



**Upper Hunter
Mining Dialogue**

COMMUNITY FORUM 2024

Working together for a sustainable future for the Upper Hunter

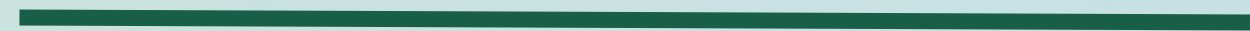
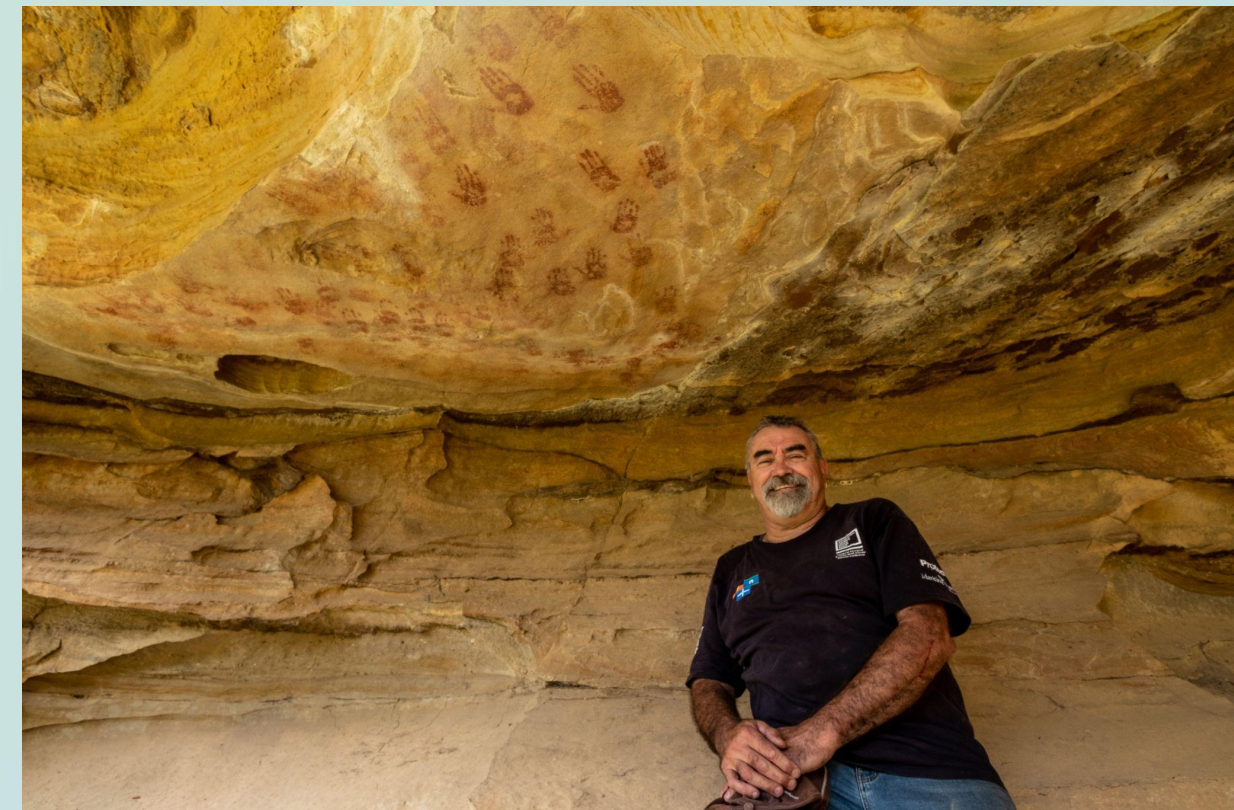
Welcome to Country



Upper Hunter
Mining Dialogue

Uncle Warren Taggart

WALKABOUT WITH WARREN



Introduction



Upper Hunter
Mining Dialogue

Jessica Rouse

FACILITATOR

Housekeeping



Upper Hunter
Mining Dialogue

- Emergency procedures
 - Toilets
 - Name tags
 - Security
 - Breaks & meals
 - Phones
 - Recordings & photos
 - Questions & answers
 - Suggestions
 - Handouts
-

Chair Address



Upper Hunter
Mining Dialogue

John Watson

CHAIR

UPPER HUNTER MINING DIALOGUE

Chair Address

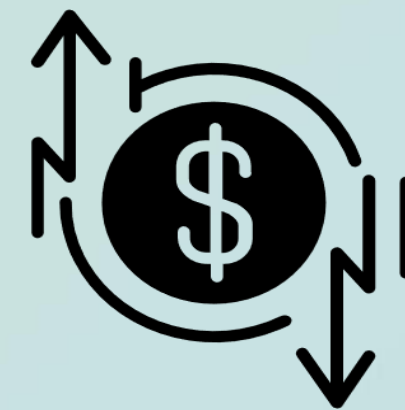
SINCE THE 2022 COMMUNITY FORUM, THERE HAVE BEEN SOME IMPORTANT CHANGES IN THE UPPER HUNTER



Politics



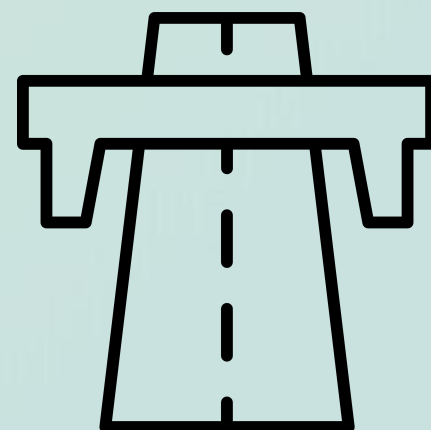
Weather
conditions



Economy



Mining
Industry
changes



Infrastructure



Community
priorities



Upper Hunter
Mining Dialogue

Chair Address

THE PURPOSE OF THE DIALOGUE

Preserving vital
resources for all

Minimising
environmental
impacts

Leaving a positive
long-term legacy



Established in 2011 in response to increasing community concern about the cumulative impacts of mining



Provides an opportunity for stakeholders to engage in meaningful and respectful discussions on important issues



Provides a reliable source of information that builds trust between the mining industry and community



Contribution to a healthy living environment and sustainable community in the Upper Hunter



Chair address

DIALOGUE STRUCTURE

Joint Advisory Steering Committee

- Oversees the development of the Dialogues projects and activities to ensure alignment with the purpose of the Dialogue.
- Shapes the direction of the Dialogue to ensure longer-term strategic issues facing the Upper Hunter Region are addressed

WORKING GROUPS

Communication

Focus on increasing both community and industry knowledge of the Dialogue through implementing the School Mine Tours Program, development of stakeholder communication strategies, social media engagement and ensuring clear unbiased messaging on all Dialogue communications.

Economic and Social Development

Facilitate communication between the local business community, government and the mining sector on relevant economic and social matters such as economic diversification, procurement and employment.

Environment

Focus on discussing and addressing identified environmental impacts of mining in the Upper Hunter region. Includes publication of factual annual reports on air quality emissions, mine rehabilitation & land management and water quality.



CHAIR ADDRESS

OPPORTUNITIES FROM TODAY'S SESSIONS

- Receive an update on the Dialogue projects and priorities
- Learn more about the economic outlook for the Upper Hunter
- Gain further clarity around Government priorities and the long term impacts for the Hunter
- Leverage insights from other regional areas into economic and social transition
- Engage with the community to identify priorities for the Dialogue to address



Acknowledgements



Wendy Bowman

Former Joint
Working Group
Member



Sarah Withell

Former UHMD
Chair



Jeff Esdaile

Former Joint
Working Group
Member



Danny Eather

Business
Singleton



Upper Hunter
Mining Dialogue

Update on Projects & Priorities



Upper Hunter
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James Barben

SECRETARIAT

UPPER HUNTER MINING DIALOGUE

Update on Projects & Priorities

2023/2024 WORK PLAN

- Feedback from the 2022 Forum determined the following priority areas of focus including:
 - rehabilitation
 - post mining land use
 - climate change adaptation
 - air quality
 - data transparency and accessibility
 - water stewardship
 - collaboration with mining and businesses
 - engagement with youth
 - workforce challenges and transition planning



Update on Projects & Priorities

HUNTER FOCUSED STRATEGIES

- Future Jobs and Investment Authority
- Hunter Regional Plan 2041
- Upper Hunter Strategic Regional Land Use Plan
- Hunter Regional Economic Development Strategy
- A 20 Year Strategic Vision for Regional NSW - Refresh
- Strategic Statement on Coal, Exploration and Mining
- Hunter Advantage: Supporting the Hunter Identity and Positioning Strategy (Hunter Central Coast Development Corporation)
- Greater Hunter Regional Water Strategy
- Net Zero Plan - Stage 1: 2020-2030
- NSW Hydrogen Strategy
- Climate Change Adaptation Strategy
- Regional Growth Fund
- Regional Investment Attraction Packages under the Regional NSW Investment Attraction Strategy 2022 - 2027
- Regional Jobs Creation Fund
- Hunter-Central Coast Renewable Energy Zone (EnergyCo)
- Critical Minerals and High-Tech Metals Strategy 2024-35



- Local Jobs Program - Supporting workforce transition to a net zero economy
- Hunter Employment Region Local Jobs Plan
- Upper Hunter Economic Diversification Action Plan
- Hunter Central Coast Circular Economy Roadmap
- Upper Hunter Shire Council Local Strategic Planning Statement
- Community Strategic Plan - Upper Hunter 2032
- Muswellbrook Local Strategic Planning Statement 2020 - 2040
- Employment Land Strategy (all Councils but led by MSC)



- Singleton Socio-Economic Development Strategy 2024 -2028
- Upper Hunter Employment Lands Strategy
- Our People Strategy 2022-2026
- Empowering Voices: Australian Case Studies Unveil the Power of Community in Decision-Making
- Hunter 2023: A New Energy
- A Plan for the Hunter: Frontier of the New Economy



Upper Hunter Mining Dialogue

Update on Projects & Priorities

PASTURE RESTORATION FIELD DAY

- The Field Day brought together industry, agronomists, government and community representatives to tour pasture establishment areas at Lidell and Rix's Creek, providing an opportunity for participants to understand industry's successes and challenges, and to share research and expertise.
- 40 attendees participated from 18 organisations
- Participants welcomed the strong commitment and efforts from the mining sector to establish stable, productive and sustainable grazing land use.
- The Dialogue is planning another Field Day in 2025 – focusing on other topical issues such as post mining land use.



Upper Hunter Mining Dialogue

Update on Projects & Priorities

STAKEHOLDER ENGAGEMENT AND COMMUNICATIONS


- The Dialogue has increased engagement with young people through participation with youth networks and consultations with secondary school students. The Dialogue is currently preparing to establish a Youth Advisory Group for people aged between 18 and 30.
- The School Mine Tours Program continues to be a significant engagement program. In 2024, the Dialogue ran 18 tours and brought over 570 primary and secondary school students onto mine sites.
- Focus on social media presence. Developed social media strategies which have increased our Facebook following by over 600%, and established a LinkedIn page.



Update on Projects & Priorities

ECONOMIC AND SOCIAL DEVELOPMENT

- We continued building strong relationships with Chambers and Councils and industry on economic development challenges and opportunities.
- Following the 2022 Forum, the Dialogue expanded its view from the 'here and now' economic issues and is investigating social development issues, including housing affordability/availability and economic diversification and transition
- Chamber representatives are now members of the Joint Advisory Steering Committee.



The screenshot shows the top section of the NSW Mining Dialogue website. It features a green header with the NSW Mining logo and a navigation menu. Below the header is a large image of a group of people, with a green call-to-action button that reads "BECOME INVOLVED WITH THE DIALOGUE".

Procurement Information Hub

Helping suppliers understand mining procurement processes and preparing for tendering opportunities.

The Dialogue's primary objective under the Economic and Social Development theme is to improve engagement between the mining sector and local suppliers. Critical to this is improving the understanding and awareness of procurement processes across the various Upper Hunter mining companies.

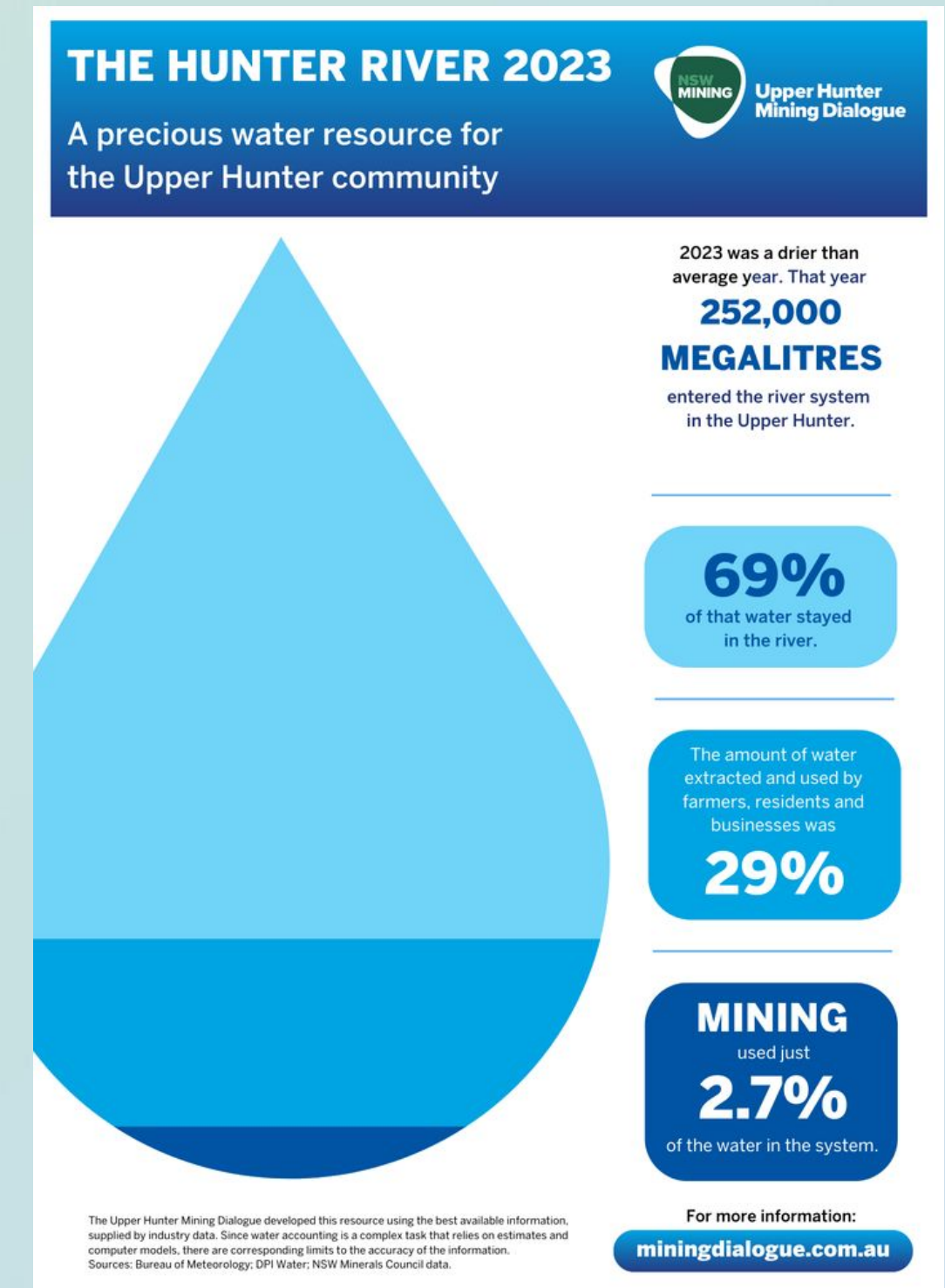


Upper Hunter
Mining Dialogue

Update on Projects & Priorities

WATER ACCOUNTING FRAMEWORK

- The project commenced in 2014 and has been reported on annually.
- This objective is to provide transparent information about the water stewardship of mining operations across the Upper Hunter.
- The 2023 results are published on the Upper Hunter Mining Dialogue website:
<https://miningdialogue.com.au/project/water>
- The 2024 rainfall to date has already surpassed 2023's total rainfall.



