

An aerial photograph of a river delta, showing a complex network of channels and distributaries. The water is a deep blue, while the surrounding land is a mix of green and brown, indicating vegetation and urban development. A semi-transparent dark grey rectangular box is overlaid on the right side of the image, containing the title and authors' names.

The future of urban rivers in the burgeoning megacities of Australia

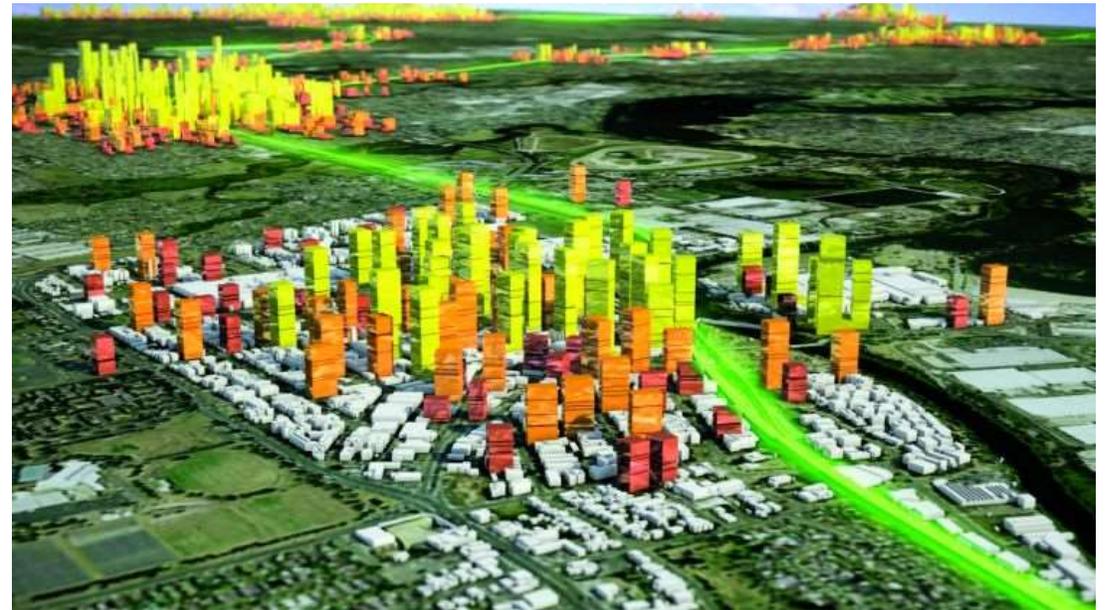
Peter Morison; Neil McCarthy; Dom Blackham; Hannah Pexton; Phil Birtles; Richard McManus

