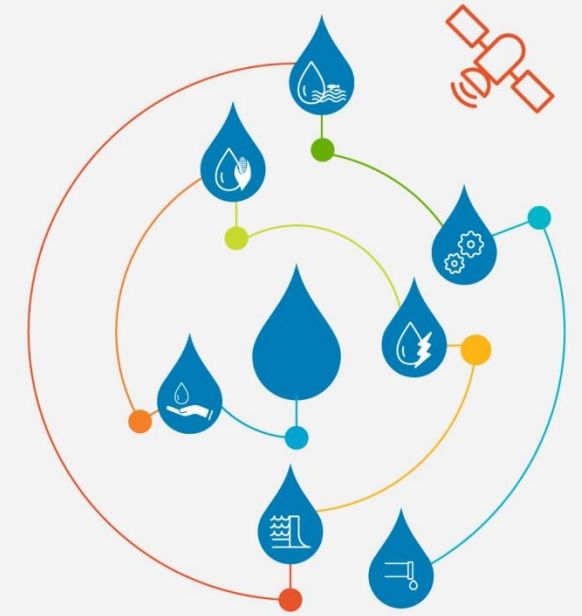


Towards Resilient Rivers: *embracing innovation*



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Key points in my presentation

- A paradigm shift is needed: from river recovery to river resilience
 - *The vision: from river recovery to river resilience*
- Innovation across the whole adaptive management cycle
 - Whole of system understanding
 - Innovation: how to operationalise the term Resilience
- Come and join our journey: *A blueprint for Resilient Rivers: come and join our journey*

A paradigm shift is needed for our rivers and waterways...

Waterways
as sources
of water

Waterways
as sewers

Waterways
as a lifestyle

Waterways
for future
generation



service-based

outcome-based

reactive

strategic

recovery

sustainability

Resilience

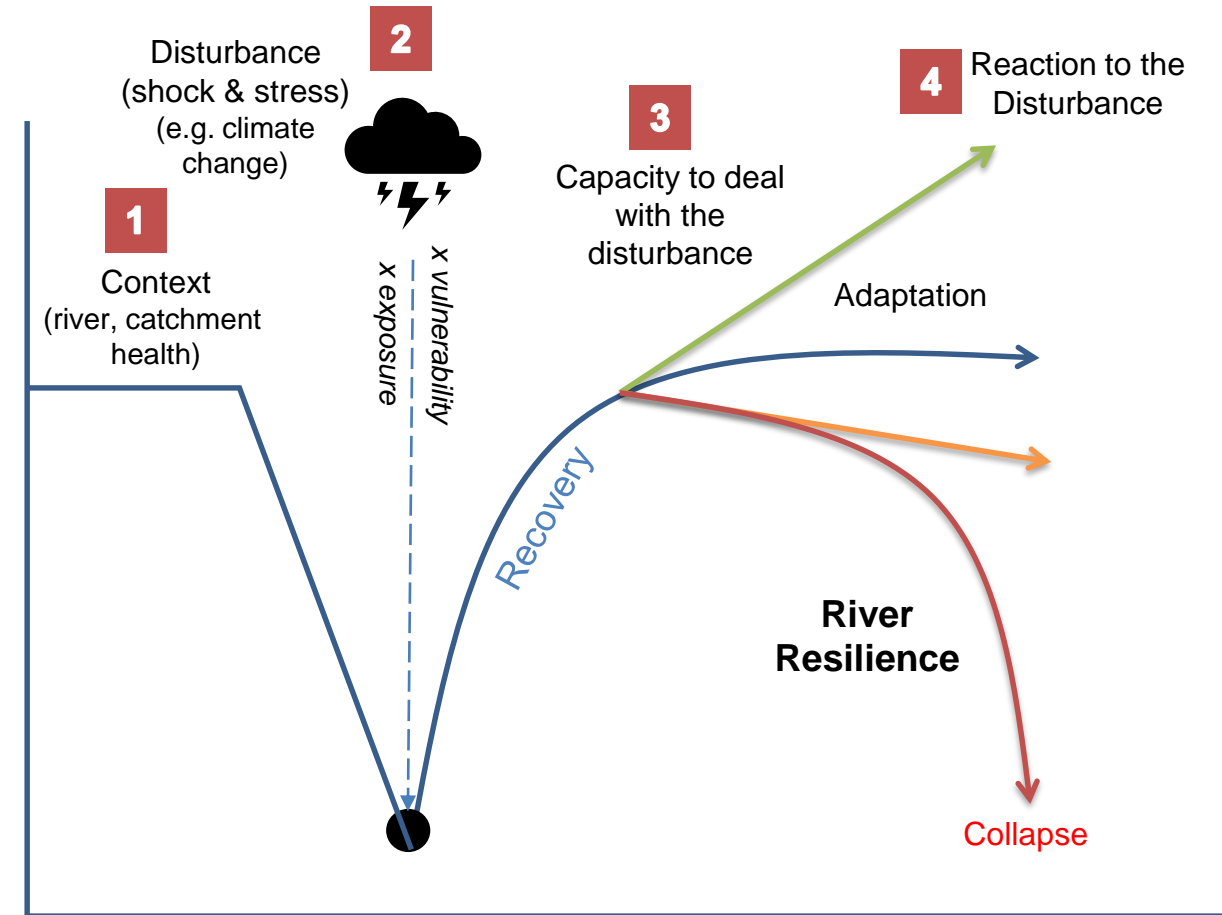
What are resilient rivers?