Update on Projects & Priorities

WATER ACCOUNTING RESULTS 2023

252

billion litres of water
entered the Hunter River
System in 2023

69%

of the water stayed in the
Hunter River System in
2023

29%

of the water was extracted
and used by farmers,
residents and businesses

2.7%

of the water was used by
mining in 2023

40%

of mine water was
reused on site
in 2023

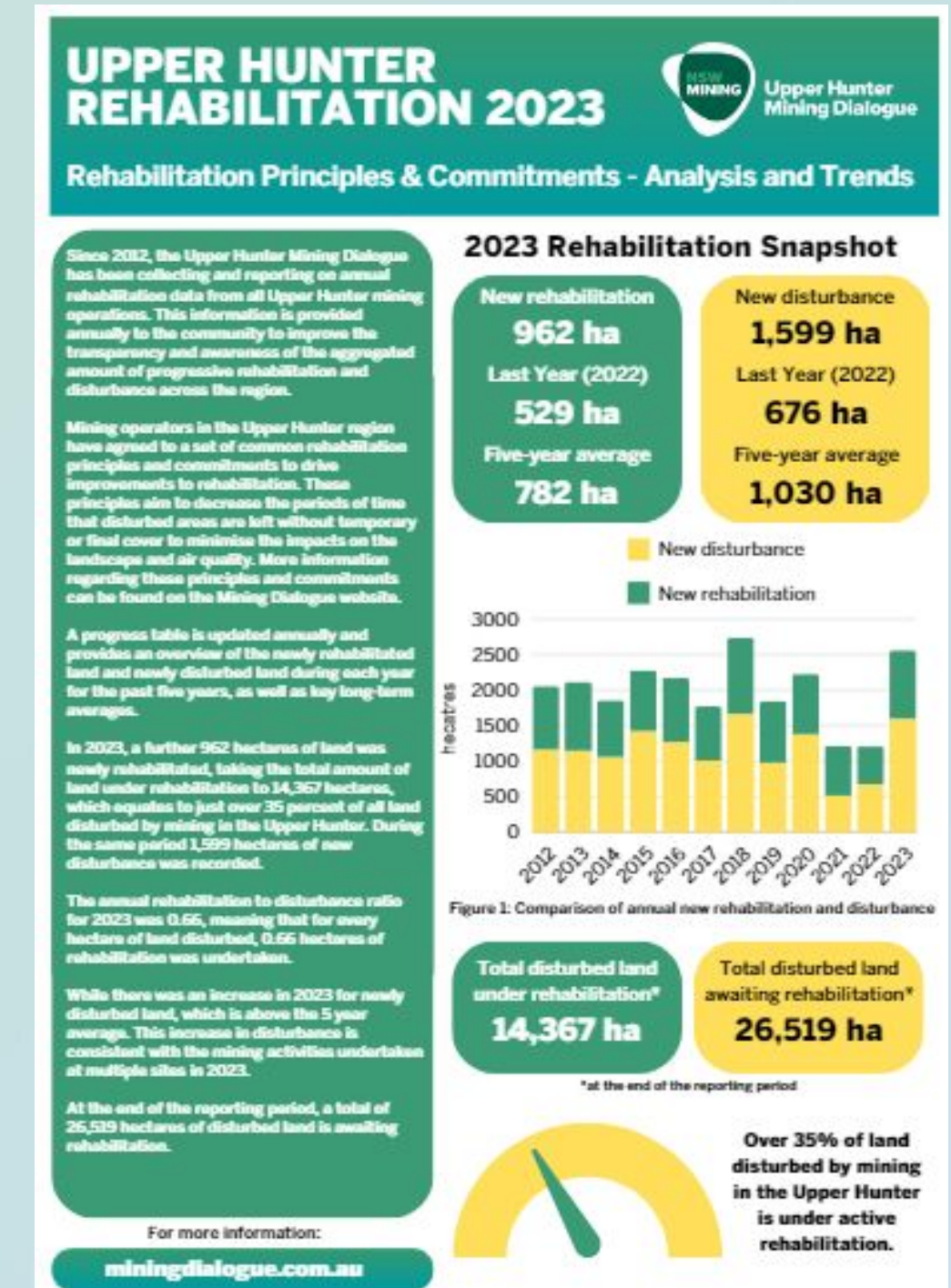
32%

of mine water was sourced
from onsite rainfall and
runoff in 2023

Update on Projects & Priorities

REHABILITATION PRINCIPLES

- The project commenced in 2012 and has been reported on annually.
- The aim of this project is to improve the transparency of information about the progressive rehabilitation across the Upper Hunter.
- The 2023 results are published on the Upper Hunter Mining Dialogue website: <https://miningdialogue.com.au/project/rehabilitation>
- In 2023, we changed the source of our data to align with information that mine sites are required to provide to the NSW Resources Regulator.
- The parameters that are reported remains the same as in previous years, however there may be some minor variances in the data because of differences in definitions.



Update on Projects & Priorities

REHABILITATION RESULTS 2023

962

HECTARES
of land was newly
rehabilitated in 2023

1,599

HECTARES
of land was newly
disturbed in 2023

0.66

is the disturbance to
rehabilitation ratio for
2023

14,367

HECTARES
of land was under
rehabilitation in 2023

26,519

HECTARES
of land was disturbed and
awaiting rehabilitation
at the end of 2023

35%

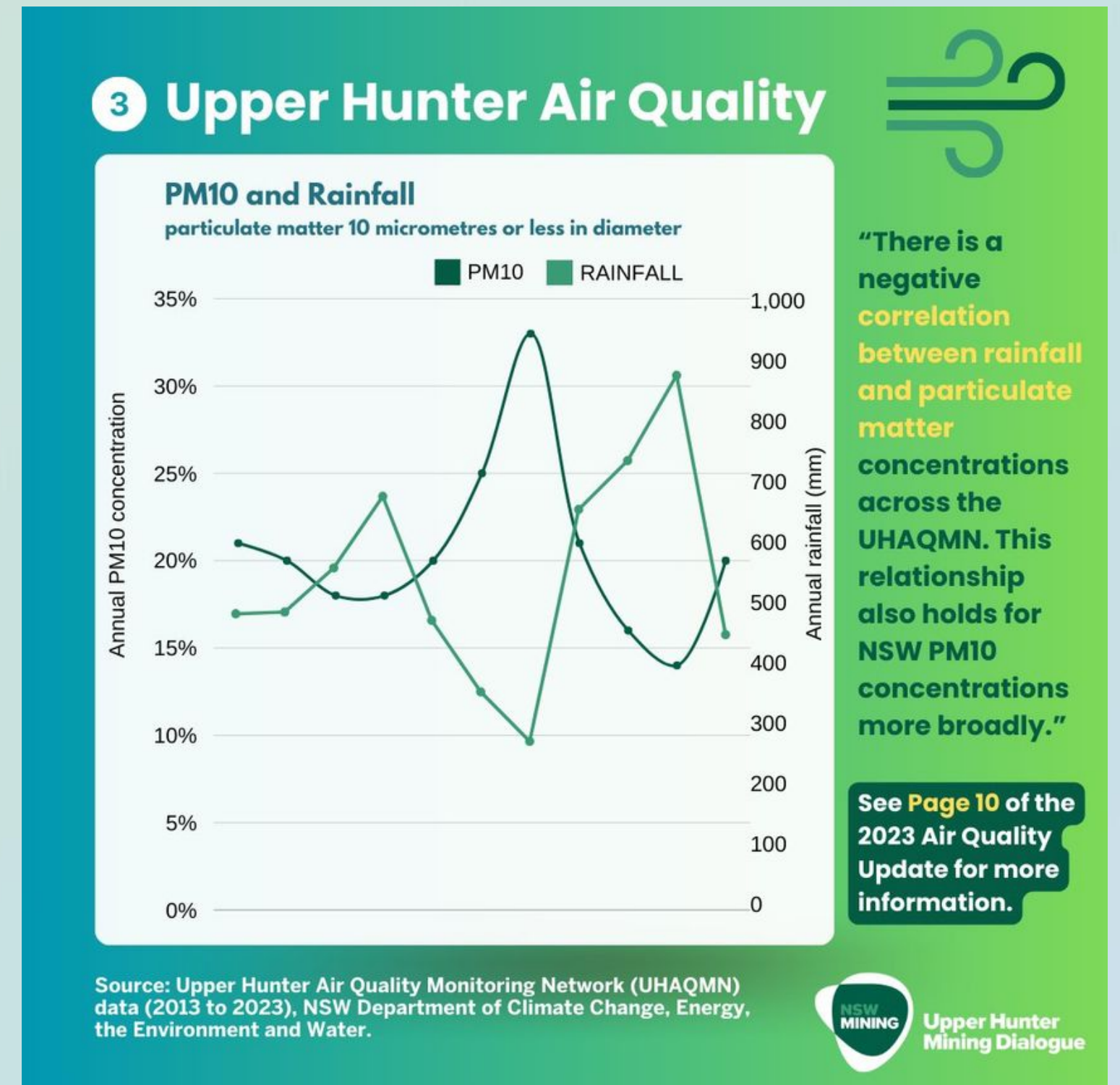
of disturbed land had
been rehabilitated by
the end of 2023



Update on Projects & Priorities

AIR QUALITY MONITORING NETWORK DATA ANALYSIS

- 2023 Update released in May, with findings reinforcing earlier reports.
- This project has received positive feedback and will continue to be undertaken annually.
- Russ Francis Zephyr Environmental will provide a 2024 Progress Update next.



Update on Projects & Priorities

KEEP ENGAGED



Like our Facebook page:

facebook.com/UPPERHUNTERMININGDIALOGUE



Follow us on LinkedIn:

au.linkedin.com/company/upper-hunter-mining-dialogue



Visit our Website:

miningdialogue.com.au



Join our Email List for Newsletter Updates

info@miningdialogue.com.au



Upper Hunter
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Air Quality 2024 Progress Update



Upper Hunter
Mining Dialogue

Russ Francis

SENIOR CONSULTANT

ZEPHYR ENVIRONMENTAL

2024 Progress Update Air Quality

Russ Francis

Senior Air Quality Consultant – Zephyr Environmental

Agenda

- Introduction to air quality
 - Meteorology and dispersion
 - Key pollutants and sources
 - Monitoring equipment and locations
- 2024 progress update
 - Particulate matter
 - Rainfall
 - Coal production

Introduction to air quality

Introduction to air quality

What is air quality?

It is a measure of the cleanliness of the surrounding air

The atmosphere is a mixture of gases and particles emitted from both anthropogenic (human-generated) and natural (non-human) sources

Meteorology and dispersion

The quality of the air we breathe is dependent on the **rate** that pollutants are emitted into the atmosphere and the ability of the atmosphere to **disperse** these pollutants.



The movement and **dispersion** of air pollutants is dependent on **wind, temperature, turbulence** and changes in these elements caused by local topography.

Particulates – PM₁₀ and PM_{2.5}



Particulate matter sources in the UH

- Coal mining
- Coal-fired power stations
- Domestic wood heating
- Agriculture
- Motor vehicles
- Non-road diesel equipment
- Planned burning and bushfires

High concentration scenarios

- Prolonged periods of hot and dry conditions (drought)
- Build up of pollutants from multiple sources
- Windy conditions

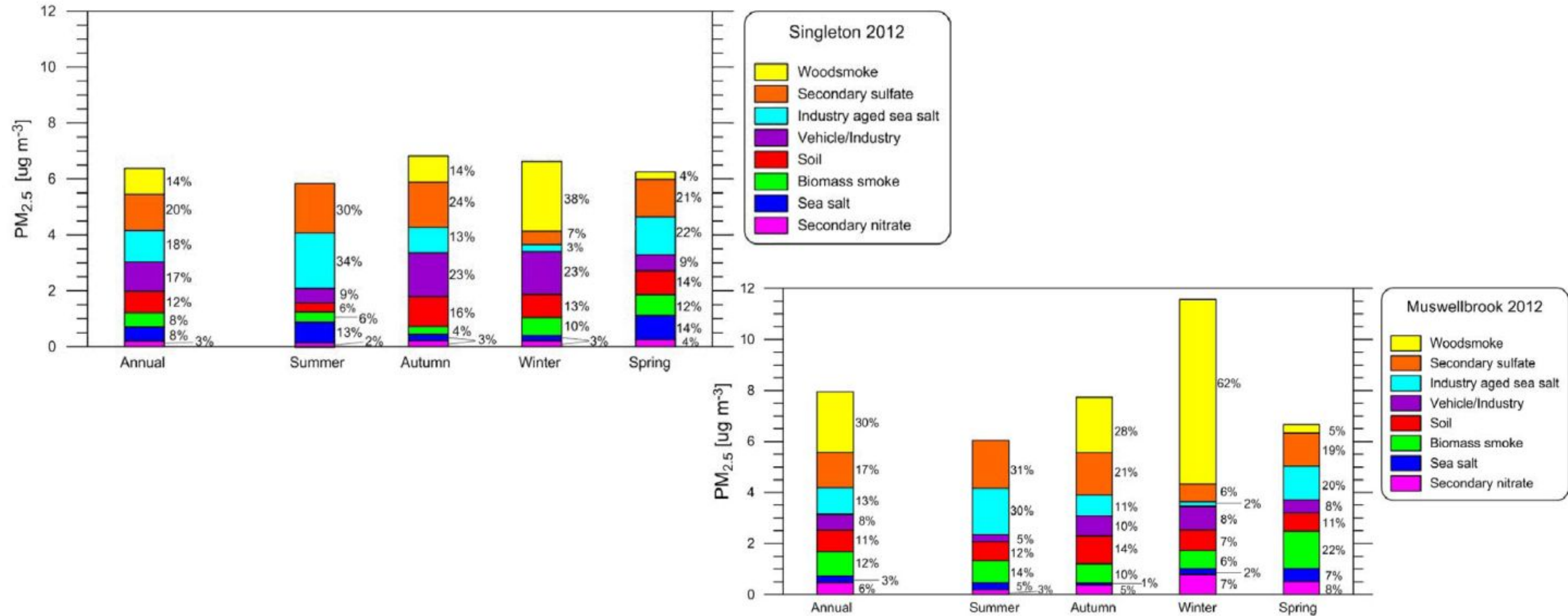


High concentration scenarios

- Cold mornings with very stable air
- Woodsmoke from domestic heating in population centres
- Temperature inversions trapping pollutants