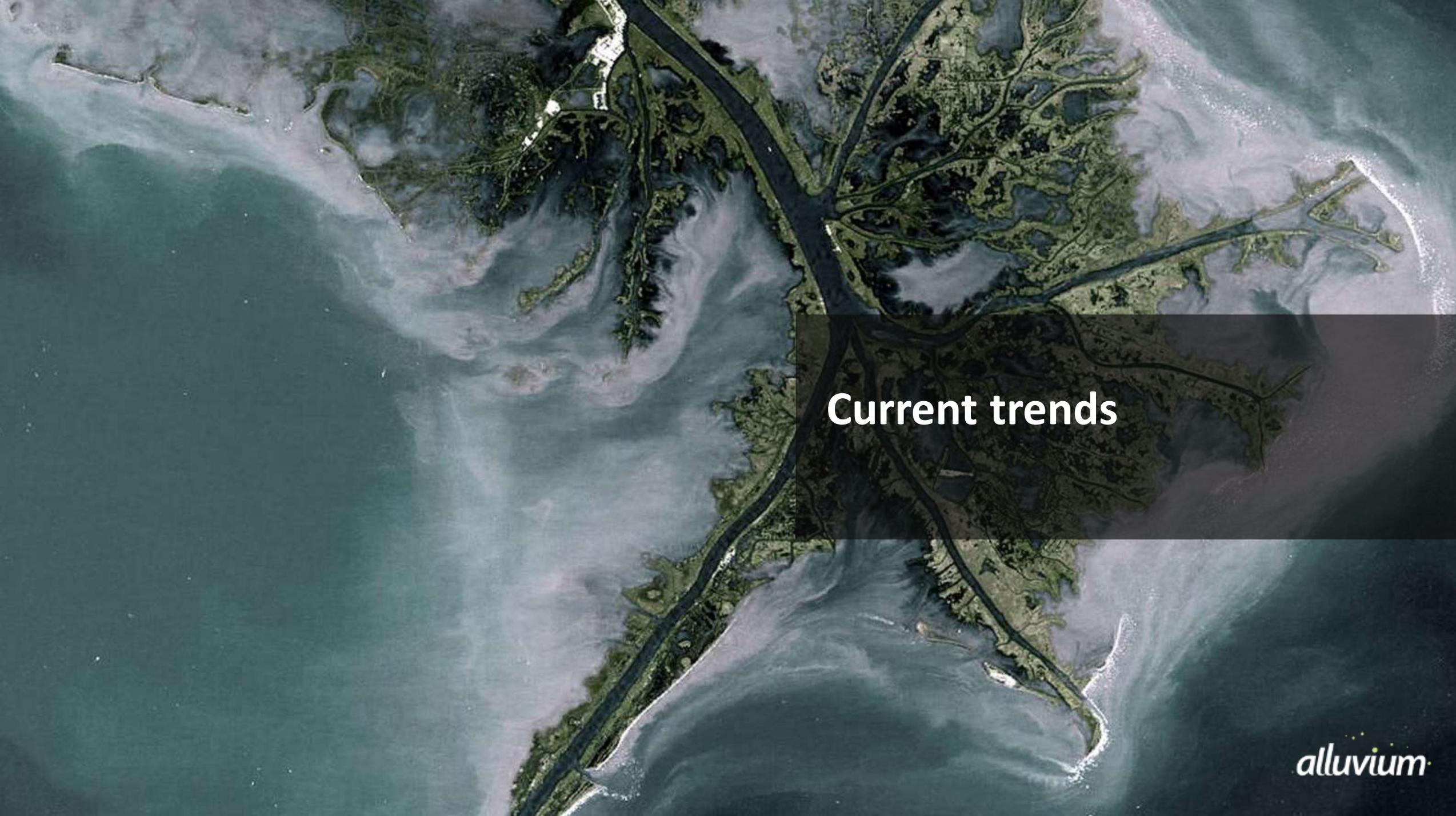
World leading urban growth

- Largest urban growth in the world
- 2050:
 - 36 million across Australia
 - 8 million in Melbourne
 - 8 million in Sydney

The Challenge:

With such unprecedented urban growth in these megacities, what will their urban rivers look like and how will they function?

