Resilient Byron

A systems-thinking model to bolster community regeneration and resilience

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Overview

1. Climate / disaster risk context in the North Coast of NSW.

2. The missing link – a 'whole-of-community' approach.

3. Introducing Resilient Byron as an example of grassroots community resilience.

4. Lessons being learnt.

1. Climate / disaster risk context in the North Coast of NSW

- Australia has **already experienced an increase of temperatures, a change in rainfall patterns and rising sea levels** (IPCC 2021).

- This is applicable to the whole country and the **North Coast region of the state of New South Wales is not immune to it**.

- CSIRO and BOM expect an **increase of the average temperature** in all seasons, meaning more hot days and longer warm spells; a decrease in winter rainfall but an **increased intensity of extreme daily rainfall events**; a **harsher fire-generating climate**; and a **significant rise in sea levels** (Dowdy et al 2015).

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1. Climate / disaster risk context in the North Coast of NSW

- "**Australia's disaster outlook is alarming**" (Royal Commission into National Natural Disaster Arrangements, 2020).

- The North Coast Regional Emergency Management Plan published by the NSW Emergency Management Committee in June 2019 (EMC 2019), identifies **26 hazards and risks for the region**.

- Of these, **16 could be associated with a changing climate**, as their likelihood or impact could be made worse because of it.

- These hazards include: biosecurity emergency, bridge collapse, communicable disease, dam failure, East Coast low, fire (of all sorts), flood (riverine and flash), heatwave, landslip, storm and utilities failure emergency.

- Of these, **seven are considered to remain a *high* regional residual risk priority** even after risk controls have been implemented.

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1. Climate / disaster risk context in the North Coast of NSW

- The Office of Environment and Heritage conducted in 2014 six sector-based Integrated Regional Vulnerability Assessment (IRVA) workshops in the North Coast region to assess the likely impacts and vulnerabilities of these sectors to climate change. These existing sources of vulnerability "will be amplified by climate change" (OEH 2016, p. 10).

- **The vulnerabilities identified include the narrow coastal plain; the population demographics; the infrastructure; the regional networks; the leadership; and the funding models and priorities.**

- For instance, the report notes that floods and sea level rise (king tide) would have significant impacts with damages to infrastructure and the disruption of services these infrastructures provides.

- This is turn would lead to isolation of coastal towns, people and communities; loss of access for emergency services; loss of local energy and water supply; poor water quality through sewage and wastewater overflow; absenteeism of workers; people stranded on major highways; isolation of health care infrastructure preventing access and egress of workers, patients, waste and supplies; increased insurance costs affecting access, affordability and coverage or increased expectations of government intervention and assistance (p.12).

- In addition, the report notes that the effects of increased flood incidence on private property, loss of crops and livestock, nutrient runoff, standing water following flood and sedimentation in rivers and drainage systems would provoke population displacement leading to an increase demand for welfare services; increased crime associated with looting leading to an increase demand for police services; and an increase in vector borne diseases affecting human and animal health leading to an increase of the demand for health and veterinary services (p.13).

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1. Climate / disaster risk context in the North Coast of NSW

- **Climate change will not affect weather patterns only**.

- It will **affect every aspect of human society**, from access to basic essentials such as water, food, shelter and health to more complex aspects of human societies such as energy production, infrastructures, transport and the economy as well as the arts, culture and education.

- **Communities aren't affected just by disasters associated with climate change.**

- **Add to this challenges due to** COVID, the biodiversity extinction, the housing crisis, the epidemics of loneliness, the rising inequality, the social fragmentation of our communities, the plastic pollution, etc.

- **Community resilience is about more than disasters**.

Sea level rise · Transient population · Water disconnection · High population · Elderly at risk · Housing crisis · Injury · Drowning · Storm surge · Fire · Lack of coordination · Isolation · Rubbish · Erosion · Storm · Tsunami · Chemical drift · Inequality · Power failure · Pest plants · Increased cost of living · Drought · Climate emergency · Fear · Pandemic · High vulnerability · Flood · Transport · Trees falling · Lack of funding · Hailstorm · Landslide · Cyclone · Blocked roads · Garden damage · Sewerage · Food security issues · High winds · Communications · Mental health · Social conflict · Contamination · Heatwave

This data has been shared by participants of the Byron Shire Resilience and Regeneration Roadshow - Feb to April 2021

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1. Climate / disaster risk context in the North Coast of NSW

- Considering the gravity of the situation, these crises **will also affect human ontology** – the way we see ourselves in the universe and the meaning we give to our life, with **associated existential and mental health crises**.