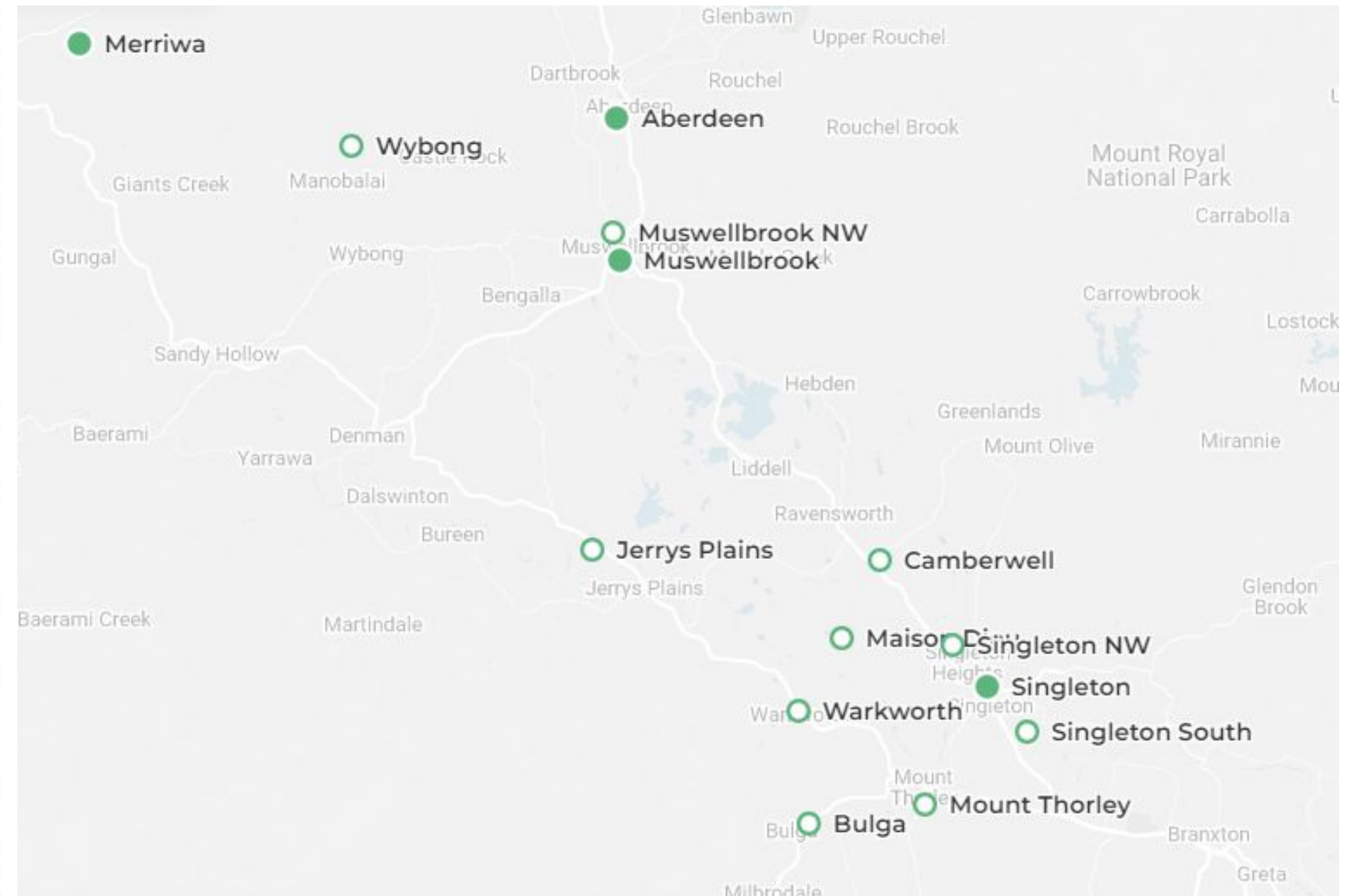
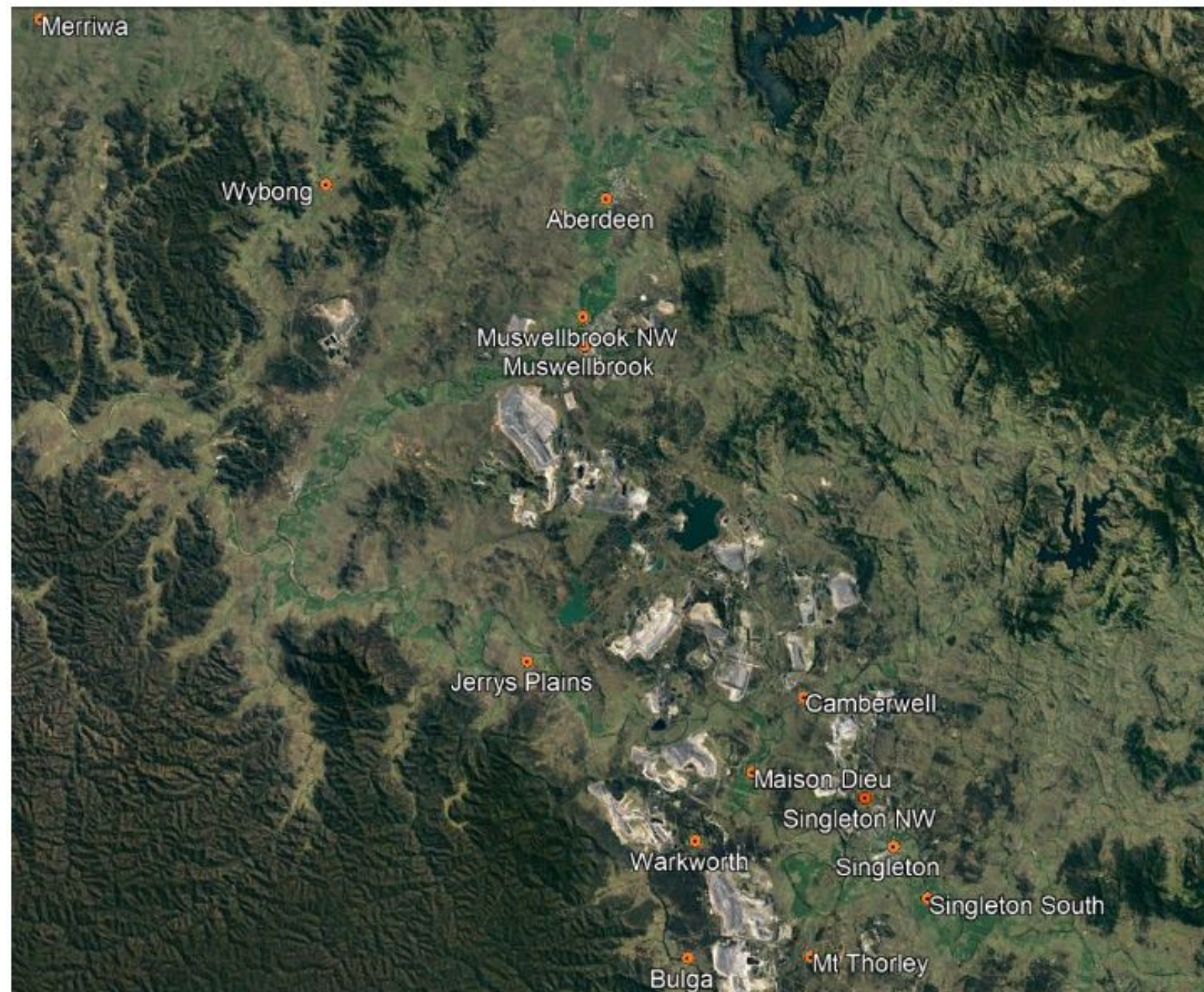
Particulate matter sources in the UH



Monitoring stations in the UH



Monitoring stations in the UH



Station groupings



Air Quality Update 2024

Annual and period average PM₁₀

| Region / Group | Year | | | | | | | | | | | | All years |
|------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|-----------|
| | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | |
| Central tablelands | 15.1 | 14.6 | 13.4 | 13.3 | 14.1 | 18.8 | 27.4 | 17.0 | 11.4 | 8.7 | 12.5 | 12.1 | 14.9 |
| Illawarra | 16.9 | 17.1 | 16.2 | 17.4 | 18.0 | 20.1 | 22.5 | 19.1 | 15.3 | 13.2 | 16.9 | 16.8 | 17.5 |
| Lower Hunter & Central Coast | 20.2 | 18.2 | 21.7 | 22.0 | 22.9 | 25.2 | 29.1 | 22.3 | 19.2 | 17.6 | 20.9 | 20.0 | 21.6 |
| North-west slopes | 16.6 | 15.8 | 14.1 | 15.3 | 15.3 | 20.1 | 33.7 | 16.8 | 12.7 | 10.6 | 15.1 | 12.8 | 16.6 |
| South-west slopes | 10.0 | 18.3 | 17.3 | 17.9 | 18.2 | 23.6 | 29.4 | 21.7 | 16.0 | 12.4 | 15.5 | 19.2 | 18.3 |
| Sydney east | 17.9 | 17.3 | 16.8 | 17.2 | 18.3 | 20.2 | 23.6 | 19.2 | 15.9 | 13.5 | 16.1 | 16.0 | 17.7 |
| Sydney north-west | 17.5 | 16.6 | 15.1 | 17.0 | 17.0 | 20.3 | 24.9 | 18.7 | 15.7 | 11.9 | 17.8 | 15.2 | 17.3 |
| Sydney south-west | 16.3 | 16.0 | 14.8 | 15.6 | 16.1 | 18.9 | 23.3 | 17.2 | 13.8 | 11.1 | 15.2 | 14.3 | 16.0 |
| UHAQMN - BG | 17.6 | 16.8 | 15.1 | 15.8 | 16.8 | 21.1 | 29.3 | 19.0 | 14.1 | 12.6 | 16.8 | 14.9 | 17.5 |
| UHAQMN - DG | 23.2 | 21.1 | 19.1 | 20.4 | 22.2 | 29.0 | 34.9 | 21.7 | 16.7 | 14.6 | 21.9 | 18.0 | 21.9 |
| UHAQMN - LP | 21.1 | 20.1 | 17.9 | 18.0 | 20.0 | 24.5 | 31.3 | 20.3 | 16.2 | 14.5 | 18.8 | 16.4 | 19.9 |
| UHAQMN - SC | 21.4 | 20.1 | 17.7 | 18.6 | 20.7 | 25.4 | 33.4 | 21.2 | 16.4 | 14.2 | 21.3 | 18.2 | 20.7 |

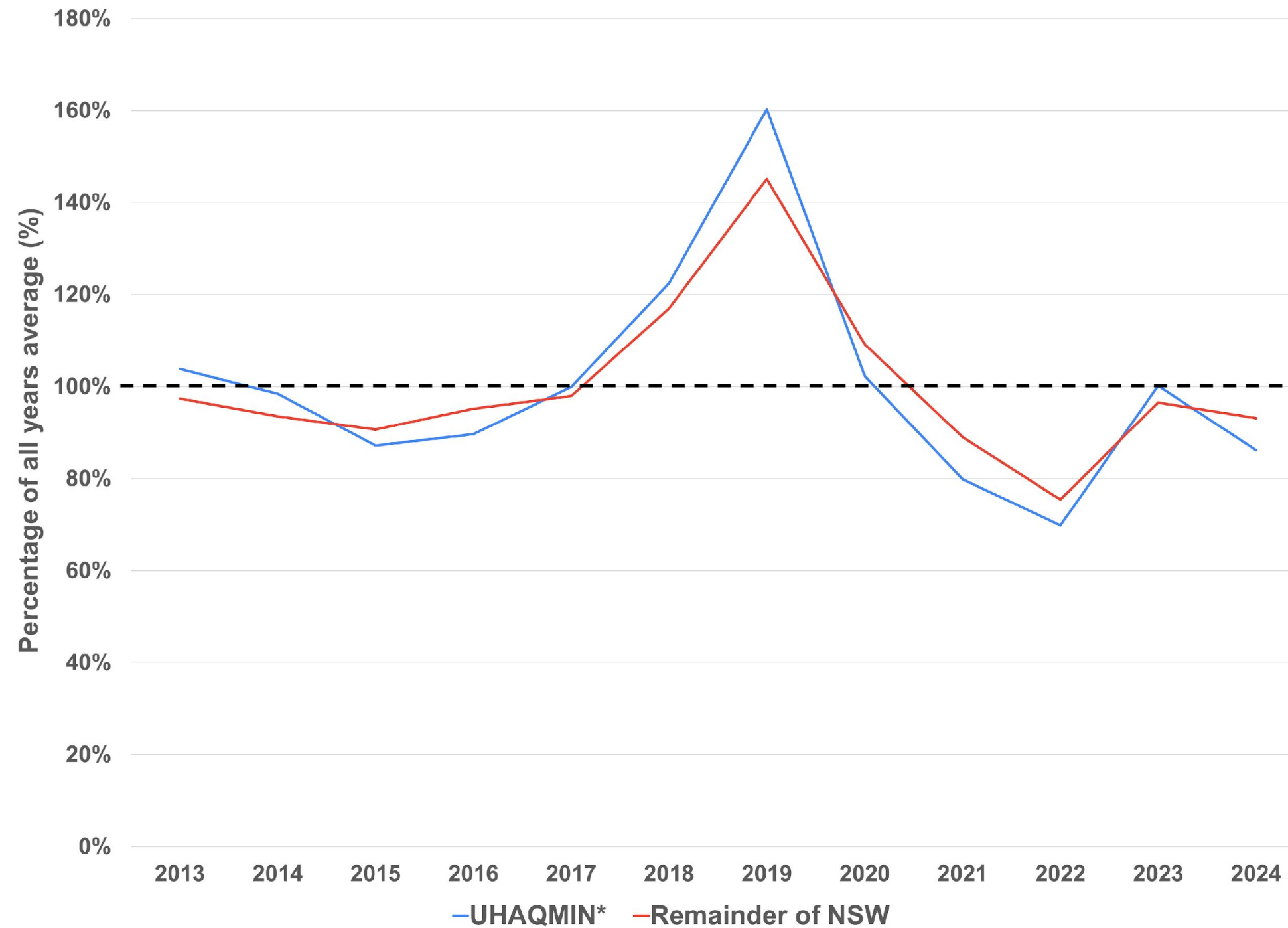
Note: UHAQMN – upper hunter air quality monitoring network, BG - background, DG – diagnostic, LP – larger populations, SC – smaller communities

Colour Coding by Percentile

| | | | | | | | | | | |
|-----------|-----|-----|-----|-----|--------------|-----|-----|-----|-----|-------------|
| 0% (min.) | 10% | 20% | 30% | 40% | 50% (median) | 60% | 70% | 80% | 90% | 100% (max.) |
|-----------|-----|-----|-----|-----|--------------|-----|-----|-----|-----|-------------|

Note: colour coding is applied to annual data by region (horizontally), whereas 'All years' colour coding is applied vertically, to allow comparison of data between regions.

