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|  | National Environmental Information Infrastructure Reference Group | Meeting #11 November 12 th 2019 |
| | | Draft Minutes |
| | | For Approval |

MEETING #11 – MINUTES

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| Meeting | Meeting #11 – National Environmental Information Infrastructure Reference Group |
| Chair | Chantelle Doan, |
| Meeting Date | Tuesday November 12 th |
| Location | Bureau of Meteorology – Winyu Room, Treasury Building Parkes Place West, Canberra |
| Time | 12.30 to 3.20 |

MEMBERS

| Member | Organisation | Attending |
|--------------------------|---|------------------|
| Chantelle Doan | Bureau of Meteorology | Chair |
| Linton Johnson | Bureau of Meteorology | Katrina Annan |
| Nick Dos Remedios | Atlas of Living Australia | Member |
| Michael Rigby | AURIN | Member |
| TBC | Australian Bureau of Statistics | Apology |
| Adrian Burton | Australian Research Data Commons | Member |
| Cynthia Love | CSIRO | Apology |
| TBC | Department of Agriculture and Water Resources | Apology |
| Katrina Philips | Department of the Environment and Energy | Peter Graham |
| Neal Evans | Geoscience Australia | Member |
| Sebastian Mancini | Integrated Marine Observing System | Apology |
| TBC | Murray Darling Basin Authority | Apology |
| Ben Evans | National Computational Infrastructure | Member |
| Jochen Schmidt | NIWA NZ | Member |
| Siddeswara Guru | Terrestrial Ecosystems Research Network | Member |

SECRETARIAT

| Representative | Organisation |
|-----------------|--------------------------------------|
| Vivienne Bordas | Bureau of Meteorology, Data Services |

OBSERVERS

| Representative | Organisation |
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| Martin Chan | Bureau of Meteorology, Data Services |

MINUTES

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| Item 11.1 | Opening & introductions |
| Item 11.2 | Minutes from Meeting #10 and actions |
| Minutes | Approved the minutes as a true and accurate record of the NEII Reference Group meeting #11 held on the 15 th November 2017. Minutes will be made public at www.neii.gov.au . An update was provided on standing action items. |
| Actions | 10.4 Members to provide corrections or suggested improved draft TORS to the programme team by September 7 th COMPLETE 10.3 The NEII program to table analytics reports to future meetings of the reference group. - COMPLETE 10.2 The NEII program to lead the development of a joint lessons-learnt paper (conference or journal) around building national environmental information infrastructures in collaboration with interested members – IN PROGRESS 10.1 NEII program to develop a public communication product that provides an overview of the infrastructure highlighting options for participation, current program focus and key benefits of contributing to the federation. IN PROGRESS. |
| Item 11.3 | NEII video The NEII video provides a versatile, contemporary and engaging way to communicate the NEII beyond the traditional print and web campaigns. The video aims to increase awareness about the NEII and its purpose with a variety of stakeholder, such as data providers, data users and the general public. The video, created by PICTA creative, provides an overview of the key elements of the NEII and encourages interested stakeholders to collaborated with the NEII community. The video will be distributed via; <ul style="list-style-type: none">• Neii.gov.au• eXchange newsletter• briefing, workshops and meetings for key stakeholders• NEIIRG members are encouraged to promote and show the video wherever possible. |
| | The video is available on the NEII home page, and the components page |