- Associated with this, **social unrest may be possible too**, especially if global and regional migrations of scales never seen before in history, are poorly planned for.

- Altogether, and while the above presents only a snapshot of a very complex and dynamic set of parameters, it is clear **that delivering timely, comprehensive, effective and well-resourced emergency services to the North Coast population will be rendered more challenging**.

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1. Climate / disaster risk context in the North Coast of NSW

- The impacts of climate change on the North Coast are **also applicable to emergency services**.

- Emergency service agencies will be operating in a more challenging environment in which **their own vulnerabilities could increase**.

  - For instance, the health and well-being of their personnel could be affected by the impacts of climate change in ways similar than the North Coast's population; or their access to these populations restricted.

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1. Climate / disaster risk context in the North Coast of NSW

- Their vulnerabilities to the impacts will vary as they have different strategies and resources to account for these but **all will need robust business continuity plans**.

- The Australasian Fire and Emergency Service Authorities Council (AFAC 2018) has identified **a number of risks – physical, transitional and legal – associated with climate change that may affect the emergency management sector**.

- **All of these risks are applicable to the North Coast of NSW.**

1. Climate / disaster risk context in the North Coast of NSW

- In the North Coast, **both the responses to the 2017 cyclone Debbie and the 2019/2020 Mount Nardi bushfire are illustrative**.
  - Both disasters were made of coincident and cascading events that led to an increase demand on services;
  - both led to issues with workforce management, and negative health effects on staff and volunteers;
  - both impacted infrastructures supporting the EM sector;
  - both underscored inadequate organisational structures to face increasingly complex challenge;
  - both had considerable financial implications and carried serious reputational risks.

- Altogether, it is clear that **climate change has additional implications to the North Cost emergency services** that require them to devise their own mitigation and adaptation strategies – and **work deeper with communities**.

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2. The missing link – a 'whole-of-community' approach

- "In significant emergencies and disasters, **emergency management personnel do not, and never will, have the capability and capacity to solve the emergency threat for every individual at risk**." (Royal Commission into National Natural Disaster Arrangements 2020).

- The National Recovery and Resilience Agency "supports communities impacted by disaster, with a strong on-the-ground presence and **a guiding principle of locally-led recovery**" (NRRA 2021).

- "**Charities are vital in the emergency response** and relief for bushfire affected communities and ecosystems" (National Bushfire Recovery Plan, p. 2)

- **A whole-of-community approach is consistent with Resilience NSW** in its responsibility for all aspects of disaster recovery and building community resilience to future disasters, **as well as with the National Disaster Risk Reduction Framework.**

2. The missing link – a 'whole-of-community' approach

- A "whole of community approach" is **one of the different principles of recovery** set out in the 2016 NSW Recovery Plan.

- It also aligns with the NSW Government's stated objective to "**emphasise community engagement in the development and exercise of plans as well as in their operational employment**" (EMPLAN, p. 6)

- Both the 2020 Royal Commission in Natural Disasters Arrangements and the 2020 NSW Bushfire Inquiry identify the **need for the community to be better integrated in the disaster management cycle**, including prevention, preparedness, response and recovery.

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2. The missing link – a 'whole-of-community' approach

A bit about myself:

- Lecturer at Southern Cross University since 2016.

- Academic research focuses on impacts of climate change on community and national security.

- Firefighter (volunteer and on-call) since 2016.

- Former international aid worker for 15 years (experience in Afghanistan, Iraq, Congo, North Korea, Haiti, Yemen, Central and South America, etc).

- Dad of 2 young boys.

- Founder and co-chair of Resilient Byron.

2. The missing link – a 'whole-of-community' approach

- There is a **qualitative difference between grassroots and institutional** community resilience building.