PM₁₀ variability



Annual and period average PM_{2.5}

| Region / Group | Year | | | | | | | | | | | | All years |
|------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|-----------|
| | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | |
| Illawarra | 7.7 | 7.0 | 7.0 | 7.3 | 6.9 | 7.1 | 11.1 | 7.2 | 5.3 | 4.3 | 5.3 | 5.4 | 6.8 |
| Lower Hunter & Central Coast | 7.5 | 7.0 | 7.5 | 7.8 | 7.7 | 8.2 | 17.3 | 7.6 | 6.3 | 5.5 | 6.8 | 6.5 | 8.0 |
| South-west slopes | 7.9 | 7.5 | 7.6 | 7.4 | 8.1 | 8.4 | 11.3 | 10.9 | 6.3 | 5.3 | 6.6 | 8.0 | 7.9 |
| Sydney east | 8.2 | 8.4 | 8.3 | 8.1 | 8.4 | 8.2 | 16.5 | 8.0 | 6.9 | 5.2 | 7.1 | 6.6 | 8.3 |
| Sydney north-west | 8.3 | 6.7 | 8.0 | 8.3 | 7.4 | 8.3 | 20.5 | 8.2 | 6.9 | 5.1 | 7.1 | 6.9 | 8.5 |
| Sydney south-west | 8.0 | 7.5 | 7.4 | 7.6 | 7.8 | 8.7 | 18.9 | 7.9 | 7.0 | 5.0 | 6.8 | 6.1 | 8.2 |
| UHAQMN - LP | 8.7 | 8.8 | 8.2 | 8.2 | 8.8 | 8.8 | 18.0 | 8.9 | 6.8 | 5.7 | 7.1 | 7.3 | 8.8 |
| UHAQMN - SC | 8.2 | 7.8 | 7.2 | 7.5 | 7.4 | 8.4 | 17.3 | 7.5 | 5.7 | 4.8 | 6.1 | 5.7 | 7.8 |

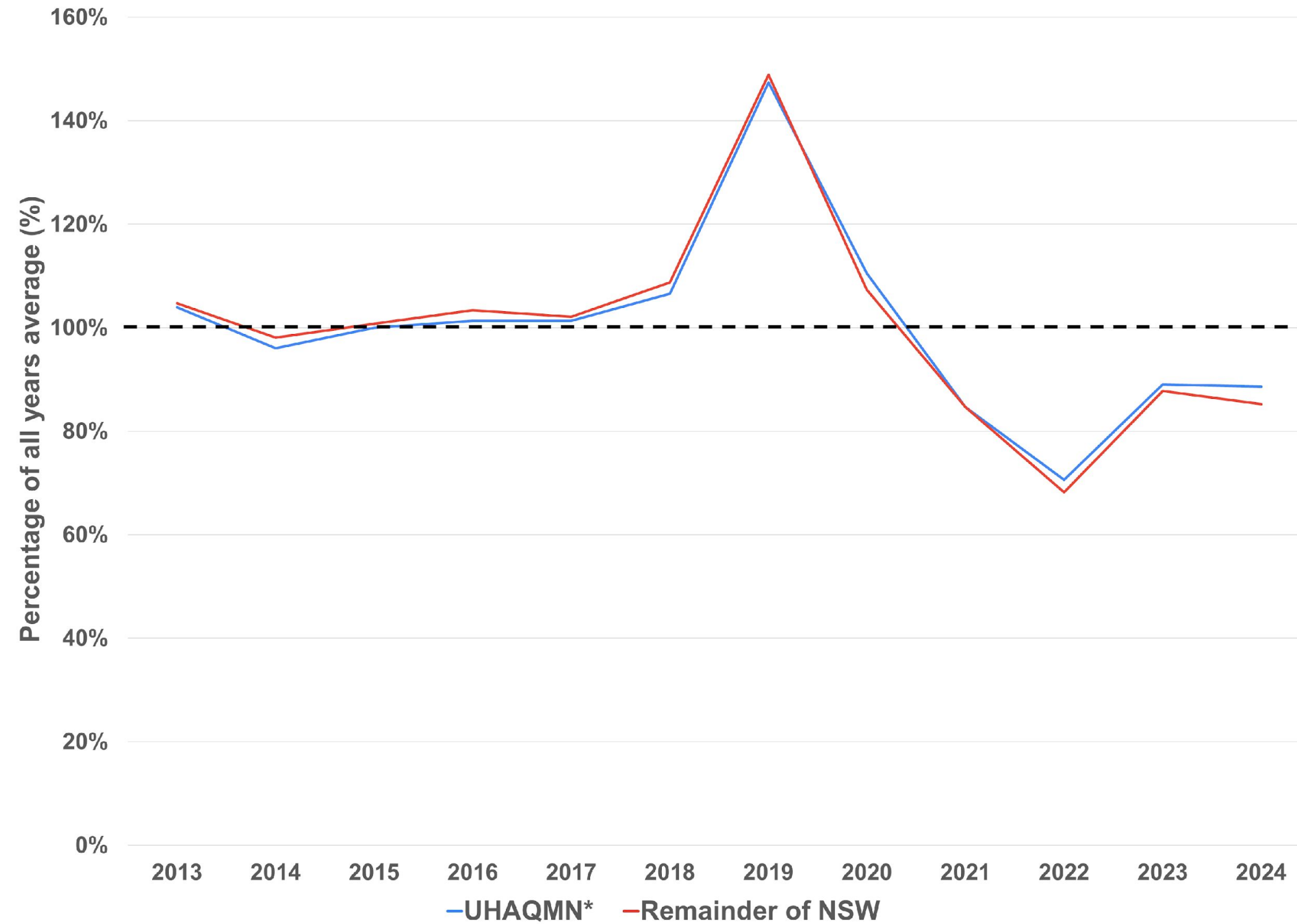
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Colour Coding by Percentile

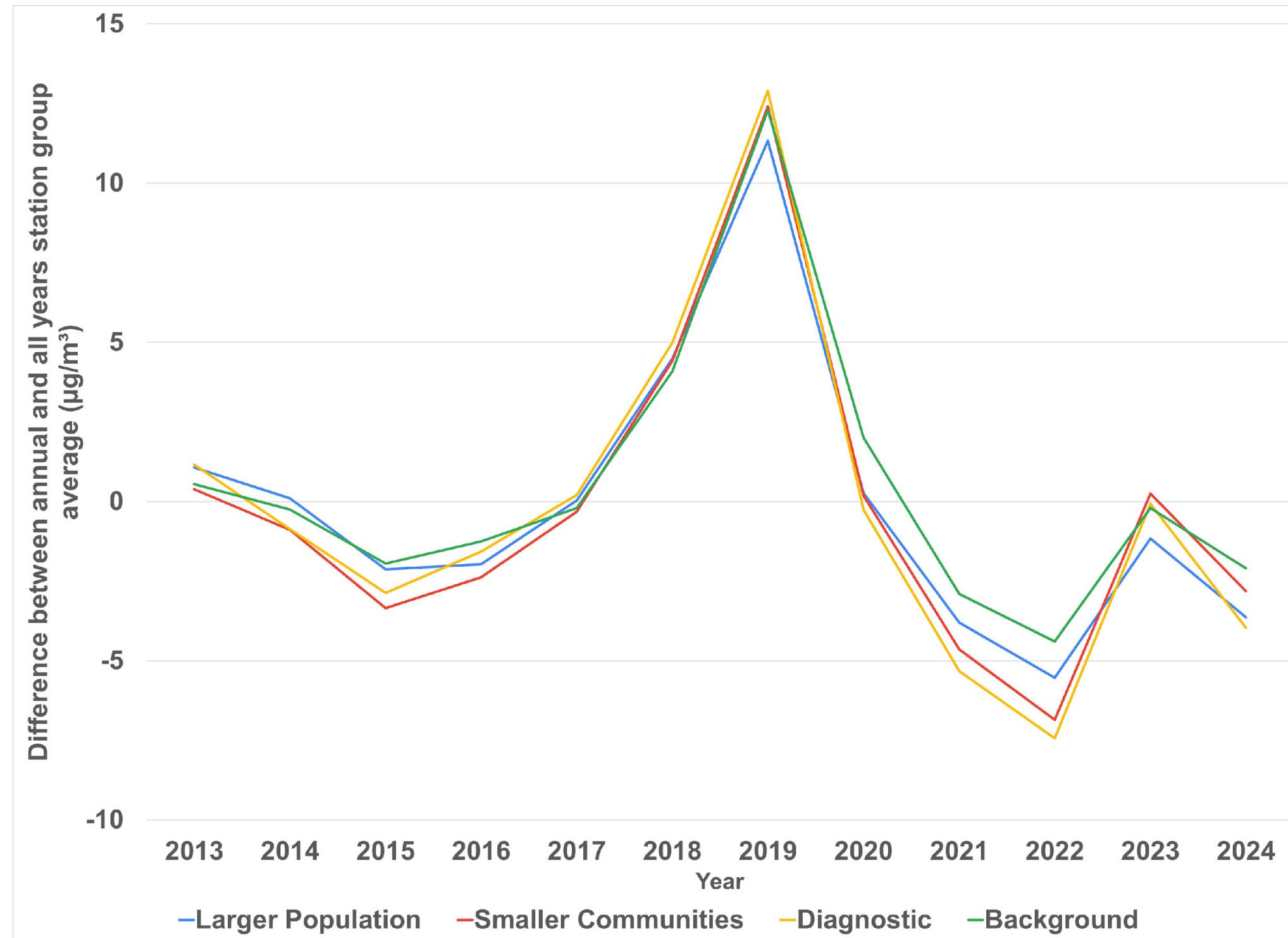
| | | | | | | | | | | |
|-----------|-----|-----|-----|-----|--------------|-----|-----|-----|-----|-------------|
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|-----------|-----|-----|-----|-----|--------------|-----|-----|-----|-----|-------------|

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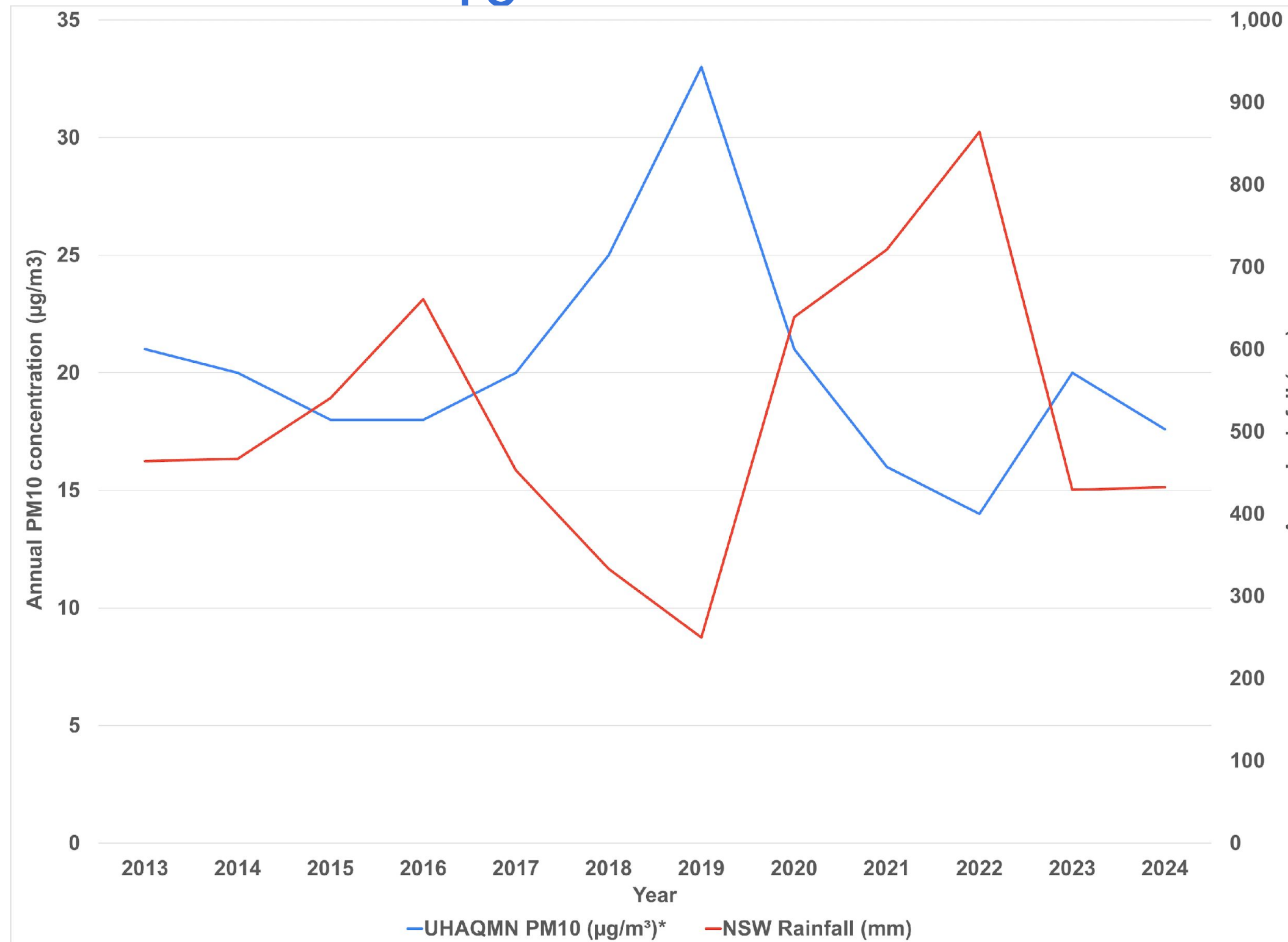
PM_{2.5} variability



