data Viewer, enabling users to discover earth observation data through the existing Water Regulations Watercourse Level SOS2 data services • The NEMSR working group held its 3rd meeting last month and the group is working well with a focus on setting priorities for future monitoring site data on-boarding • Released the NEMSR CSV to GeoJSON converter as self-service tool to data providers
Discussion	Members noted recent activity under the programme and discussed the possibility of integrating existing NEII ICT components into one framework, or data discovery portal. The programme noted the ultimate goal is to develop this capability and it remains a priority for 18-19. Architecturally however, it remains a major challenge given much of the data in the NEII is federated. CSIRO has commenced some work in this space and the GA-led FSDF programme could also offer useful lessons. The NEII programme team noted that with the recent completion of the Environmental Vocabulary Service a

	<p>priority for 17-18 is to develop an analytics or user metrics capability for NEII to gain a better understanding of users of the various components and underpinning data.</p>
Recommendation	Noted the NEII Programme is tracking on schedule against the NEII Roadmap 2014-2019.
9.7	Member updates (by exception)
	<p>ANDS</p> <ul style="list-style-type: none"> • Are working on a data service registry capability to support its RDA portal through a project with other NCRIS facilities. The goal is to continue making web data services more interoperable <p>GA</p> <ul style="list-style-type: none"> • CIO Antony Stinziani has moved on to Parliamentary Services and Carina Kemp is now acting in this position • Digital Earth Australia (Earth Science Data Cube) has a number of projects current underway including with NEII and these may assist • Dynamic satellite, change in land use i.e. mangrove extent, opportunity earthobservation@ga.gov.au <p>Environment</p> <ul style="list-style-type: none"> • Have undergone a restructure with scientific and IT divisions now combined. An initial priority is to increase data literacy across the Department • Leading a Data Integration Partnership for Australia activity around environmental data integration currently known as the Energy and Natural Resources Analytics Network (ENRAN). There is currently one data integration project underway on gas price changes and impacts on business productivity <p>BoM</p> <ul style="list-style-type: none"> • The Bureau recently underwent a major restructure and one outcome is that the existing environmental observations and IT function have been combined into one group (Data and Digital Group). Anthony is also now the Chief Data Officer for the Bureau charged with leading its emerging data program <p>Department of Agriculture and Water Resources</p> <ul style="list-style-type: none"> • Are currently looking at renewal of IT systems, developing consistent data models and making data available as web data services <p>TERN</p> <ul style="list-style-type: none"> • Suggested there may be value in collaborating with the NEII programme to develop an environmental observing methods vocabulary • Collaborating with NECTAR, ANDS, ALA and the Essential Environmental Measures program around improving access and interoperability of vegetation site data <p>NIWA NZ</p> <ul style="list-style-type: none"> • Are continuing to refine their data catalogue and attempting to develop a workflow to help their scientists document their own data. This includes ensuing data management is embedded in formal project plans • Have been collaborating with 52North to deliver more environmental

	<p>observations through a Sensor Observation Standard (SOS).</p> <ul style="list-style-type: none"> • In collaboration with IMOS have recently released a New Zealand version of the Australian Ocean Data Network called NZODN to support marine data management in New Zealand • Environmental vocabulary services are not well developed in NZ but have commenced collaborating with NEII and ANDS around improving their capability
9.8	Other business & next meeting
	Next meeting to be held in March 2018 with dates provided early in 2018. Members requested that a presentation from the Digital Earth Australia initiative on progress would be timely.
Action 9.2	GA Digital Earth Australia presentation on progress to the next meeting.

Summary of Open Actions

Action 6.3	NEII Programme to continue expansion of the framework to other information types including observations, monitoring sites and controlled vocabularies. IN PROGRESS (needs to be updated for NEMSR and Vocabularies)
Action 9.1	The Linked Data Working Group to provide a written brief on progress ahead of the next meeting of the reference group
Action 9.2	GA Digital Earth Australia presentation on progress to the next meeting.