#HEAL2022 has resumed now, with participants splitting into thematic sessions: I (@mariemcinerney) will be in Aboriginal & Torres Strait Islander knowledges and food/soil/water security: @AlisonSBarrett will be at clean energy and bushfires sessions.

Assoc Prof Linda Payi Ford opens with the importance of Indigenous voices being heard in climate action and #HEAL2022 discussions.
Hearing from Prof Elaine Lawurrpa Maypilama & Assoc Prof Petra Buergelt re this project #HEAL2022

Sees Indigenous knowledges as critical to survival, not just of Aboriginal and Torres Strait Islander people but all humanity #HEAL2022
Strong culture, strong language, strong identity: says Elaine Lawurrpa Maypilama

The more we are getting to know, the more we in awe of the sophistication, tremendous value of Indigenous knowledges, says A/P Buergelt of Yolngu research

Project has looked at what made Yolngu stronger, and what makes Yolngu weaker. Latter points to Balanda (non-Indigenous people) research impact

- Balanda working on top of us
- not allowing us to live according to our Yolŋu ROM
- Balanda not recognizing
- not working together two-way
- don’t know much about us
Pathways to strengthening Yolngu, includes strengthening (already strong) Yolngu governance. #HEAI2022

Now hearing from Kris Vine re Healing Country project, local community led actions aimed at addressing disproportionate impact of climate change on Aboriginal and Torres Strait Islander people #HEAI2022

Weaving knowledges for Healing Country
Co-creating Aboriginal program evaluation processes and resources for climate change mitigation and adaptation planning

Presented by Kris Vine on behalf of the Healing Country Project Team
HEAL Network Conference, Online – 24th November 2022
Shout out to the work from @DrVMatthews and others in @LowitjaInstitut Discussion Paper:

Climate Change and Aboriginal and Torres Strait Islander Health - Clim...
climate in health - This discussion paper describes climate change in Australia and its impact on the health and wellbeing of
https://www.lowitja.org.au/page/services/resources/Cultural-and-social-determinants/cli...

#HEAL2022

Climate Change and the Health of First Nation Peoples

- Lowitja Discussion Paper (2021) reviewed the evidence of how climate change is impacting First Nation Peoples’ health
- Examples of First Nations led mitigation and adaptation strategies
- Key recommendations on the ‘how to’
- Launched at COP 26 Climate Change Conference
- Highlighted gaps - need more Aboriginal and Torres Strait Islander perspectives, broaden research to cover all community contexts & climate concerns.

Goal of Healing Country project to co-design, implement adaptation strategies, v much focused on local solutions #HEAL2022

Healing Country - Weaving knowledges

- Aims:
  a. Respectfully gather traditional knowledges on changing climate and its impact on community and Country
  b. Co-develop interactive story-data maps combining knowledges
  c. Using multiple information sources, develop and implement local community resilience plans with community and stakeholders
- Led by Aboriginal & Torres Strait Islander communities: Wadejuk Nyoongar Country (Perth); Bundjalung Country (NSW); remote location (tbd)
Real focus on ensuring strong Indigenous cultural and intellectual property rights in the project.

Community workshops have begun.

Continue to establish cultural governance groups. Will be engaging with community/service stakeholders.

#HEAL2022

Ongoing evaluation will be embedded: #HEAL2022

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**Healing Country – Co-creating an evaluation for health**

**Overview**

- Informed by relevant evaluation frameworks and best practice approaches
- Co-creation of Aboriginal program monitoring and impact evaluation processes and resources for wholistic health
- Bringing the best together to fill the gap – more culturally appropriate, adaptable and applicable impact evaluation resources, accessible and relevant to community
- Participatory action research approach and community-driven
- Aiming to weave together Western and Indigenous knowledge systems, published literature and community voices

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#HEAL2022 cc @LowitjaInstitut
Scoping review also underway, testing what’s already out there #HEAL2022

Now hearing from Amba-Rose Atkinson, Gumbaynggirr nyami from the mid-north coast of New South Wales (who has written for @CroakeyNews from #COP27 eg

"Doing this research because I have responsibility to take care of Country: I’m the manifestation of my ancestors". Climate change compounding the disparities caused by colonisation." Amba-Rose Atkinson
Big takeaway from #COP27 was the need to "protect our knowledge holders", a key part of that is in language which "brings Country to life". Relationality is integral to methodology: Amba-Rose Atkinson #HEAL2022

Significance of research: identity tied to Country, destroying this link damages health and wellbeing. Amba-Rose Atkinson sees climate change as a symptom of colonisation, says important to define what 'climate justice' refers to, where Indigenous voices are there. #HEAL2022

Now hearing from Djarra Delaney, Quandamooka - his PhD at Melbourne Uni School of Geog, is investigating climate adaptation practices in Australian Indigenous island communities in context of colonisation/climate change #HEAL2022

Welcome recognition on Masig island in the Torres Strait of non-colonised weather/seasons -- Djarra Delaney says knowledges also to be found in Indigenous art, other methods of recording #HEALTH2022
Adaptation discussions too often 'top-down' - within community, because of gaps, adaptation occurs at a local level, but beware of colonial co-opting: Djarra Delaney #HEAL2022

Comment in the chat box, echoes praise from Assoc Prof Linda Payi Ford at cultural safety on show in research projects outlined here at #HEAL2022 session

wonderful - all wonderful - wish this had been a plenary - awesome

thank you all - especially emphasising climate change as more of the harm of colonisation - ngā mihi nui

Linda Payi Ford closes theme session, praising Amba-Rose and Djarra for how they both draw from oral histories and lived experience in the way they interpret the world, urges them to share videos to other young people on Tic Toc, "to see and hear your voices". #HEAL2022
New session now opens on: Food, soil and water security, being led by Professor Erica Donner (UniSA) #HEAL2022:

Some aims

(a) Assess health risks related to impaired soil, food, and water security caused by changing environmental conditions, such as severe droughts, and pollution from legacy and emerging contaminants

(b) Understand, communicate, and mitigate pollution-associated health risks

(c) Develop and support system-based solutions to improve food, soil and water security

(d) Facilitate uptake of sustainable water, soil and food security solutions and move towards an equitable and sustainable circular economy that fits the need of diverse communities and Country

Why??