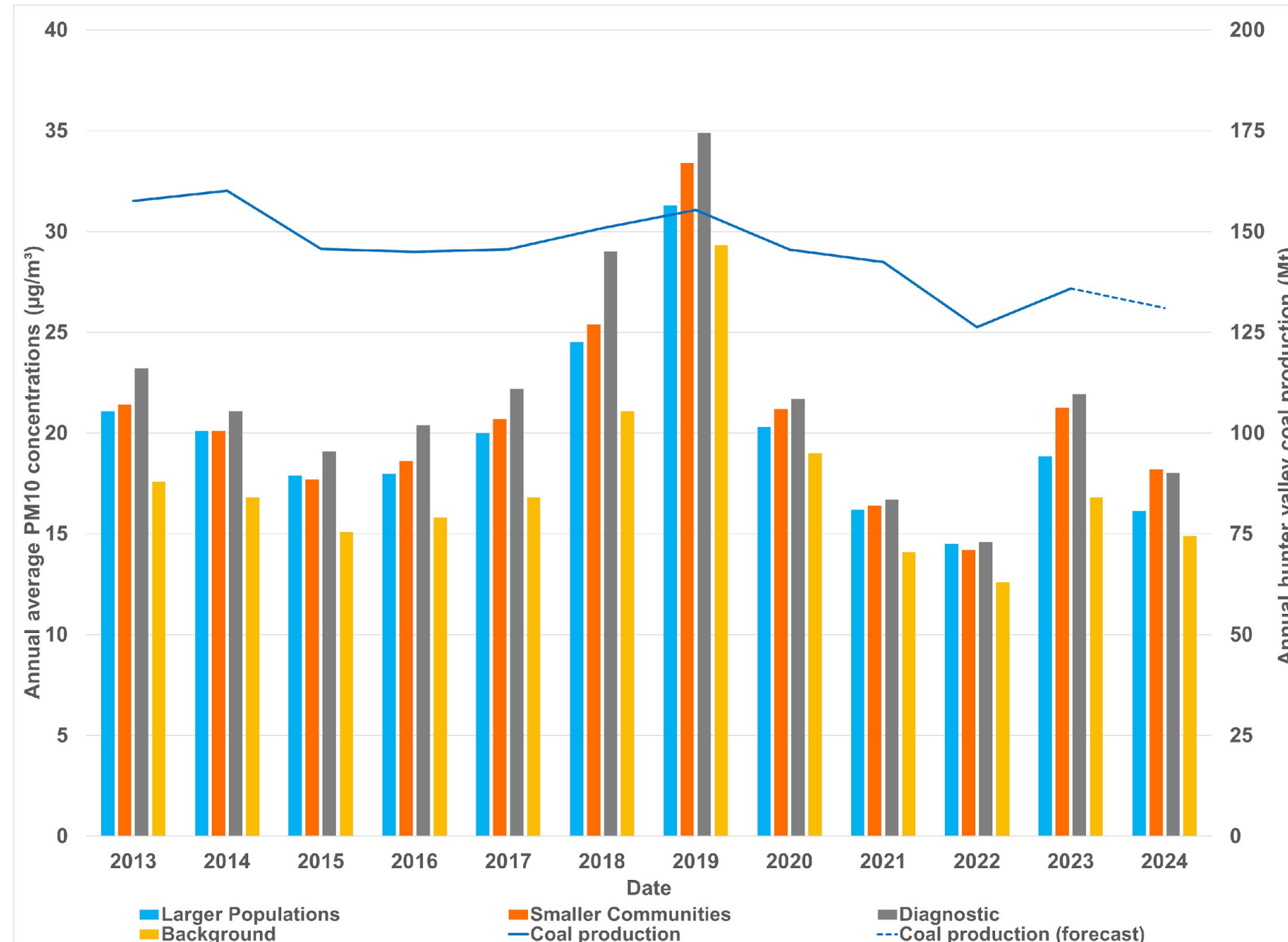
Comparison of trends



Rainfall vs PM₁₀ concentrations



Hunter Valley coal production vs UH annual average PM₁₀ concentrations



Summary

- Overall:
 - The 2024 results are consistent with 2023
 - The changes in PM_{10} concentrations within the Upper Hunter are generally consistent with changes in PM_{10} concentrations experienced across the rest of NSW
 - The changes PM_{10} concentrations across the Upper Hunter are associated with regional conditions and are indicative of a minimal change in contribution from local emission sources inclusive of mining

Summary

- For rainfall:
 - There continues to be a negative correlation between rainfall and particulate matter concentrations across the Upper Hunter
- For coal production
 - The annual fluctuations in PM_{10} are anticipated to be related to meteorological conditions (ambient temperatures and the amount of rainfall) rather than changing coal production

Russ Francis
Zephyr Environmental
Senior Consultant



Upper Hunter Economic Outlook



Upper Hunter
Mining Dialogue

Robin Griffin

VICE PRESIDENT, METALS & MINING MARKETS

WOOD MACKENZIE

The future of coal

A Hunter Valley Perspective

Robin Griffin, Vice President Metals and Mining

**Please note that this presentation included
proprietary information. If you would like to discuss
access to this presentation, please contact
info@miningdialogue.com.au**



NSW Government Update



Upper Hunter
Mining Dialogue

The Hon. Emily Suvaal, MLC

PARLIAMENT OF NSW

MEMBER OF THE LEGISLATIVE COUNCIL

Climate Change Policy & Action Plan Impacts for Hunter



Upper Hunter
Mining Dialogue

Shagofta Ali

DIRECTOR OF STRATEGY & POLICY, CLIMATE & ENVIRONMENT PROTECTION
NSW ENVIRONMENT PROTECTION AUTHORITY



SHAGOFTA ALI
DIRECTOR POLICY &
STRATEGY



UPPER HUNTER MINING DIALOGUE
29 OCTOBER 2024

NSW EPA Climate Change Policy and Action Plan – Impacts for the Hunter

Open Cut Coal Mine
Credit: Rod Grant



Acknowledgement of Country



The NSW Environment Protection Authority acknowledges the Traditional Custodians of the land on which we live and work, honours the ancestors and the Elders both past and present and extends that respect to all Aboriginal people.

We recognise Aboriginal peoples' spiritual and cultural connection and inherent right to protect the land, waters, skies and natural resources of NSW. This connection goes deep and has since the Dreaming.

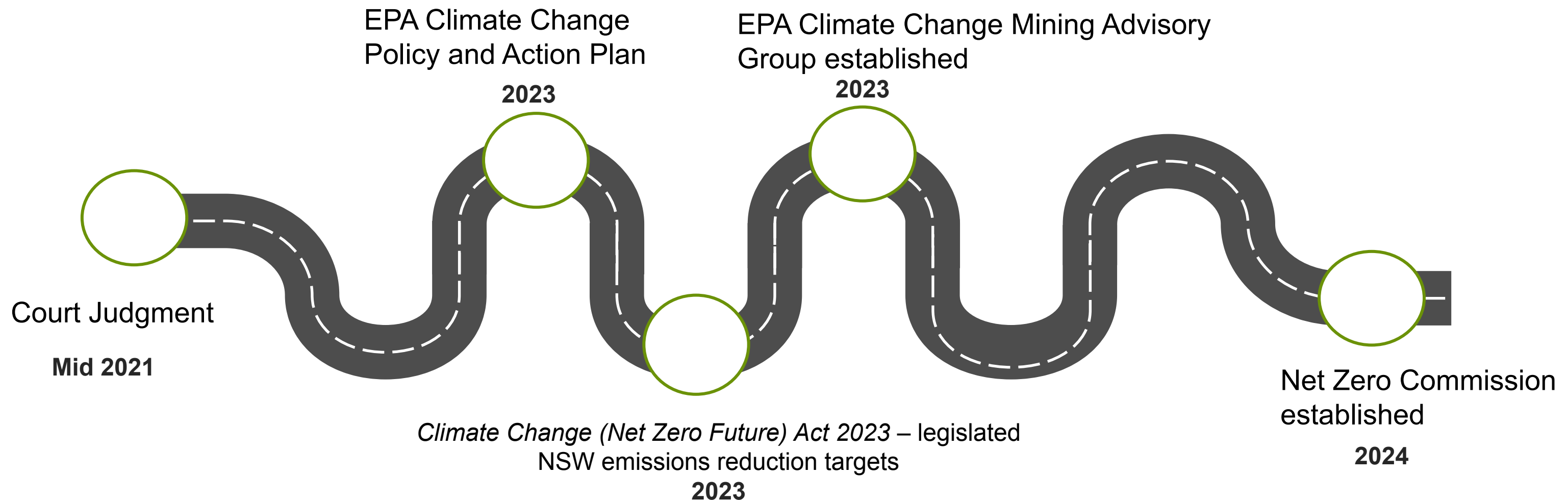
We also acknowledge our Aboriginal and Torres Strait Islander employees who are an integral part of our diverse workforce, and recognise the knowledge and wisdom embedded forever in Aboriginal and Torres Strait Islander custodianship of Country and culture.



EPA's role in climate change



- Statutory objectives, including taking action in relation to climate change
- Protect the environment and human health from the threat of climate change
- Support NSW achieve legislated emission reduction targets
- Active government partner on climate change
- Support industry to decarbonise and build greater preparedness and resilience to climate change risks



The EPA's climate change policy and action plan



Inform & plan

Working with industry, government and experts to improve the evidence base, decision making and regulatory response to climate change



Mitigate

Establishing cost-effective approaches to support further emissions reductions in key industry sectors, or part sectors



Adapt

Developing and implementing programs and regulatory approaches to ensure EPA and its regulated industries are more prepared for, and resilient to climate change impacts

What has happened so far?

Inform and plan

- Climate change advisory groups
- Licensee survey

Mitigate

- Climate Change Assessment Requirements and Large Emitters Guide
- Partnerships

What next?

- Best practice guideline for coal mining
- Licensing requirements

<https://www.epa.nsw.gov.au/your-environment/climate-change>

Climate Change Advisory Groups



Mining Climate Change Advisory Group

- Industry
- Scientific
- Environment
- Aboriginal perspectives

Established

Agriculture Climate Change Advisory Group

- Industry
- Scientific
- Environment
- Aboriginal perspectives

Established

Community and Environment Climate Change Advisory Group

- Community
- Scientific
- Environment
- Aboriginal perspectives

Being established

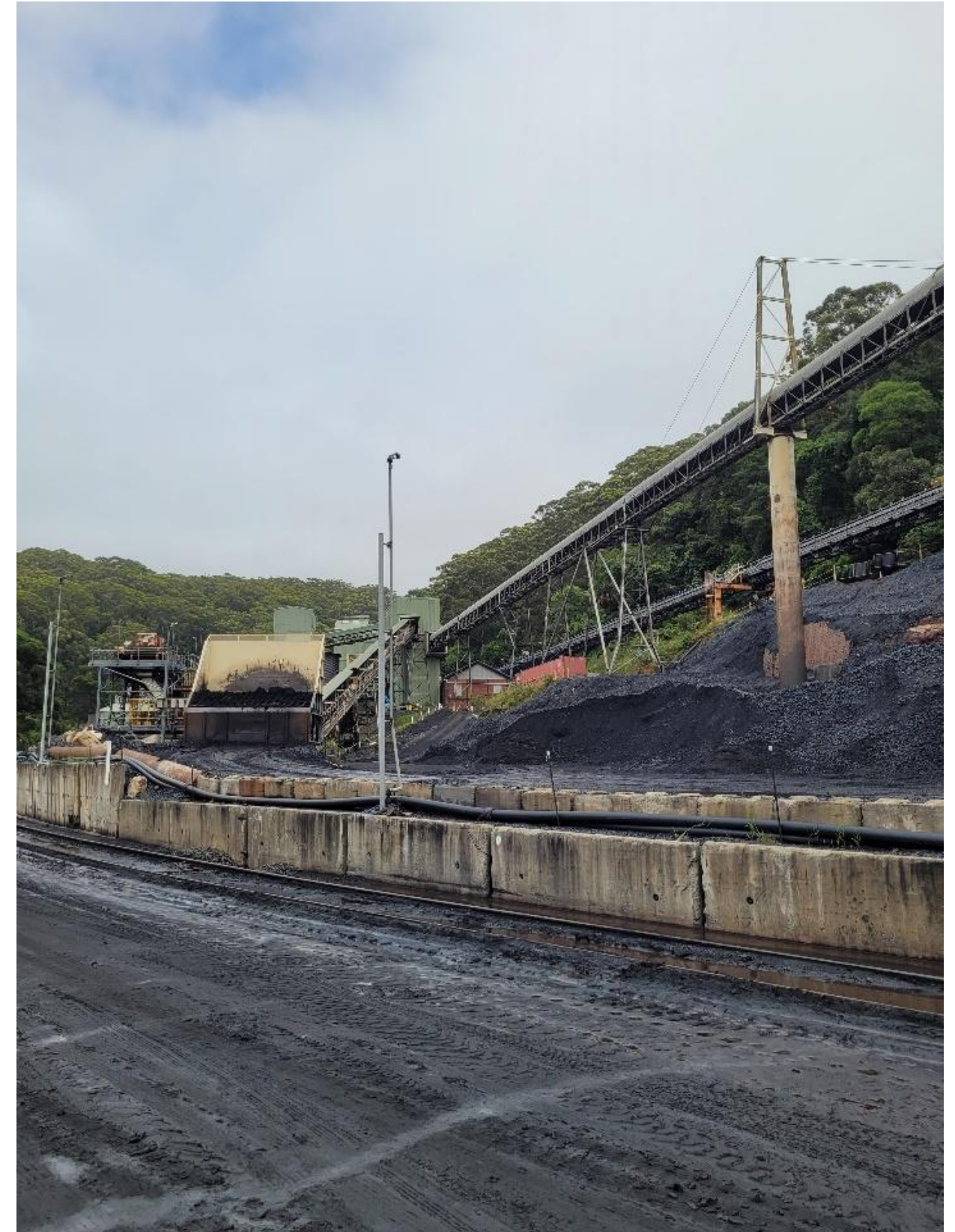
Statutory groups. Do not replace the need for public consultation.