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| Discussion | Reference Group members commented on how useful the video is to explain the complex nature of NEII to a variety of audiences. |
| Recommendations | That Reference Group note the video and members share the video. |
| Item 11.4 | NEII – Update – moving forward |
| | <p>Chantelle Doan provided an overview of the main activities covering;</p> <ul style="list-style-type: none"> • Data additions to the data platform, communications products delivered and analytics • The NEII team have moved from the development phase to BAU, current work activities include further Analytics development and growing contributors and data. • NEMSR – new additions include BoM Environmental Information Explorer network, Water Data Online, Water Regulation data (Water course discharge levels, storage levels, volume, electrical conductivity, pH and turbidity). • Terria cube project added satellite imagery from Digital Earth Australia, including Water Observations from Space, Landsat 8, Sentinel II etc. <p>This data provides a richer inside to environment landscape.</p> |
| Discussion | <p>The National Computation Infrastructure (NCI) needs to be attributed for its input, especially given that big data comes from the NCI. For example, the project should be attributed as Data 61, GA and the NCI.</p> <p>Both the NCI and the Atlas of Living Australia (ALA) requested information on how to contribute datasets and services to the NEII data platform.</p> <p>The group discussed National Maps high-level navigation structure that is due to be implemented. It aims to improve standardisation within National Maps and throughout related maps and viewers.</p> <p>The NCI commented that they can provide additional endpoints and services, however they need direction from the NEII team as to which ones to provide, especially given the massive nature of some of the data.</p> <p>The NCI also suggested that The Ecological Society of Australia's Annual Conference in Launceston, 25-27th November 2019 maybe an opportunity for the NEII to promote its data platform.</p> |
| Action 11.1 | The NCI to be attributed for their input to the various aspects of the NEII data platform. |
| Action 11.2 | The NEII team to discuss with Data61 the inclusion of the NCI and ALA in the standardisation discussions. |
| Item 11.5 | Analytics– Martin Chan |
| | <p>Martin Chan provided an overview of the current state of NEII Analytics, a monthly report using Excel, VBA and Python, the data is exported as a PDF. This process is manual and time consuming, as the data grows the size limitations of Excel impact on the report generation.</p> <p>Therefore, work has been undertaken to enhance the provision of analytics data, this includes a transformation to web-based analytics. The NEII team anticipate that the NEII analytics will be provided to our collaborators via the NEII collaboration space. A site which is not in the public domain and only available to NEII collaborators who have registered with the NEII site.</p> |

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| Discussion | <p>The Reference Group discussed the value of the web statistics being made available in the public domain. Further information is required to ascertain the value and legality of this.</p> <p>NEII program to table analytics reports to future NEII RG meetings.</p> |
| Action 11.3 | <p>The NEII team to table analytics reports to future NEII RG meetings.</p> |
| Item 11.6 | <p>Water Data Online</p> <p>Todd Lovel presented Water Data Online. Designed to improve the quality of water information in Australia, The Bureau of Meteorology is required to collate standardise and archive water data collected by more than 200 organisations named in the Water Regulations and to provide Australian with free, online access to reliable water information.</p> <p>Whilst most data received is in the Water Data Transfer Format (WDTF) some of the data provided is in a format that cannot be readily ingested. To address this, the Bureau is developing the Data Connect web portal which will enable data providers to submit data by simply dragging and dropping their data files.</p> <p>Data available from approximately 6200 measurement stations across Australia include;</p> <ul style="list-style-type: none"> • Watercourse Level (Category 1a) • Watercourse Discharge (Category 1b) • Storage Level (Category 3a) • Storage Volume (Category 3b) • Electrical Conductivity @ 25C (Category 9a) • Turbidity (Category 9d) • pH (Category 9g) • Water Temperature (Category 9h) • Rainfall is coming first quarter 2020 <p>Data can be accessed via</p> <ul style="list-style-type: none"> • WISKI <ul style="list-style-type: none"> - For internal users - Powerful tool for exploring data - Multiple station export • Web Services <ul style="list-style-type: none"> - Data for applications - SOS2 is an inter-agency standard. Possibilities for integration between different agencies systems • Water Data Online <ul style="list-style-type: none"> - Internal or external users - Simple, easy to use interface for exploring individual station data <p>Water Data Online parameters including watercourse discharge and water levels, water quality, storage volumes and levels are now available through a public Sensor Observation Service (SOS) API.</p> <p>A detailed user guide for accessing and using the SOS2 services is now available through the Water Data Online portal (under FAQ pages)</p> <p>The Bureau has worked with the CSIROs Data61 to enable API's delivered through national data portals including the Australian Renewable Mapping</p> |