Resilience:

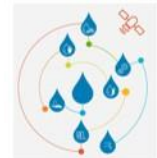
the capacity of a river system to

- tolerate disturbance without collapsing,
- to withstand shocks,
- to rebuild itself, when necessary, and
- to improve itself when possible.

www.gsdr.org



Components of a Resilient Framework



Why resilient rivers?

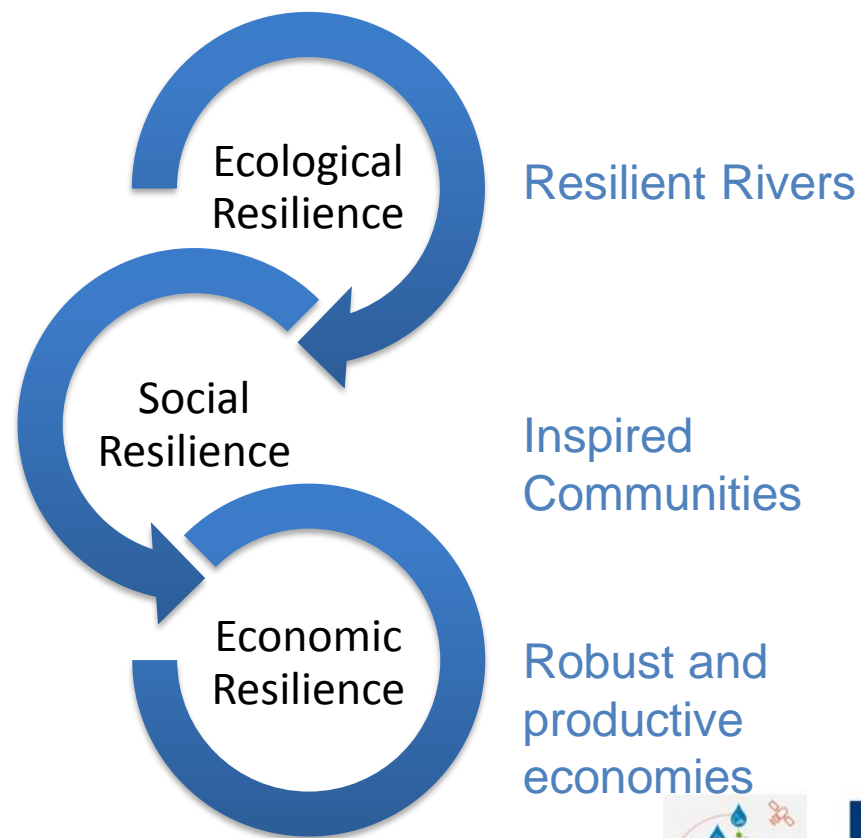
Resilient Rivers Initiative (SEQ, Australia)

for the robust future of our waterways...

Minneapolis Riverfront Turenscape Team

- A new lifestyle of the Resilient River
- A river worthy of respect, even reverence, and protection from harm
- A new relationship between the people and their river, which can inform the way of living within nature, across the city and region.