<https://www.epa.nsw.gov.au/your-environment/climate-change>

NSW coal mining GHG emissions (scope 1)

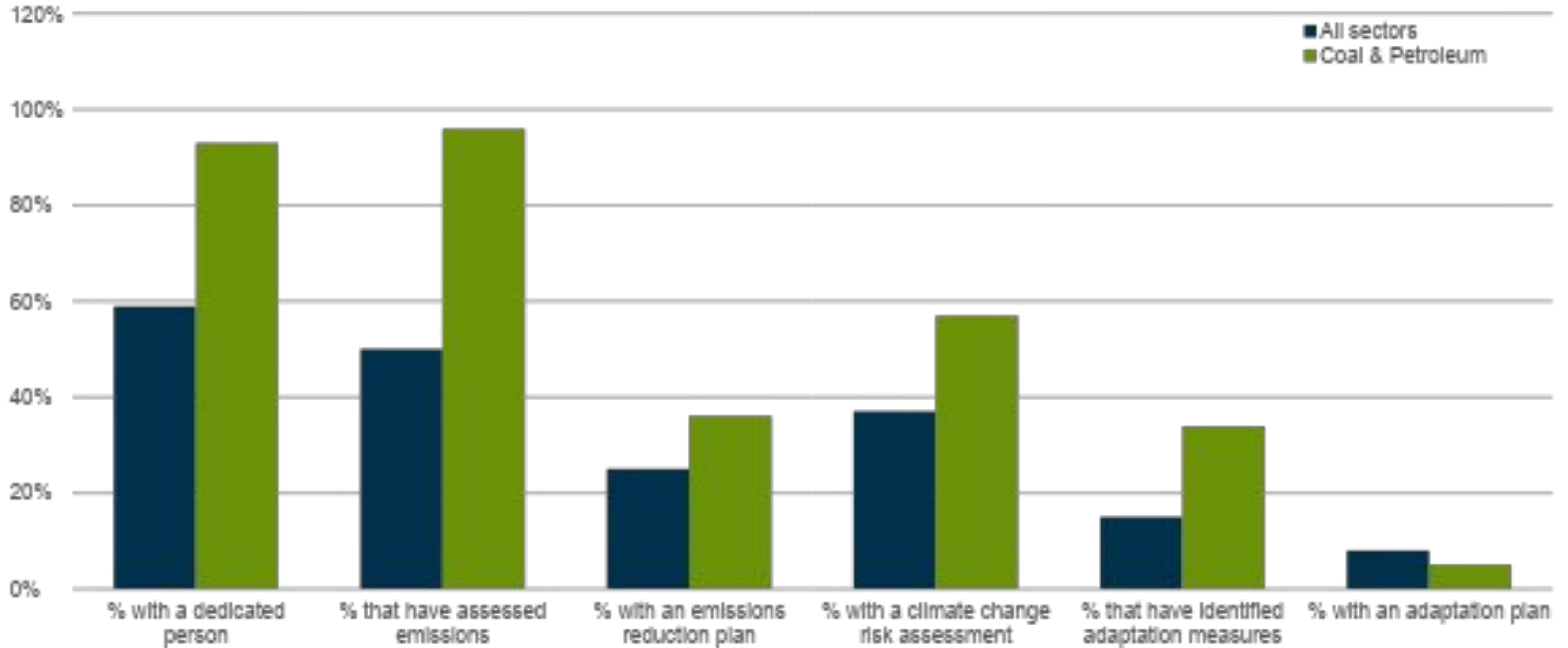


- Approx. 12% of all NSW emissions
- Approx. 17% of emissions from all EPA licensees



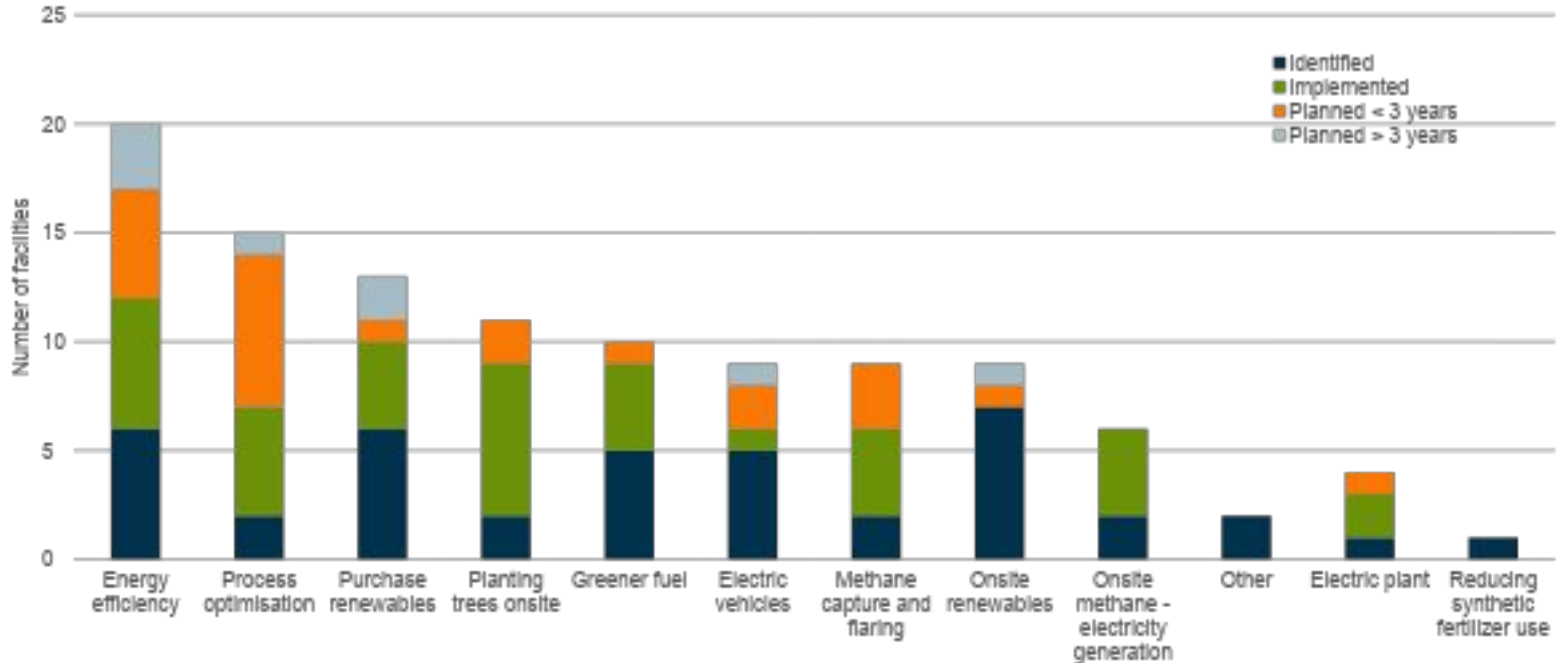
Licensee survey - High level results

'Coal mining' & 'Petroleum exploration and production'



Emissions reduction opportunities

'Coal mining' & 'Petroleum exploration and production'



Where support is needed

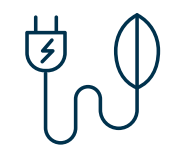
'Coal mining' & 'Petroleum exploration and production'



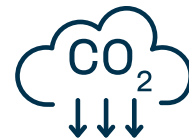
Top 5 responses



Additional support to identify adaptation measures for the sector (38 licensees)



Additional support to identify emissions reduction measures for the sector (36 licensees)



Additional support to decarbonise (32 licensees)



More detailed guidance directly related to the mining sector (32 licensees)



Case studies of leading or best practice (28 licensees)

Confirms the need to develop industry-sector specific regulatory approaches, guidance and support.

Draft Climate Change Assessment Requirements for large emitters and supporting Guide



Objective:

- Ensure climate change considerations are in projects with large GHG emissions
- Provide guidance on what information should be submitted
- Ensure EPA, government agencies and consent authorities have the information to inform decisions
- Encourage emissions reductions to support NSW's legislated emissions reduction targets

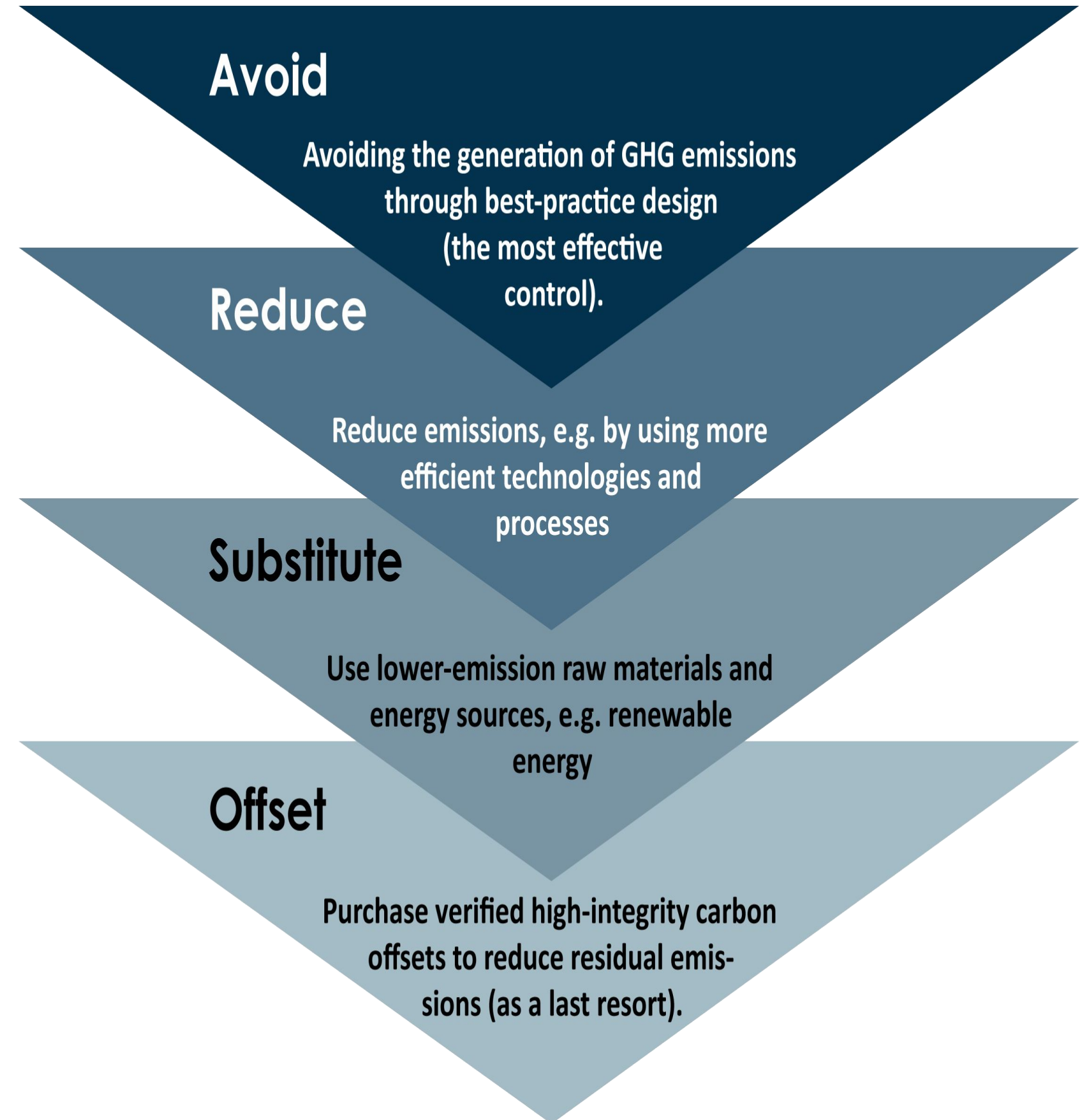
Overview of CCARs and draft Guide



The draft Guide requires:

- Information on greenhouse gas emissions throughout the life of the project
- Greenhouse gas mitigation plan with goals
- Emissions management hierarchy
- Criteria for any proposed offsets

On public consultation in mid 2024.
260 submissions under review.



Best Practice Guide for greenhouse gas mitigation at NSW coal mines

- Under development
- Evidence base and expectations for avoiding and reducing greenhouse gas emissions at NSW coal mines
- Measures for avoiding and reducing emissions at mine sites, including:
 - the minimum performance the EPA expects
 - what best practice entails
 - existing and emerging measures (i.e. what is readily available now and what is expected in the future –e.g. post-2030)



Literature Review &
Industry scan – Q4 2024

Independent
Peer Review – Q4
2024

Consultation with
advisory groups
– Q1 2025

Public
consultation
– early 2025

Partnership case studies (not mining specific)



Purpose: to support pilot projects that could inform climate change programs

| | |
|---------------------------|--|
| Civic Futures Lab | The “Circularity for Climate” challenge. An intensive program to support businesses solve circular problems in their business and reduce emissions. |
| Hunter Joint Organisation | Co-design a program to help councils understand and reduce landfill gas. |
| Dairy Up | Investigating emissions reduction pathways for dairy farms |

Mount Kaputar National Park
Credit: Simone Cottrell, DCCEEW



OUR MISSION

Protect Tomorrow Together



Update from Mt. Arthur Coal's Pathway to 2030



Upper Hunter
Mining Dialogue

Liz Watts

VICE PRESIDENT - NSW ENERGY COAL
BHP



BHP

Future Positive - Preparing for closure of Mt Arthur Coal

Liz Watts

Vice President NSW Energy Coal

People, Planet,
Prosperity. To deliver
a positive legacy from
BHP mining in the
Hunter Valley.
That's our vision.

Acknowledgement of Country


BCC
**BAYSWATER
COLLIERY**

**BAY
4**



Today's focus

➤ **Operations update**

➤ **Rehabilitation and land management**

➤ **Community survey insights and next steps**



Operations update

8%

increase in safe
production

\$287 million

to state and federal
governments for
royalties and taxes

\$6 million

to local council for
land rates and
community funding

\$730 thousand

to local community for
social investment,
sponsorships and
donations

The Modification to
extend operations from
2026-2030 is currently
under assessment –
expecting an outcome in
around March 2025.