- Building resilience from the ground up is critical because of the **context-specific nature of climate change and disaster impacts** and of the **specific strengths and vulnerabilities of different communities**.

- **Community work is 'messy'** and doesn't fit nicely in project management and institutional funding frameworks ('ebbs and flows').

- Community resilience is best done from the ground up, but **with the active support of existing agencies**.

- Focus on **facilitating social support and cohesion, knowledge and skills** as well as **tools and services**.

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3. Resilient Byron as an example of grassroots community resilience

Connecting Northern Rivers communities and neighbourhoods

- Community-led.
- Founded in 2019.
- Registered as a not-for-profit charity with the ACNC.
- Winner of a 2020 Byron Shire Sustainability Awards.
- Funded through donations and grants.
- Independent with no ideological, economic or religious affiliations.
- 2 part-time staff.
- 22 active volunteers.
- 850+ persons in the network.

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3.1. Resilient Byron's aims

- **Build the resilience of our communities in the short term**, by improving the wellbeing and social cohesion of our communities, and by helping them prepare for future challenges.

- **Transform our society by being regenerative in the long term**, by contributing to the reorganisation of our food, water, housing and energy systems.

- For this, we aim **to create interconnected communities of local resilience** (e.g. streets, neighbourhoods, informal groups, private networks, etc.), **themselves supported by residents organised in thematic groups** (food security, water security, housing security, energy security, health & well-being, safety & emergency, etc.).

- **We actively collaborate and partner with existing organisations**, including councils, emergency agencies, businesses, community groups, etc.

3.1. Resilient Byron's aims

How is Resilient Byron different to the work implemented by existing agencies?

- We support communities *coming together to develop their own capacities*, in support of, or in case agencies cannot provide the response that may be needed.

- Our *concept of resilience is not limited to disaster* prevention, preparedness, response and recovery, but *includes other areas* such as food security; water security; housing security; energy security and health and well-being.

- Given the gravity of the multiple crises we are going through, we believe the best way to become resilient to future disasters and crises is *to transform our society by being regenerative* in the long term. We do so by contributing to the reorganisation of our food, water, housing and energy systems.

- Hence our focus is on **connection**, **resilience** and **regeneration**.
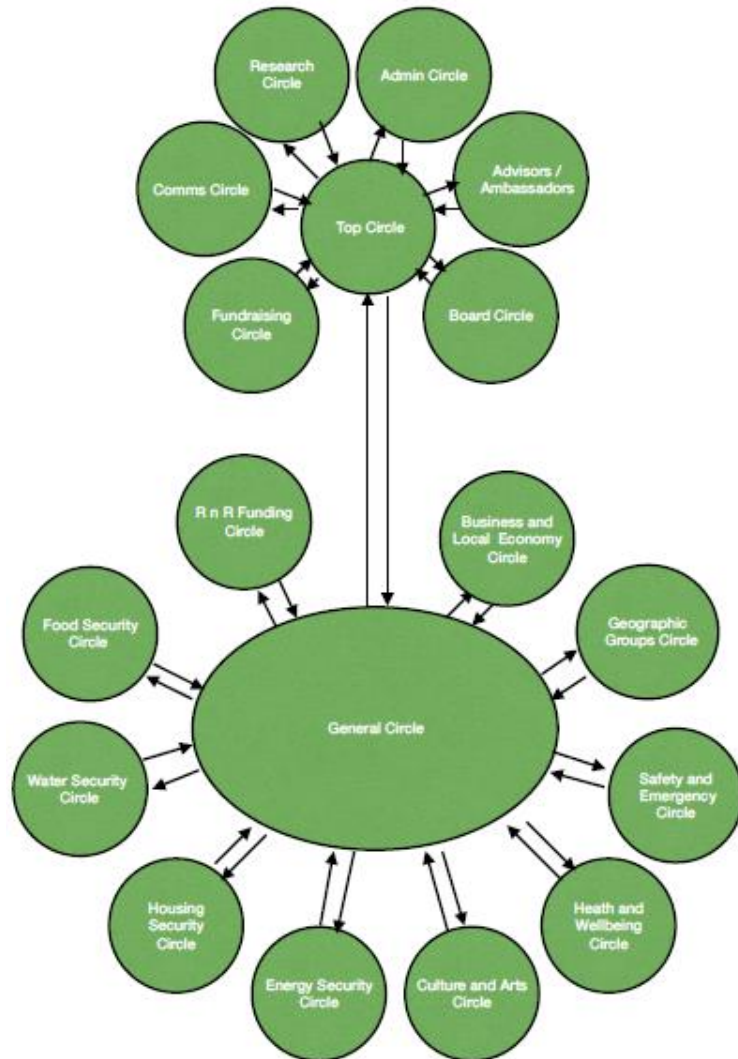
CONNECTION
RESILIENCE
REGENERATION

