
LINKONLINE

Short webinars for environmental policy-makers and practitioners

New Zealand's Protected Areas Network

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The following questions were asked during our live webinar with Simon Planzer and Stella Belliss but due to time restrictions, we were unable to answer these in the session.

Data sets contributing to PAN-NZ / linkages to other data

Is World Heritage considered as the pinnacle in the PAN framework?

World heritage sites will be included in PAN-NZ.

We tend to think of 'protection' in the ecological sense, but legal protection could be for a variety of reasons (landscape, water quality, etc). Will this work be limited to the ecological side?

We will include all protected areas as defined in table 15-7 of the Standardised terrestrial biodiversity indicators for use by regional councils (<https://envirolink.govt.nz/assets/R7-2-Standardised-terrestrial-biodiversity-indicators-for-use-by-regional-councils-LC2109-report.pdf>). This includes legal protections where the primary purpose is not ecological. The ranks of biodiversity protection will also be included.

How does PAN-NZ relate to the requirement under the NES:FW for Regional Councils to identify Outstanding Natural Water bodies? I think waterbodies can be designated 'outstanding' for a number of criteria, some of which are non-ecological.

The intention is to include all protections overlapping with water bodies that are protected under New Zealand law. The majority of these can be found in the following document: Standardised terrestrial biodiversity indicators for use by regional councils (<https://envirolink.govt.nz/assets/R7-2-Standardised-terrestrial-biodiversity-indicators-for-use-by-regional-councils-LC2109-report.pdf>) see table 15-7.

I work for one of the largest private land owners in NZ. We struggle to answer that question as we simply don't have easy access to PAN-NZ. By contrast we absolutely know what land is designated SNA by councils, and many of those designations will cite RAPs. Unsure about meaning of "P" in PAN-NZ - in our world statutory protection ("P") means SNA.

SNA are one of many forms of legal protection. See table 15-7 in Standardised terrestrial biodiversity indicators for use by regional councils (<https://envirolink.govt.nz/assets/R7-2-Standardised-terrestrial-biodiversity-indicators-for-use-by-regional-councils-LC2109-report.pdf>) for a list of those protected in law.

How will highly productive land be considered in this project?

PAN-NZ does not include protections under NPS-HPL.

Have you captured land covenanted through subdivision, QE2 etc. What about esplanade strips?

It is the intention to aggregate the covenant data as held by local government and QE2.

Delivery of PAN-NZ data**Noting MWLR have a number of other Maps, how come it isn't a layer in the other maps?**

As with other MWLR datasets, you can view the earlier version on PAN-NZ in Our Environment <https://ourevironment.scinfo.org.nz/>. As we redevelop PAN-NZ we aim to be able to share all the public data accessed, while protecting any private data contributed. One of the challenges is in keeping such a layer up-to-date through regular automated updates from data providers.

Your recommendations are great, and I keep seeing similar recommendations for various environmental datasets. It seems like everyone's trying to create their own data and metadata standards and guidelines when a national level data standard for ALL environmental data should be created. Do you or anyone here know of such ongoing projects?

We agree there is a lot going on in environmental data in New Zealand, and there are a number of initiatives around making data FAIR (findable, accessible, interoperable and reusable). MWLR works to the objectives of NZGOAL as well as participating in international and local initiatives for data standards and interoperability. Using smart technologies, web services and API's to share, aggregate and make sense of the plethora of environmental data is essential. PAN-NZ will provide input layers for a range of other datasets such as LCDB.

Are these protected areas publicly available as GIS map layers? Good to have for Emergency Response impact assessment and recovery considerations.

Yes we recommended any future versions of the public data in PAN-NZ is accessible via public download and public APIs.

Side topic - but I would LOVE a national SNA spatial dataset. Would make life so much easier.

Great feedback. The goal is to aggregate all SNA datasets in PAN-NZ. Users will be able to filter on legislation/protected area type and receive a dataset for just SNAs.

Will the outputs from PAN-NZ be accessible as layers to ArcGIS users so that conservation groups and citizen scientists can access them from systems like CAMS?

Yes we recommended any future versions of the public data in PAN-NZ is accessible via public download and public APIs.

Connection with other datasets and initiatives, including international**The IUCN PA categories and definitions provide the international criteria.**

Thank you - will look into this when we consider the system architecture.

Do all our protected areas (all types) meet the minimum standards of the IUCN?

Ensuring that data meets international criteria is important for reporting and will be part of the scoping project.

Is there any plan to integrate the PAN-NZ data into World Database on Protected Area (WDPA)?

Noting that we are still scoping PAN-NZ, we expect that public data contributed will be released via commonly adopted standards (e.g. those by the Open Geospatial Consortium) so it can be readily integrated with other systems such as WDPA. We contribute to a number of international data initiatives and expect that PAN-NZ will have benefits for data sets such as WDPA.

Are there discussions about how PAN-NZ would link to other existing databases, e.g. GBIF ?

Public data in PAN-NZ would be released via commonly adopted standards (e.g. those by the Open Geospatial Consortium) and be readily integrated with other systems.