➤ Together
we Deliver

Rehabilitation


➤ It's happening
now

BHP


Alternate mine land-use



Agriculture



Recreation



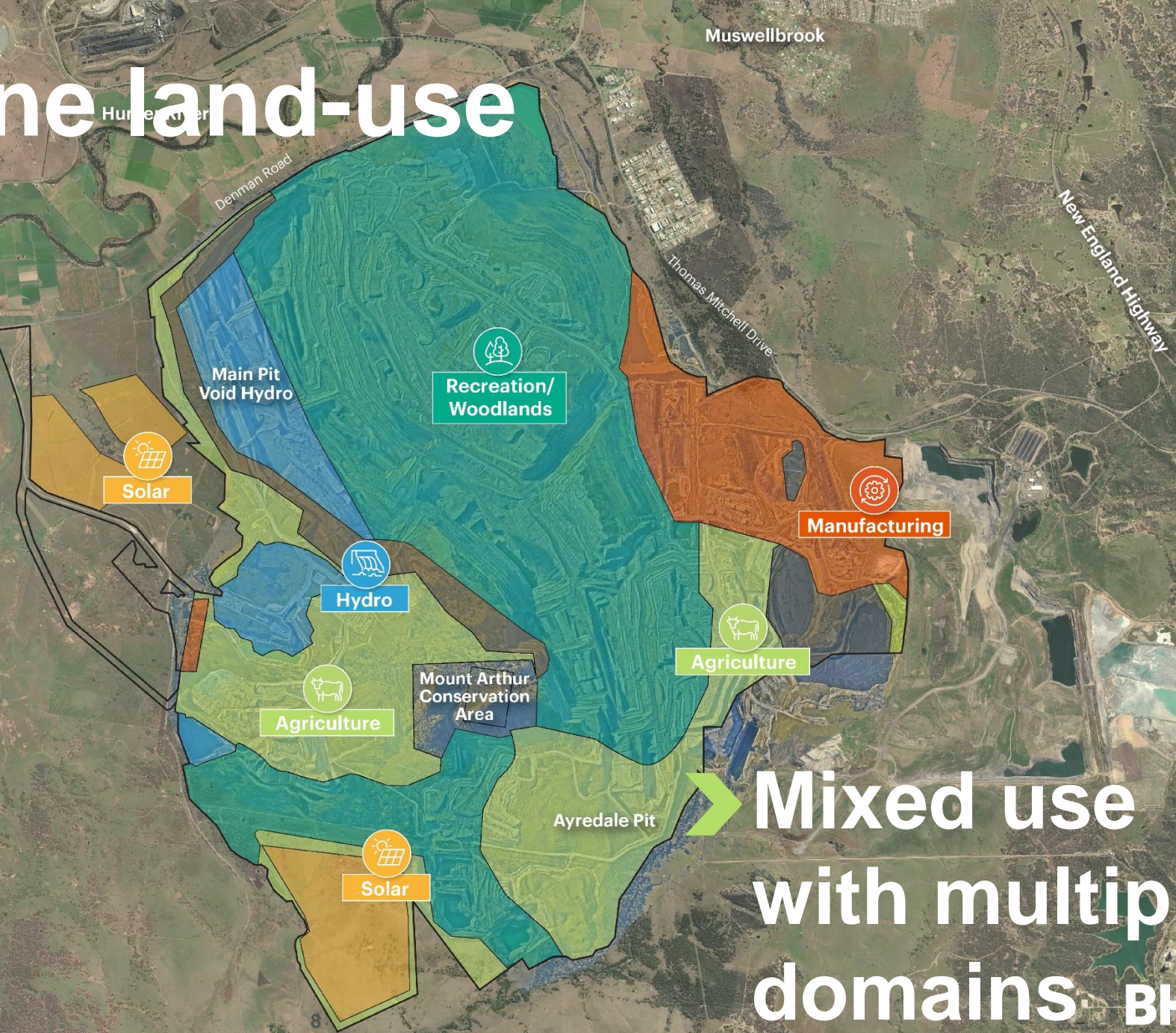
Solar



Manufacturing



Hydro



Mixed use
with multiple
domains BHP

2030 alternate land use options - Pumped Hydro

How it works

- Stored water runs downhill to spin a turbine to generate electricity, usually through the night when other renewable energy sources are not available (eg, solar and wind).
- During the day, when there is plenty of energy in the system (due to wind and solar being available), water is pumped back up to the upper reservoir.
- This means that there is energy available 24 hours per day to run things like your fridge during the night.



Investigating Pumped Hydro at Mt Arthur Coal

- Renewable energy.
- Safe and reliable energy storage.
- Used all around the world, including here in NSW already.
- Could power up to 500,000 homes per day.

Community listening insights

Economic
uncertainty

Environmental
and visual
concerns



Workforce support

➤ Education+

Financial support and study leave for any Nationally Recognised Qualification.

Supporting Mt Arthur Coal employees to continue their career post 2030.

Q&A



Upper Hunter
Mining Dialogue

Shagofta Ali

NSW ENVIRONMENT
PROTECTION AUTHORITY

**The Hon.
Emily Suvaal, MLC**

NEW SOUTH WALES
PARLIAMENT

Di Sneddon

COMMUNITY
REPRESENTATIVE

Planning for Transition Insights from other Regional Examples



Upper Hunter
Mining Dialogue

Prof. Roberta Ryan

EXECUTIVE DIRECTOR

INSTITUTE FOR REGIONAL FUTURES

Planning for Change and Transition Regional Insights

Professor Roberta Ryan



THE UNIVERSITY OF
NEWCASTLE
AUSTRALIA

**INSTITUTE
FOR
REGIONAL
FUTURES**



**Upper Hunter
Mining Dialogue**

Professor Roberta Ryan

- Inaugural Chair of Local and Regional Governance, University of Newcastle
- Areas of research of expertise:
 - regional development
 - levers required for sustainable positive growth
 - economic, spatial and social development
 - strategic land use planning.
- Leader in the design and delivery of innovative stakeholder engagement, particularly between governments and the community on contentious and sensitive matters.
- Trusted advisor to federal, state and local governments and major public and private enterprises on their development and delivery of strategy, policy and reform.



Institute for Regional Futures

- Established September 2022
- Flagship institute alongside NIER and HMRI
- Independent and fee-for-service research services:
 - *Social*
 - *Economic*
 - *Spatial / strategic place planning*
- Incorporates the Hunter Research Foundation Centre



Resource Productivity & Efficiency
Energy Technologies & Utilisation
Advanced Materials for Industrial Innovation
Land, Water, Social Impacts & Sustainability



Priority Populations
Healthy Life Course
Healthy Future



Optimising organisations
Planning inspired by fresh thinking
Fostering real connections

**INSTITUTE FOR
REGIONAL FUTURES**

Muuya Banggi – Recovering Language
Umuliko Indigenous Higher Education
Purai – Global Indigenous Diaspora Research

WOLL **OTUKA**

Aboriginal & Torres Strait Islander Health
Active and Healthy Aging
Complex and Chronic Illness
Mental Health and Wellbeing



Afternoon Session

The session aims to identify and prioritise issues raised by the Upper Hunter Mining Dialogue, focusing on those that can be addressed by the mining sector through targeted projects, programs, or advocacy efforts over the next 1-2 years.

The overarching goal is to implement strategic interventions that drive meaningful change and improvement in the region.

Workshop approach

- Overview of most recent update to Hunter Economic Insights
- National and international experience of impacts of economic diversification and change
- Summary of 2022 Upper Hunter Mining Dialogue Community Forum discussions
- Group feedback and prioritisation on issues affecting the Upper Hunter
- Facilitated small group work to flesh out barriers/enablers on priority impacts



Hunter Economic Insights

- The **Hunter Insight Dashboard** provides up-to-date socio-economic data on the Hunter region.
- It covers areas such as employment, unemployment, industry sector growth, housing prices, and rental trends, drawing from regional and national sources.
- The most recent quarterly update (October) highlights key insights, including employment growth, a low unemployment rate, mixed trends in housing prices.



Hunter Conditions

- Hunter labour market (employment): Employment in the Hunter region has declined in recent months, reversing the increase in early 2024. 11,800 full-time jobs were shed in the last quarter.
- Growth in employment in health services and construction, with declines in mining, manufacturing, public administration, administrative services and education.
- Unemployment rate in the Hunter is still low, with a rate of 3.7% in August 2024. The Hunter unemployment rate is below NSW averages.
- Hunter housing market: Prices in the Hunter are mixed, with price rises of 1.3% on a median basis for sales in the Greater Newcastle area in the first quarter of 2024. Rental prices are continuing their upward trajectory for most Hunter LGAs.

Gross domestic product



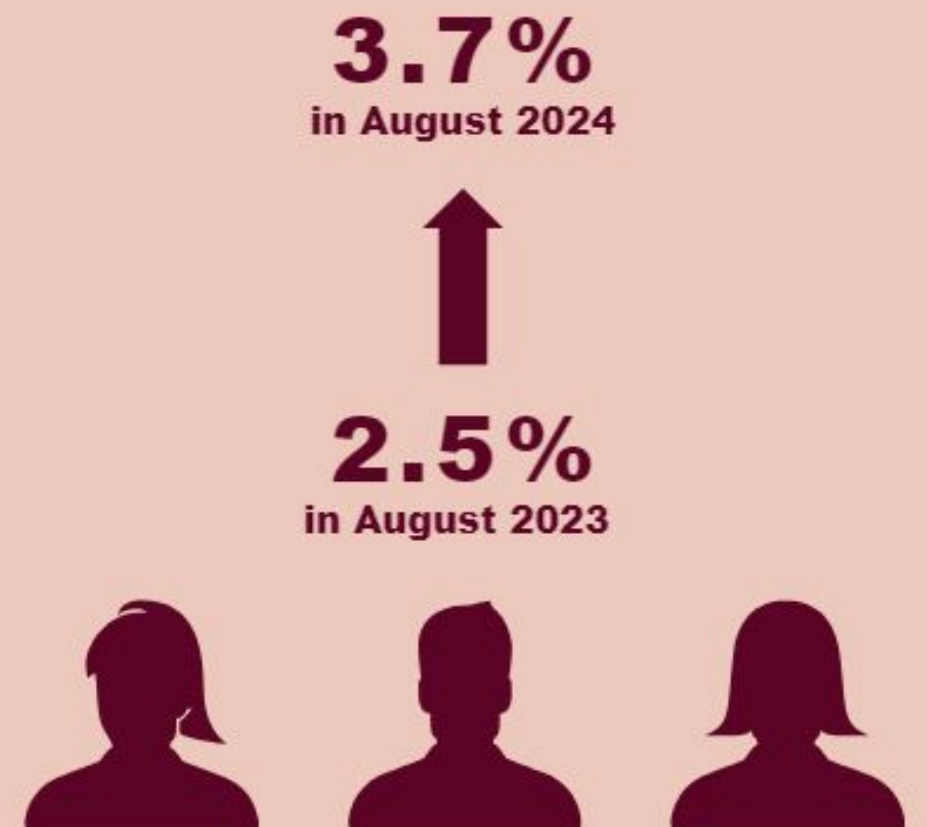
June quarter, chain volume measures.

Housing



1st quarter 2024 for sales, 2nd quarter 2024 for rents; Greater Newcastle region.