We aim to

- Support our communities by building resilience in the short term.

- Transform our society by being regenerative in the long term, by planning for sustainable food, water, housing, energy and social wellbeing.

Resilient Byron

3.2. Resilient Byron's structure

- Strives to become an organisation which governance model is **based on sociocracy**.
  - Clear allocation of responsibilities;
  - hierarchy and autonomy;
  - system of co-chairing and co-leading;
  - based on transparency and consensus.
- Key teams include Meta-circle; Advisors & Ambassadors; Geographic Groups; Food security; Energy security; Housing security Health & Wellbeing; Research team.

3.3. Examples of Resilient Byron's projects

Byron Shire Resilience and Regeneration Roadshow

- **The Roadshow encouraged local communities to connect, share, listen and work on concrete ideas ('big ideas') to take on the challenges** presented by bushfires and floods, the economic and housing crisis, and COVID.

- From Feb to April 2021.

- In 5 locations of the Byron Shire.

- Funded by the Northern Rivers Community Foundation.

- Implemented in partnership with Renew Fest.

- Disaster agencies invited to join and promote their work.

3.3. Examples of Resilient Byron's projects

- Each roadshow event featured a different **guest speaker**, who was interviewed by a local podcaster, and which **recording** remains available, followed by **hands-on workshops**.

- The regional newspaper *The Echo* featured a **series of articles** where guest speakers wrote their answer to the question: what will make local communities more resilient?

- Participants expressed **feeling empowered**, with a sense of **hopefulness** about what can be done locally.

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Time for resilience

Pictured are three close families/neighbours from Yankee Creek Road, behind Mullum. In front left are the Thomases: Lottie, Marli and Isla, with their expecting mum and dad, Maz and Arron, sitting on the far right. Joshua with his daughter Nicki are pictured centre, while Carole and Chris are standing behind. Photo Jeff Dawson

3.3. Examples of Resilient Byron's projects

Resilience Hub at Renew Fest (May 2021)

- The Resilience Hub offered a place at Renew Fest where **patrons could explore all things resilience and regeneration**.

- Resilient Byron offered several 1 hour opportunities to discuss **how the community can improve** our food security, water security, housing security, energy security, health and wellbeing and disaster preparedness.

- These occurred through facilitated conversations, workshops and role-plays.

- From intimate group conversations to jam-packed exchanges.

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- **The Resilient Byron Research team compiled the 'big ideas' collected during the Roadshow,** analysed them, and **put them together in a series of one-pager posters.**

- These were then **shared at the Resilience Hub** and are available on the Resilient Byron website.

FOOD
BIG IDEAS

DISTRIBUTION
- Surplus food (re)distribution
- Expand access to food grown locally (markets, hubs, boxes, stalls)
- Food diversification
- Coordination/mapping of food grown
- Providing community groups food security

GROWING FOOD
- Reallocate unused land for growing food

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Food security - Big ideas

Read it

WATER
BIG IDEAS

WATER SUPPLY
- Diversify water storage infrastructure
- Subsidise water tanks
- Reduce water loss - fix leaks
- Increase water recycling
- Plant water sparing crops
- Water storage for fire

WATER QUALITY & EDUCATION
- Protect health of

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Water security - Big ideas

Read it

HOUSING
BIG IDEAS

AFFORDABILITY
- Rent caps
- Government subsidy
- Tiny home villages
- Spare room network
- Protect shared community rights
- Social housing
- Co-housing
- Regulate holiday lets
- Cheaper construction

SUSTAINABILITY
- Incentives for landlords to fit solar

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Housing security - Big ideas

Read it

HEALTH
BIG IDEAS

HEALTH SERVICES
- Push for more services!