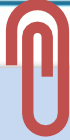
Resilience Interdependencies:
Ecological, Social, Economic



Embracing innovation across the whole cycle

- **Innovation** generally refers to changing processes or creating more effective processes, products and ideas. ...
- **Being innovative** does not only mean inventing.
- **Innovation** can mean changing your business model and adapting to changes in your environment to deliver better products or services.

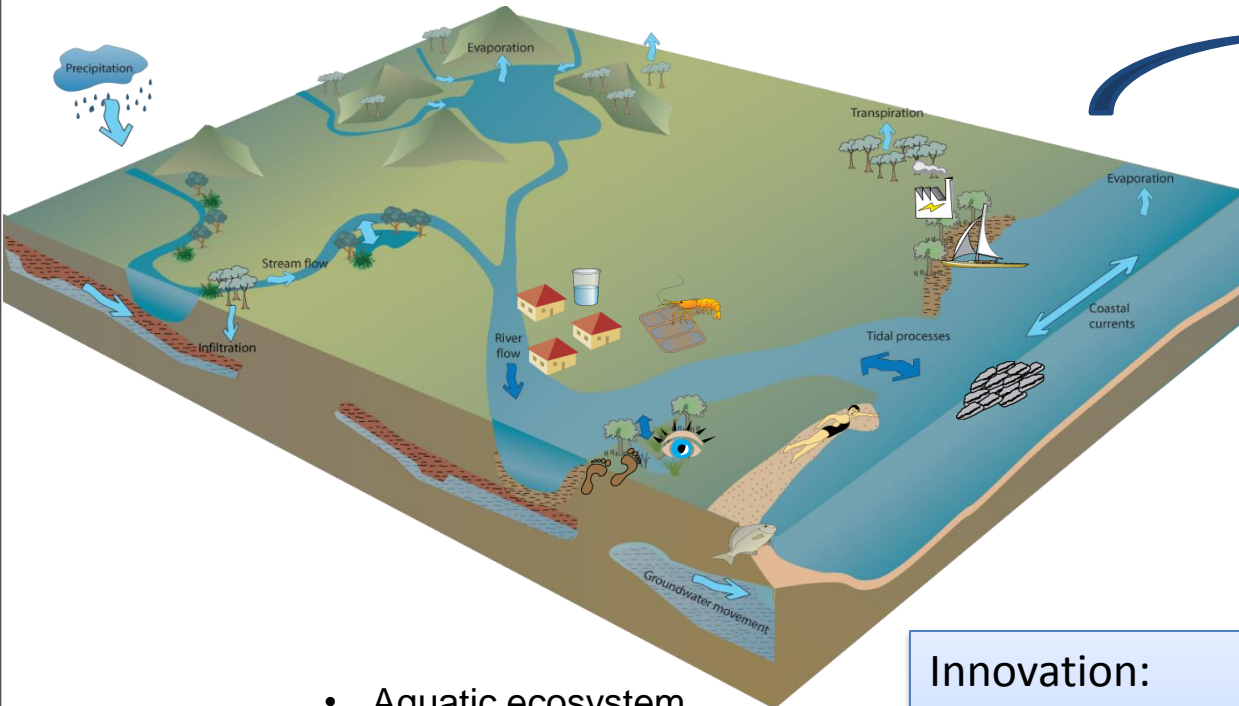
Dept of Industry, Innovation and Science - www.business.gov.au, 20/11/2017



A whole-of-system understanding: needed

Our rivers support a number of environmental values

Multiple solutions for multiple pressures

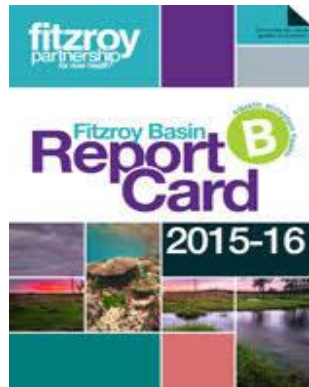


Innovation:

- Whole-of-system models and decision support tools
- Powerful visualisation

- Aquatic ecosystem
- Cultural & spiritual values
- Primary recreation
- Secondary recreation
- Human consumption
- Aquaculture
- Industrial use
- Drinking water