Hunter Unemployment

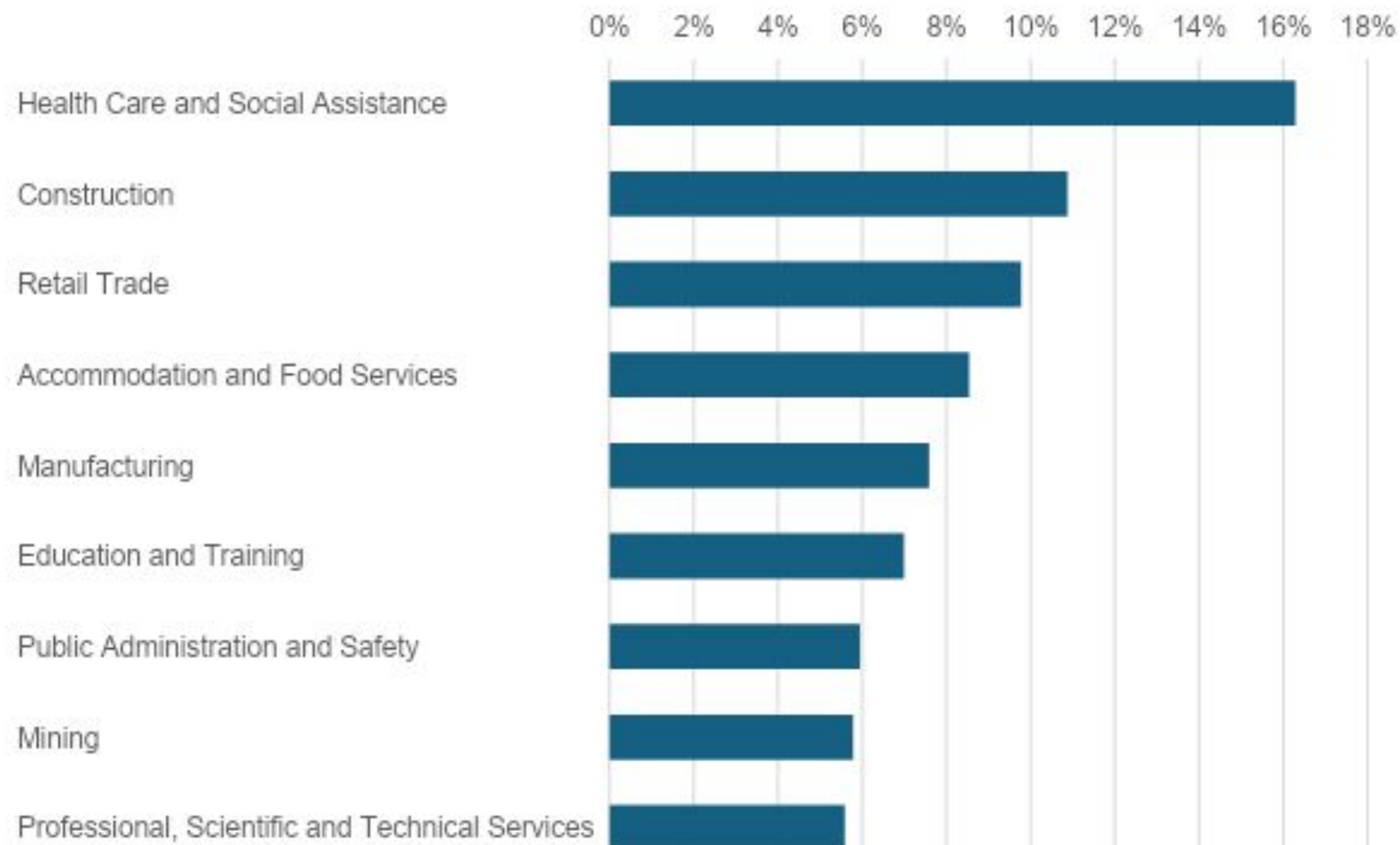


11,800
full-time jobs
shed in quarter
to August 2024

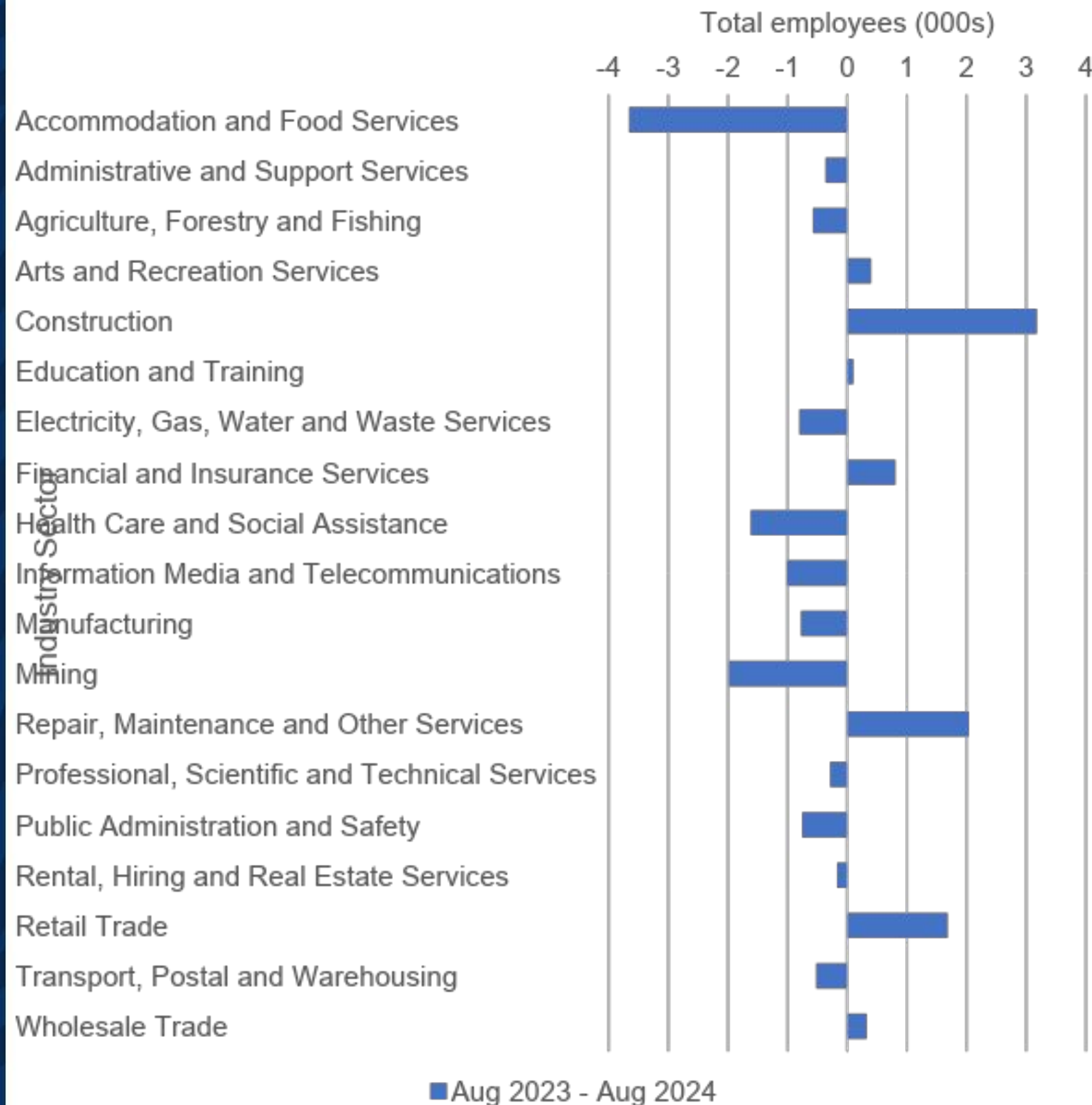


Employment Hunter Valley (excludes Newcastle and Lake Macquarie)

Industry Sector Employment over 5%
(Hunter Valley - August 2024)



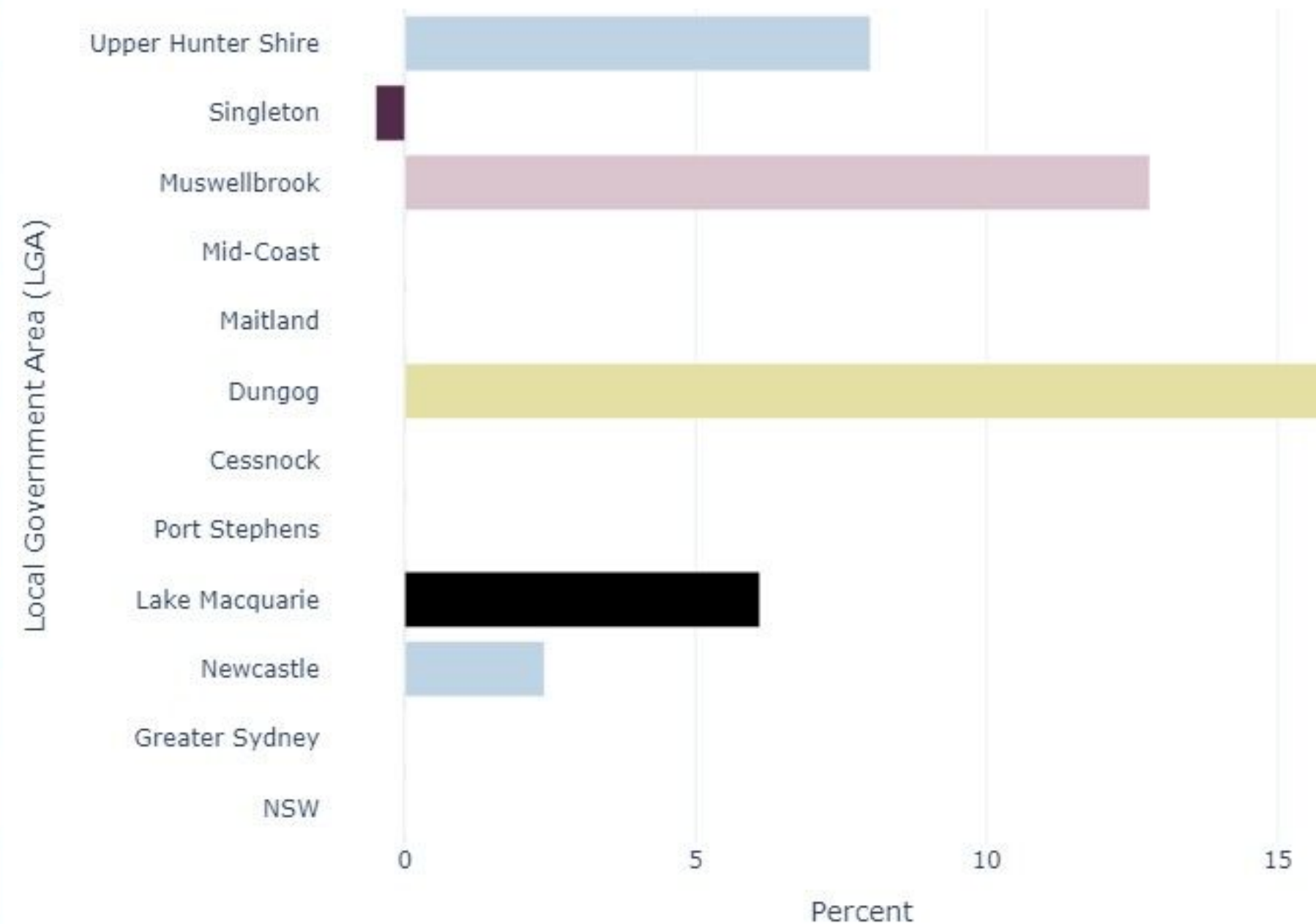
Employment by Sector in Hunter Valley (past 12 months)



Median House Prices

% Growth (3 bedroom house – past 6 months)

- All LGAs have maintained significantly higher median prices than pre-COVID
- Still below NSW averages on a value basis
- Price increases in the 6 months to March 2024 are evident in Upper Hunter Shire, Muswellbrook, Lake Macquarie and Newcastle
- Singleton saw a small decline but has a volatile median price history (with a small number of sales) over the last 12 months



National and international case study experience of structural economic change

- Economic diversification involves broadening the economic base of a region to reduce vulnerability to change and external shocks.
- Economic diversification and resilience-building (future-proofing) are critical for regions dependent on single industries.
- Impacts include shifts in employment, income stability, community cohesion, and regional growth dynamics.
- Understanding these impacts is key to supporting sustainable, inclusive transitions.
- Key and vital role for industry-led initiatives in leveraging relationships, proactive investment, innovation, and collaboration with local stakeholders.

Impacts of economic change can be severe, but strategic planning and proactive policy responses can mitigate negative effects.

- Regions must invest in education, infrastructure, and social support systems to reduce risks to the community.
- Risks include:
 - **Job displacement and workforce shifts:** Sector shift from traditional sectors like mining or manufacturing can lead to job losses, particularly in regions heavily reliant on these industries.
 - **Income instability:** Fluctuations in employment and industry restructuring can create income gaps and increase inequality, with flow-on economic impacts.
 - **Community displacement and cultural shifts:** Loss of industries integral to regional identity can lead to social dislocation and loss of cultural capital.

Key lessons for managing socio-economic change

- Community engagement is key to addressing socio-economic impacts.
- Infrastructure, education, and skills development are critical for fostering new sectors.
- Tailored approaches for different regions (no "one-size-fits-all") are necessary.
- Align with industrial attraction and development in emerging sectors like renewable energy, critical minerals, advanced manufacturing and technology to ensure sustainable growth.
- Develop programs focused on skills development and community-driven betterment projects.
- Distribute the benefits of transition to the whole of the community to build support for change amidst uncertainty.
- Foster partnerships between local governments, industries, and communities for a holistic approach to economic transition.

Understanding the context for community engagement

- We are yet to see what these new forms of industry and energy look and feel like, from a community perspective.
- Our research shows a broad-based acceptance for change, but priority concerns remain in key areas (young people, fairness and re-skilling/up-skilling)
- Places that are impacted by change are not necessarily the beneficiaries.
- Governments tend to underestimate the role of local ‘influencers’.
- Who is managing the cumulative impacts?
- The community doesn’t think in ‘siloes’ or along the lines of professional expertise – language like ‘that’s not in my remit’ or ‘you’ll need to speak to a different agency’ does not work
- Government struggles to understand what other agencies are doing and when – this creates a very confused context and general apprehension.
- There is a lack of commitment to building the capacity of the community to understand the process e.g., how things work, when decisions get made, pathways to influence change
- There was an overall lack of responsibility for thinking through the positive and negative impacts on landowners across various scenarios e.g., when land is needed for a ‘public purpose’

Before it's too
late...

Educate,
Communicate
and Co-ordinate

- Understand who the 'community' is and how to communicate with them.
- Clarify what can be influenced and what cannot and when
- Reach out – don't expect people to come to you
- Cumulative impacts – each project/each proponent
- Focus on place – not activity (water, sewer, roads, etc.)
- Develop an overall narrative – put it all together – engagement is not one of the silos

Summary of Upper Hunter Mining Dialogue Forum 2022

- The 2022 Forum discussion placed a high priority on economic diversification, skills development, and community engagement as key pillars for addressing the socio-economic impacts of the economic change in the Upper Hunter.
- Included proposals for actions:
 - Developing infrastructure and housing solutions to support new industries and incoming residents.
 - Conducting a regional skills audit to align workforce capabilities with emerging sectors.
 - Resourcing an independent agency to streamline collaboration between stakeholders.



Key Issues

(environmental)

- **Air Quality:** significant community issue with health impacts, particularly around dust and chemical pollutants, highly valued air quality monitoring and analysis. Industry can drive early adoption of technology to reduce diesel emissions.
- **Mine Voids and Post-Mining Land Use:** future compatible land uses, including using voids for flood mitigation, pumped hydro, or industrial freshwater storage, noting environmental and economic challenges.
- **Rehabilitation of mine sites:** requires innovation and joined up governance, opportunities for utilising tailings as topsoil and addressing organic material shortages for revegetation, interest in creating biodiversity corridors to connect ecosystems using post-mining lands and areas offset by mining.
- **Water Security and Drought Proofing:** demonstrating leading edge water stewardship, including low use and reuse best practices of industry.
- **Other issues:** examples included concerns around noise, spontaneous combustion, odour, chemical contamination, ongoing concerns about mining operations affecting quality of life for local residents.

Key Issues

(socio-economic)

- **Economic Diversification and New Industries:** strategic planning on land availability for future industries, roadmap/timeline for post-mining land use, investment and industry attraction (renewable energy, agribusiness, and critical minerals processing), multi-purpose land use, unlocking mining lease land for affordable housing and training.
- **Technological Innovation:** opportunity to showcase transition technologies globally, support innovation and demonstrate new, sustainable business models.
- **Skills and Workforce Development:** identify existing talent for new industries, align educational programs with future industry needs, retraining programs for workers for emerging sectors and industries.
- **Youth and Education:** creating opportunities for the region's youth to remain or return after education, more apprenticeships and educational pathways within the region.
- **Housing and Infrastructure:** affordable housing emerged as a high-priority concern, particularly as economic transitions could drive up housing costs, access to services and infrastructure and aligning infrastructure projects with the region's evolving needs.

Key Issues

(socio-economic)

- **Community and Social Well-being:** including addressing negative perceptions of the region that could hinder diversification and growth, marketing and advocacy strategies were suggested to combat this image and highlight the region's long-term potential.
- **Community Engagement:** Participants emphasized the importance of involving the broader community in decision-making processes. This includes ensuring affordable housing options and educational opportunities are available and accessible.
- **Industrial and Skills Shortages:** looming shortages of critical minerals and skilled labour, both of which are essential for transitioning into new industries, collaboration between stakeholders to address these shortages was recommended.
- **Economic and Social Costs:** potential short-term economic and social costs of the transition, such as job displacement and loss of philanthropic support from mining companies.

Feedback Session

What are the most pressing challenges faced by the Upper Hunter region that could benefit from targeted intervention from the Mining industry and sector?

Prompts for discussion:

- Which issues have the most significant impact on the community (e.g., employment, housing, skills development)?
- Which are most time-sensitive?
- How can we sequence interventions to maximise impact?
- What are the strengths of the mining industry that can be harnessed?

Program Prioritisation

- **How would you prioritise these issues for targeted action?**
- You have 100 points to allocate among the identified issues and challenges.
- Use your best judgement, but points should be distributed based on the importance and urgency of each issue for the Upper Hunter region.
- For example, if housing affordability is seen as highly critical, you might assign 30 points to it, while assigning fewer points to less urgent issues.

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Feedback Session

How can we leverage existing strengths and resources to create impactful pilot programs or projects that this issue?

Prompts for discussion:

- For instance, are there local programs that the mining industry support that we can leverage from?
- What role should local governments, other industries, and communities play in driving these initiatives?
- What are the other examples that we can learn from?

Feedback Session

What barriers (e.g., policy, financial, regulatory, infrastructure) might hinder the successful implementation of new projects, and what strategies can we adopt to overcome them in the short-to-medium term?

Prompts for discussion:

- How can advocacy and collaboration with state and federal governments be used to address barriers?
- What role should innovation, education, and public-private partnerships play in mitigating these challenges?

Thank you

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