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ENERGY
BIG IDEAS

ENERGY SYSTEMS
- Hydrogen storage
- Piloting new ideas
- Diversity of local energy

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NEIGHBOURHOODS
BIG IDEAS

SUPPORT TO NEIGHBOURHOOD GROUPS

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3.3. Examples of Resilient Byron's projects

Resilient Communities workshops

- It's an 8-module community education program that engages the Byron Shire community to strengthen disaster preparedness and resilience.

- **Participants become facilitators who are trained to empower and train their own community to implement projects that build their resilience and regeneration**.

- It focuses on addressing resilience challenges including climate change; fire and ecosystem; water; food; energy; infrastructure; economy; and health.

- From May to December 2021.

- Funded in part by the Northern Rivers Community Foundation.

- Delivered in partnership with OzGreen.

3.3. Examples of Resilient Byron's projects

- 'Resilient Communities' **allows communities to generate their own solutions** to local and global concerns.

- Examples of actions taken include:
  - Installing solar panels and solar hot water;
  - Establishing veggie gardens;
  - Creating online food exchange groups;
  - Connecting with neighbours;
  - Promoting resilience activities in local media;
  - A vet joined the Local Emergency Management Committee to ensure wildlife was cared for during disasters.
  - Etc.

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3.3. Examples of Resilient Byron's projects

- **Energy security team**:
  - Brought together key influential stakeholders from the region for a **Byron Community Energy workshop**.
  - The purpose was to determine our vision and the challenges we'll need to overcome if we are going to achieve an energy resilient Byron Shire.
  - We agreed that **our vision is to work towards *A rapid transition to accessible community energy***.
  - Our next step is to draw up a plan that sets us on a path to achieving our vision.

- **Food security team**:
  - Seeking to **develop a strategic approach to build a resilient sustainable food system** in the Northern Rivers.
  - The project aims **to create a shared vision and pathways** towards food security and resilience by bringing together the community, government and food system actors.
  - Sought funding in partnership with Wild Community.

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3.3. Examples of Resilient Byron's projects

- **Housing security team:**
  - Co-organised an **exhibition of Tiny homes** at Renew Fest (May 2021).
  - **Proposed a long list of solutions to the housing crisis** in the Northern Rivers.
  - Provided a **submission to the NSW Regional Housing taskforce.**

- **Health and Wellbeing team**:
  - Organising '**Celebrating Resilient Communities**' an event located in the bushfire-affected town of Ashby.
  - Funded by Healthy North Coast.
  - Will include: entertainment; food; acknowledging the work of volunteer organisations; information about wellbeing programs/support; speakers to share information/tools/practices to strengthen resilience and promote mental health.
  - **Seeking funding to develop a mental health campaign** ('*It's ok not to be ok*') to promote community awareness and cohesion, and provide concrete tools for residents of the Northern Rivers to support each other.

3.3. Examples of Resilient Byron's projects

- **Safety and Emergency team:**
  - **Active participation to the first Northern Rivers Bushfire and Disaster Convergence** organised by Renew Fest in May 2021.
  - **Holding on-going meetings and conversations** with Northern Rivers Councils' disaster resilience an recovery officers, as well as representatives from the Red Cross, SES, RFS, Fire and Rescue NSW, the Police and other emergency agencies.
  - Has **provided detailed feedback to the Byron Shire Council newly released Emergency Dashboard.**
  - Is an **active participant** of the Byron Shire Council's Community Resilience Network.
  - **Provided multiple disaster and flood-related resources** through multiple local community social media groups to help our communities prepare, respond and recover from the recent wet events.

This data has been shared by participants of the Byron Shire Resilience and Regeneration Roadshow - Feb to April 2021

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3.3. Examples of Resilient Byron's projects

"given the existential threat posed by the climate emergency in particular, there has never been a more important time to consider what's ahead of us and how we might set about building more supportive and cooperative localised communities to help us withstand the worst and perhaps create a new, just and more inclusive societies."