Innovation in Reporting: *Waterway resilience report cards*

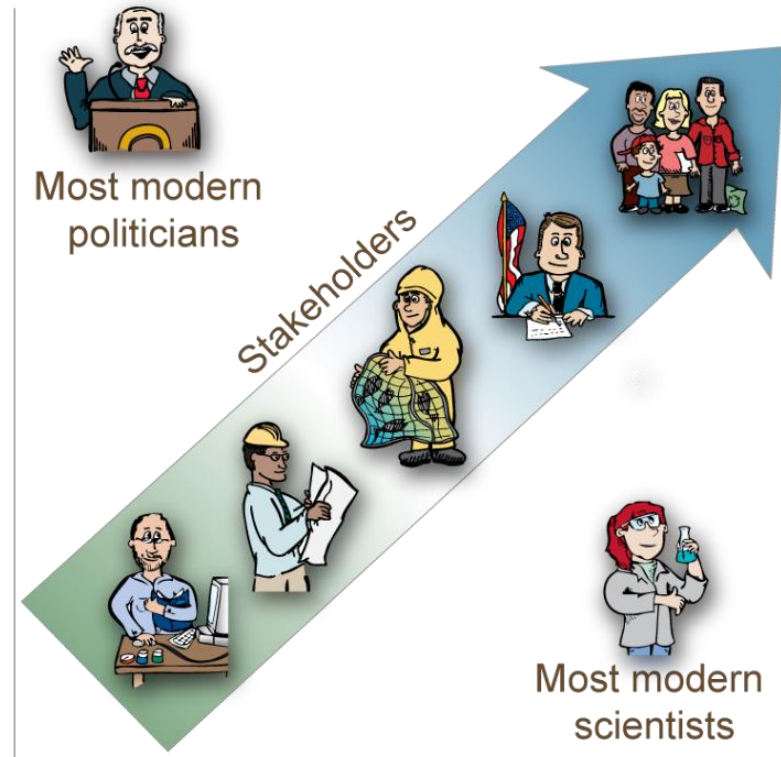


- Enable large and complex data to be communicated to a broad audience
- Direct/focus management action
- Identify regions or issues of concerns
- Provide accountability; measure success of effort of management actions
- Framework for monitoring activities

Innovation:

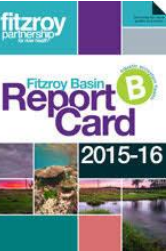
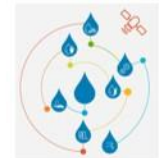
- Interactive Report Cards
- Reporting for impact

Increasing communication quality



Increasing science quality

Report cards provides truth to power.



Engaging...inspiring...transforming communities

The Spectrum of Community Engagement

INCREASING IMPACT ON DECISION-MAKING				
INFORMING	CONSULTING	INVOLVING	COLLABORATING	EMPOWERING
Providing balanced and objective information about new programs or services, and about the reasons for choosing them. Providing updates during implementation.	Inviting feedback on alternatives, analyses, and decisions related to new programs or services. Letting people know how their feedback has influenced program decisions.	Working with community members to ensure that their aspirations and concerns are considered at every stage of planning and decision-making. Letting people know how their involvement has influenced program decisions.	Enabling community members to participate in every aspect of planning and decision-making for new programs or services.	Giving community members sole decision-making authority over new programs or services, and allowing professionals to serve only in consultative and supportive roles.

Adapted from the IAP2 Public Participation Spectrum, developed by the International Association for Public Participation.

Note: Engagement activities can include community surveys, neighborhood outreach projects, partnerships with grassroots organizations, public meetings, and efforts to select community representatives

Innovation:

engage → inspire → transform

- Use of social media
- Incorporating community-based knowledge
- Empowering the community