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| | <p>Infrastructure (AREMI), National Map, Northern Australia Portal and the NEII Viewer.</p> |
| <p>Discussion</p> | <p>Reference Group members discussed the possibility of Water Data Online being available via apps. People are starting to build their own apps and can compete with software companies. BOM needs to know what its niche is in this area.</p> <p>GA is in a similar situation and hence the need to focus on quality data.</p> <p>AURIN queried that some smaller companies cannot use WDTF and what is in place to work around this, what will happen in the future and how will data continue to be added?</p> <p>AURIN requested additional information on the WDTF format, and how smaller data providers are able to provide data, without using the WDTF format</p> <p>The Bureau's Data Connect project is enabling small organisations to upload their data. Providing that the data providers can supply their data in a consistent format such as .csv format. A translator is being developed to convert .csv to WDTF.</p> |
| <p>11.7</p> | <p>DIPA and PEAN – Peter Graham DOEE</p> <p>The Data Integration Partnership of Australia (DIPA) is a three-year, whole-of-government program that aims to transform the analysis of public data to improve policies and programs. Since 2017 the DIPA program has funded Australian Government agencies to work collaboratively to:</p> <ol style="list-style-type: none"> 1. Improve key data sets for integration and analysis. 2. Increase the supply of integrated data for analysis. 3. Analyse integrated data to solve problems. <p>Most of the funding is for the first two of these activities. In addition five data analytical units have been set up under the program to analyse integrated census, tax, health and welfare data. The units receive some of the program funding to carry out analytical projects that run for up to 12 months each.</p> <p>The Physical Environment Analysis Network (PEAN) is one of the analytical units. PEAN brings together analysts from agencies that include the CSIRO, the Bureau of Meteorology and Geoscience Australia. PEAN is managed by the Agriculture and Environment departments.</p> <p>PEAN has undertaken nine projects on issues such as agricultural development, drought and industrial energy productivity. See www.pean.gov.au. An important DIPA project that was instigated by PEAN is the development of the location index (Loc-I) to integrate data on people, business, and the environment. See locationindex.org.</p> |
| <p>Discussion</p> | <p>Reference Group members queried if the analytics hubs were available to everyone? The integrated data is available from the ABS and there are processes available for researchers to be brought into the data lab.</p> <p>It is unclear what will happen in the future when DIPA funding runs out. Currently the ABS is considering options.</p> |

AURIN

- Stage 2 technical review data to software operationalising everything determining what is realistic. Expression project bring together environment and social sciences. Research infrastructures have changed over the years. Watch this space.

ALA

- New Director Dr. Andre Zerger.
- Undertook national consultation, public presence now wrapping up,
- Instigating big project to tackle data quality.

GA

- Restructure, around aligning around GA's 2020 strategy, and merging 3 divisions into 2.
- Martine Wolf acting Chief Scientist
- Andrew Heap, Chief, Minerals Energy and Ground Water
- Place Space and Community. Spatial capabilities, location etc.
- Aligning to client base, significant advancement in Digital Earth Australia, amazing products coming out now – happy to do another presentation on this at next NEII RG.
- Funding to help business grow.
- Work with National map, looking for leadership now.

TERN

- Please share the NEPS URL to everybody <https://science.uq.edu.au/neps> Currently, expert panel are looking for feedback for the system design document <https://science.uq.edu.au/files/20194/NEPS-System-Design-outline.pdf>. The last day to submit feedback is on 28th of Nov 2019.

NIWA NZ

- Would like to be involved in lessons learned,
- Producing seamless consistent data throughout the country by a few committed people,
- National Environmental Monitoring Standards (NEMS) has produced a number of special environmental data standards are collected to the same standards, being collected for 8 years.
- Data exchange is improving particularly with water.
- Building a data directory for machine exchange, API access.
- Working with IMOS to develop marine data structure ODN for New Zealand
- National Environmental Data Services just started aim to generate machine to machine web services for a single portal especially for researchers, start-ups and businesses. Allows end users to quickly access data.

10.9

Other business & next meeting

Chantelle thanked Andre Zerger and Anthony Rae for their work and commitment to the NEII program over the years. Their departure is a loss for the NEII programme and for the Bureau of Meteorology.

The next meeting will be held in May 2020