BEING LONELY

Making sense of Australia's epidemic of social and ecological disconnection

Richard Hil, Louise Holdsworth & Charlie Brennan

August 2020

- **Geographic groups team:**
  - **Supported the creation of 15 Byron shire neighbourhood support groups** who bring residents of a given street / valley / neighbourhood closer together.
  - **Developed resources** to help residents come together.

- **Research team:**
  - **Publication of '*Being Lonely: Making sense of Australia's epidemic of social and ecological disconnection'*** in partnership with the Ngara Institute (May 2020).
  - **Publication** of 2 two-pagers on '*Community Reconnection'* and on '*Community Resilience'* (August 2021).
  - Launched the **Resilience and Regeneration Community Survey**.
  - **Stringent evaluation of the impacts** of Resilient Byron's *Community Carers and Responders* project.

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3.3. Examples of Resilient Byron's projects

Community Carers and Responders

- This project will train, equip and support neighbourhood activators and community leaders across the Northern Rivers, to become an **official network of 100+ Community Carers and Responders (CCRs)** to assist with critical aspects of local community building and disaster resilience.

- 2-year project funded by **Resilience NSW** (2021-2023).

- In **collaboration** with disaster agencies, local governments, communities and grassroot organisations.

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- Psychological first aid
- Building resilient & regenerative communities

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3.3. Examples of Resilient Byron's projects

- **The CCR network will be supported with:**
  - **Dedicated training** to build knowledge and pathways to improve local resilience (in health, food, energy, water, housing and disaster resilience).
  - Training in **first aid & psychological first aid**.
  - Access to disaster agencies, community organisations and local council (CCRs as a '**community conduit'**).
  - Ideas, inspiration and social connection through a **Northern Rivers CCR online network**.

4. Lessons being learnt

- A focus on **building community resilience that is larger than disaster** prevention / preparedness / response / recovery is valuable.
  - Includes food and water resilience, housing and energy resilience, health and wellbeing.

- A **transformative agenda** rather than a focus on disasters provides hope and a shared vision.

- **Competent and motivated** volunteers recruited through a formal selection process.

- **Prefers partnerships** rather than competition.

- '**Goes with the flow**'.

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4. Lessons being learnt

- A **focus on *communities* is preferred** to a focus on *streets* or *neighbourhoods*.
- Challenge of achieving an ambitious agenda **primarily with volunteers**.
- Emergency and recovery agencies **aren't always sure how to relate to Resilient Byron**.
- **Communities are confused** by the multiplicity of emergency management agencies.
- What affects the community, **affects us**.

4. Lessons being learnt

- Emergency services, local governments, businesses, communities should prevent, prepare, respond and recover from disasters **as one**.

- **This should be reflected in local emergency management plans and coordination mechanisms, allocation of resources, trainings and drills, as well as regulatory frameworks**.

- For this, **a shift in mindset is necessary**. Challenges remain to ensure the emergency management sector cedes control to allow meaningful community involvement (Foster et al 2013, Bosomworth et al 2016).

- Fortunately, **shifts in attitude are noticeable** as emergency managers advocate for more community resilience (e.g. Tweed Byron local Emergency Management Committee 2019).

Australian Government

Australian Institute for Disaster Resilience

4. Lessons being learnt

- While working with businesses and community service organisations is a welcome step forward, an additional step would be to **learn how to work with decentralised local systems such as spontaneous groups of volunteers**.

- It would also include **looking *creatively* at disaster management options** such as collaborating with festival sites and organisers to set-up 'refugee camps'; partnering with networks of volunteer medical and para-medical staff; supporting the creation of a free 'Airbnb during disasters' app; supporting and working with networks of neighbourhood community leaders; organising inter-agency drills that involve community members and that are open to the community, social media and local media to attend, etc.

- It would also involve **trusting local leaders, supporting them** and **accepting the 'ebbs and flows' of community work, by taking risks**, including by lessening constraints associated with timeline, funding accountability and project management.

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Thank you for your attention

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