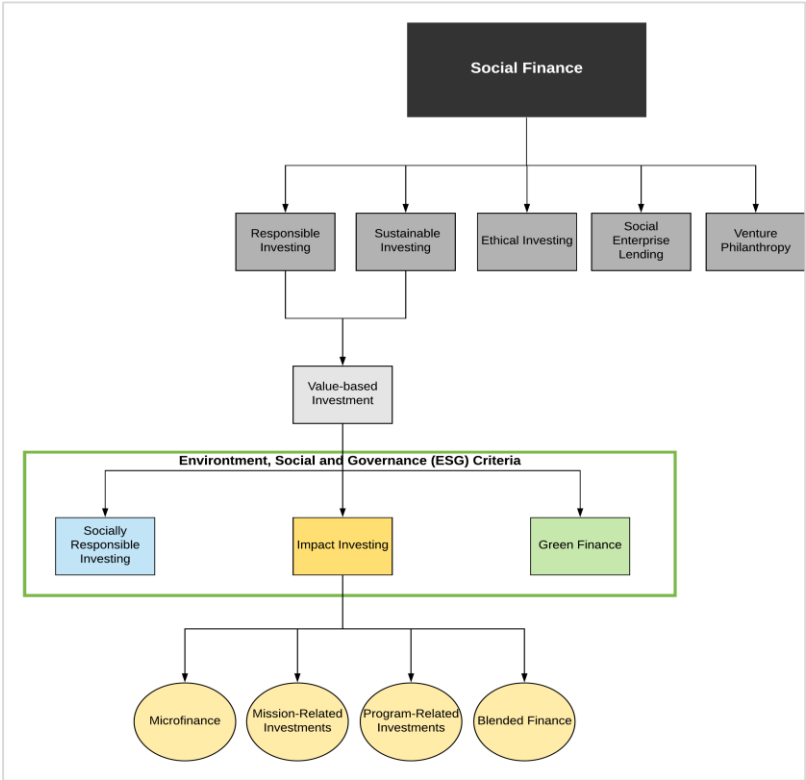
<https://artmuseumteaching.com>

Innovative solutions; innovative finance mechanisms

Ex. Cross-sectoral solutions to address water, energy and food.



Innovative finance mechanisms
(Rivera 2018, in press)



Be part of the journey: An international partnership for resilient rivers



Our goal is to develop a Blueprint which will be applicable to rivers worldwide.



The International Resilient Rivers Blueprint will inspire a global transformation towards resilient rivers, communities and economies.



STATEMENT OF SUPPORT

Climate change will have significant impacts across many sectors. As business leaders, we must ensure transparency and action around climate-related risks and opportunities. We affirm our support for the voluntary recommendations of the Financial Stability Board's (FSB) Task Force on Climate-related Financial Disclosures (TCFD). We encourage other business leaders to join us in improving disclosure across sectors and regions. These disclosures are an important step forward in enabling market forces to drive efficient allocation of capital and supporting a smooth transition to a low-carbon economy. We are proud to support better disclosure of climate-related risks and opportunities and we urge other business leaders to do the same.

You can do so by:

- Joining the TCFD's existing list of supporters
- Issuing your own statement of support on your company's website and linked back to the TCFD website
- Provide a supportive quote to be added to the TCFD website



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Developing the Resilient Rivers Blueprint

JUNE 2018

DECEMBER
2018

AUGUST
2019

OCTOBER
2019



Release of the
Blueprint

- Integrated planning frameworks for total water cycle management (**river planning**);
- Evidence-based and cross-sectoral solutions of river recovery (**river science**);
- Decision support tools incorporating risks (**river science & models**);
- On-ground restoration and rehabilitation (**river recovery**);
- Evaluation and reporting (**river monitoring**);
- Strong policy, institutional arrangements and leadership (**river governance**);
- Informed and engaged stakeholders (**river community**); and
- Innovative financial mechanisms (**river economics**);

The International RiverFoundation

The International RiverFoundation champions integrated river basin management for the restoration, protection and sustainable management of the world's rivers.

We do this by facilitating recognition, education, and collaboration.



Recognition

We recognise and reward individuals and organisations who have achieved incredible outcomes for rivers, basins and communities, and help them share their knowledge with those who could benefit from it.

**International Riverprize,
Regional Riverprizes,
Fellowships and Scholarships**



Education

We support future leaders and early-career professionals to develop their knowledge, skills, and experiences in sustainably managing the world's rivers.

International RiversymposiumRiverTwinning Program

Sydney 2018 Brisbane 2019 International 2020 Brisbane 2021



Collaboration

We advance integrated river basin management by facilitating cross-sector collaboration through events, partnerships and on-ground projects.