Throughout our lives, we are exposed to a vast range of chemical and micro-biological stressors which reduce life expectancy and quality.

- Soil and water pollution from inorganic and organic contaminants is derived from many sources and processes
- Contamination and environmental change issues are varied and pervasive
  - e.g. microplastics and multidrug resistant bacteria exemplify critical contamination issues that pose a serious threat to human and ecosystem health.

Donner: Means we need to take a One Health approach: holistic view that is very close to the wisdom of Indigenous knowledge systems, which is why Indigenous leadership so important to @HealingWorksAu #HEAL2022
There is human right to water and sanitation, Aust is a signatory to the SDGs. UNDRIP also acknowledges right to water, sanitation health for Indigenous peoples.

1100 remote communities in Australia, huge diversity. But v often tap water not safe to drink: report last week that more than 500 communities did not have water that was safe to drink/regularly tested: more here #HEAL2022
What are the issues?  #HEAL2022

Remote drinking water: Current

Reasons for insecure water supply:
- **Physical**: contamination (microbial, chemical, heat, saline intrusion)
- **Technical**: water operators working remotely can be unsupported, limited resources, mismatched training
- **Financial**: insufficient funding
- **Social and governance**: cultural water needs, management approaches


And the growing risks  #HEAL2022

Remote drinking water: With climate change

**Central Australia**: ‘Under a high emission scenario, the … number of very hot days (> 40 °C) will increase from approximately:
- 7 to 43 days per year in Katherine,
- 14 to 48 days per year in Alice Springs’


**Torres Strait Islands**
Drought conditions: already affecting the security of water supply.
Changes to bird migration; roosting on water storages
Saltwater intrusion to freshwater wells
Cyclone-proofing: to become more intense.

Water has to be: "fit for people, purpose and place" - tech not the only solution, local solutions critical, incl workforce, skills, infrastructure: Lansbury  #HEAL2022

Drinking water futures

**Note:**
Tailored community responses through community profiles
Technology is not necessarily the solution
Instead, fit for people, place & purpose

5 enabling aspects:
1. People factors: support, training, cultural competence
2. Cross-agency collaboration: regulators, funders, state & local government
3. Technologies that are fit for place, purpose & local people
4. Funding that is sufficient and sustainable
5. Taking a systems view of water and sanitation
Some effective local responses #HEAL2022

Cultural, racial and financial issues in play on water security/access, with huge impacts for health: Lansbury #HEAL2022

Now hearing from Prof Anne Roiko (@Griffith_U) - talks re the amazing twisted and torn tree in her slide, what it says about resilience, strength and long-term thinking #HEAL2022
Roiko talking about the need to do research differently so it can handle the complexity of climate change ("biotic impoverishment"): water transcends boundaries, disciplines but are disconnected systems of monitoring/surveillance #HEAL2022

The big questions of #HEAL2022

Attributing Health Effects to Long-Term Aquatic Ecosystem decline

- Hard to detect and attribute a signal in health outcome data – limits of traditional epidemiological approaches
- Integrate health outcome data into model-based estimates of future consequences of wetland deterioration
- Use a range of systems-based models – to evaluate effectiveness of alternative strategies
- Integrated analyses of mitigation and adaptation strategies across time horizons and spatial scales
- So far – scope has been narrow
  - E.g. adaptation plans and alerts for extreme heat events
  - Limited attention to other measures such as infrastructure enhancements such as green infrastructure or nature-based strategies in waterways

#HEAL2022
Hearing how 70 pc of emerging infectious diseases have animal origins now, from Prof Aparna Lai

Water an important pathway for zoonotic spillover, raising many questions (most literature focused on vector borne diseases), incl risk from climate change, other gaps.

#HEAL2022

Creation of Australian CDC presents timely opportunity to link animal-human-environment systems together to: we gather a lot of data that not integrated - Lal #HEAL2022

Implications and future directions

- Compared to research on vector-borne zoonoses well established in human populations, and the theoretical underpinning of environment-animal-health interactions, our understanding of how the potential for zoonotic spillover will be impacted by climate change remains inadequately studied.

- We need to invest more heavily in under resourced areas to monitor and track the potential for incursions, and spread through indirect pathways.

- The creation of an Australian CDC presents a timely opportunity to integrate more diverse perspectives (e.g. OneHealth) for zoonoses preparedness.
The serious impact of climate change on contamination to be seen in Sydney (2019) where air pollution from smoke events assoc with 5pc of non-accidentally mortality: Prof Nanthi Bolan @uwanews #HEAL2022

Contamination/Climate change: Bolan #HEAL2022

Need for more political and social scientists to be involved in discussions/work on impact of climate change on health, and solutions/mitigations etc, being discussed at equity session being chaired by @SharonFrielOz #HEAL2022