Will iNaturalist data be integrated with the system?

There are no plans for this specifically, but the public download facilities and APIs will enable others to integrate PAN-NZ data with other data.

Are you going to link this work to the Sustainable Development Goals?

https://www.iucn.org/sites/default/files/2022-09/6.-natural_solutions_-_sdgs_final_2.pdf

PAN-NZ will provide a snapshot of the current state of protected areas which will support some of New Zealand's reporting on the SDGs. Even more importantly, the opportunity to develop a system which can be updated efficiently, will enable better reporting of progress against SDGs and other metrics.

Uses of PAN-NZ related to data included**Is it envisaged that this will be used for enforcement purposes?**

This is not the purpose for PAN-NZ as agencies will maintain their own data for regulation and management.

All very well knowing where and scale of PAs - but Managements Effectiveness will be the reality test.

The information in PAN-NZ will support further analysis of state and trend at relevant scales for management. This is a key driver for the development of a system that can be updated efficiently.

Apart from spatial information (location, area), what other data is required for this database? Ecosystem type? current state - degraded etc? species presence?

PAN-NZ primary objective is spatial extent and type of legal protection. PAN-NZ will draw on standard classifications and be able to connect with other spatial data to deliver more nuanced information on state, management or species presence / absence.

Addition to question above ("Apart from spatial information..."), could level of current management be captured? At least at a very basic level?

PAN-NZ will be useful as a base dataset for others to add data to create products / layers specific to particular requirements.

Funding

Three questions combined in the below answer:

- **Funding is a perennial issue. Do you have any idea on how this important work ought to be funded?**
- **Once the investment in updating the dataset to current state is complete, changes are unlikely to be significant or regular (possibly annual), so cost of maintaining will be much lower?**
- **A current and reliable PAN-NZ would be extremely valuable. Is there a commitment to maintaining and updating the database?**

PAN-NZ is just one of a number of national environmental datasets that requires attention - which means funding. By bringing together consistent approaches to the data we are working towards a more comprehensive system whereby each dataset is consistent with and informs others - for instance, wetlands data, the Land Cover DataBase and land use maps are all relevant to PAN-NZ. The key to this is regular secure funding to enable data to be continually updated and improved rather than a big task every 5-10 years!

Interested in why PAN-NZ was first created and the implications of that for this current project/future use?

Here's a little history..... the first protected area in NZ was Tongariro National Park in 1894 and there was also the 1885 Forests Act to conserve forests from burn-off and a Scenery preservation Act on 1903. The need for a representative PNA system was put forward by Atkinson in 1961. The Protected Natural Areas programme aims to identify representative samples of ecosystems and genetic diversity, and selects the areas worth saving based primarily on vegetation and landform, within a framework of 268 ecological districts (Kelly and Park, 1986; Dickinson and Mark, 1988). The aim is to conserve as many examples as possible, of vegetation of the highest natural value, in each area. Highest natural value is determined by using seven primary criteria: representativeness, diversity, rarity, naturalness, long-term ecological viability, size and buffering of surrounding landscape (Kelly and Park, 1986). In 2007, Manaaki Whenua was asked to create a data layer of all the PNA information and PAN-NZ has developed from that.

Funding - why not place a QR code at reserves for collecting a suggested donation to users?

There is already a donation system on some DOC reserves but an electronic system might encourage more people to value accessible public land.

Challenges and issues

One challenge for publicly available data is that some people may consider a protected area on private land publicly accessible.

Modern data systems enable certain input data to remain private to permitted users and the general public would only see protected areas on public land. As well as privacy, the system needs to be able to provide the right levels of protection for rare ecosystems or species.

I tried making this data available to all over a decade ago. The reason I couldn't was that one party did not give us permission. Make sure you get this before you consider anything else. There's no point proceeding if you don't get it.

Good point. We are aware of the difficulties around permission to include and/or share data. We expect this to be a significant element of the scoping project and you can expect some questions on this in the survey.

SNAs are highly contentious in some regions and at fine scales (due to age of assessment, &/or lack of ground-truthing in some areas). This has led to TLAs restricting public access to this data; how to manage this?

Thanks for this feedback. We will look to extend the scope of our survey to better understand this problem.

For clarity, NPS-IB just came out. District Councils haven't given effect to it yet as that requires a Plan Change (typically 5 year process, with appeals if not socialised well).

Existing SNAs will be aggregated in PAN-NZ and the remaining will be added as made available by Territorial Authorities once they meet the requirements of the NPS-IB.

I worked for DSIR in 1980 quadrating northern bush areas to establish what species were there to compare with the remote sensing data. In 1978/9 I also produced an analysis and environmental assessment of a virgin lowland forest remnant in Manukau City, Murphy's Bush. Back in Auckland for a visit a few years ago, I was horrified to see a totally stripped out Murphy's Bush. How did local body staff allow this significant breach?

Thanks for your comment which demonstrates the value of legal protection to ensure special sites of local or national importance are catalogued and shared as a step towards long term preservation.