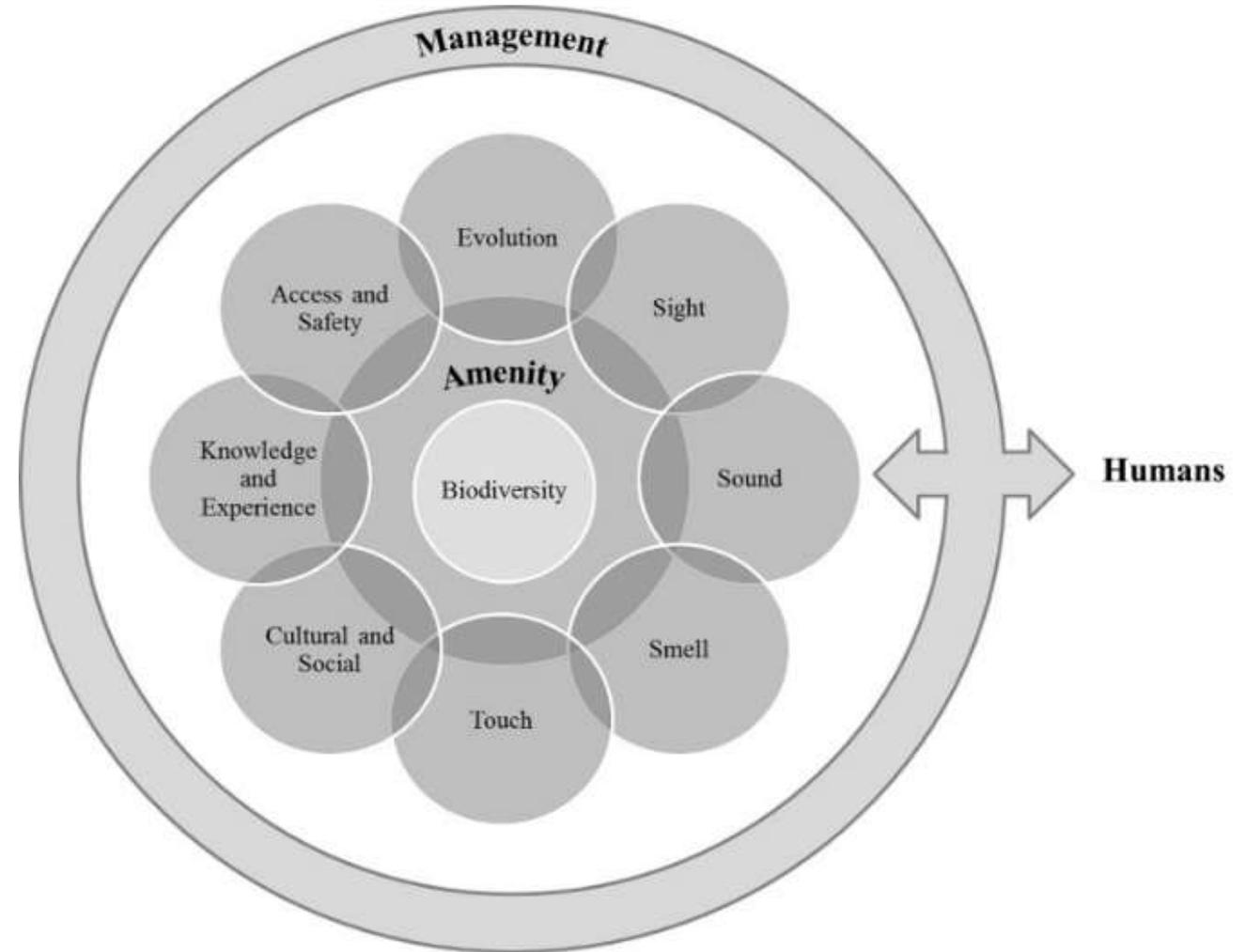


An aerial photograph of a river delta system, showing a main river channel branching into numerous smaller channels and distributaries. The water is a light, silty color, contrasting with the green vegetation on the land. A semi-transparent dark rectangular box is overlaid on the right side of the image, containing the text 'Current trends'.

Current trends

The value of urban rivers

- Values associated with rivers are highly diverse and strongly supported
- Growing recognition of integrated functions
- Quadruple bottom line
- Recreational utility (e.g. swimming)



Example: Cooks River, Sydney

- Once treated as a valueless drain
- Now an amenable corridor
- Engagement of green and blue space
- Parkland spine
- High WTP for rehabilitation





Example: Yarra River, Melbourne

- Many years of environmental recognition and improvement
- Growing recognition of socio-economic and cultural values
- Yarra as one living and integrated natural entity



An aerial photograph of a river delta, showing a network of channels and distributaries. A semi-transparent dark rectangular box is overlaid on the center of the image, containing the text "Values of the future".

Values of the future

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Values complementary
or in conflict?

Ecological values

Social and cultural
values

Economic values



An aerial photograph of a river delta, showing a network of channels and distributaries flowing into a larger body of water. The land is green, and the water is a mix of dark blue and light greyish-blue. A semi-transparent dark grey rectangular box is overlaid on the right side of the image, containing the text "Reconciling values of the future?".

Reconciling values of the future?

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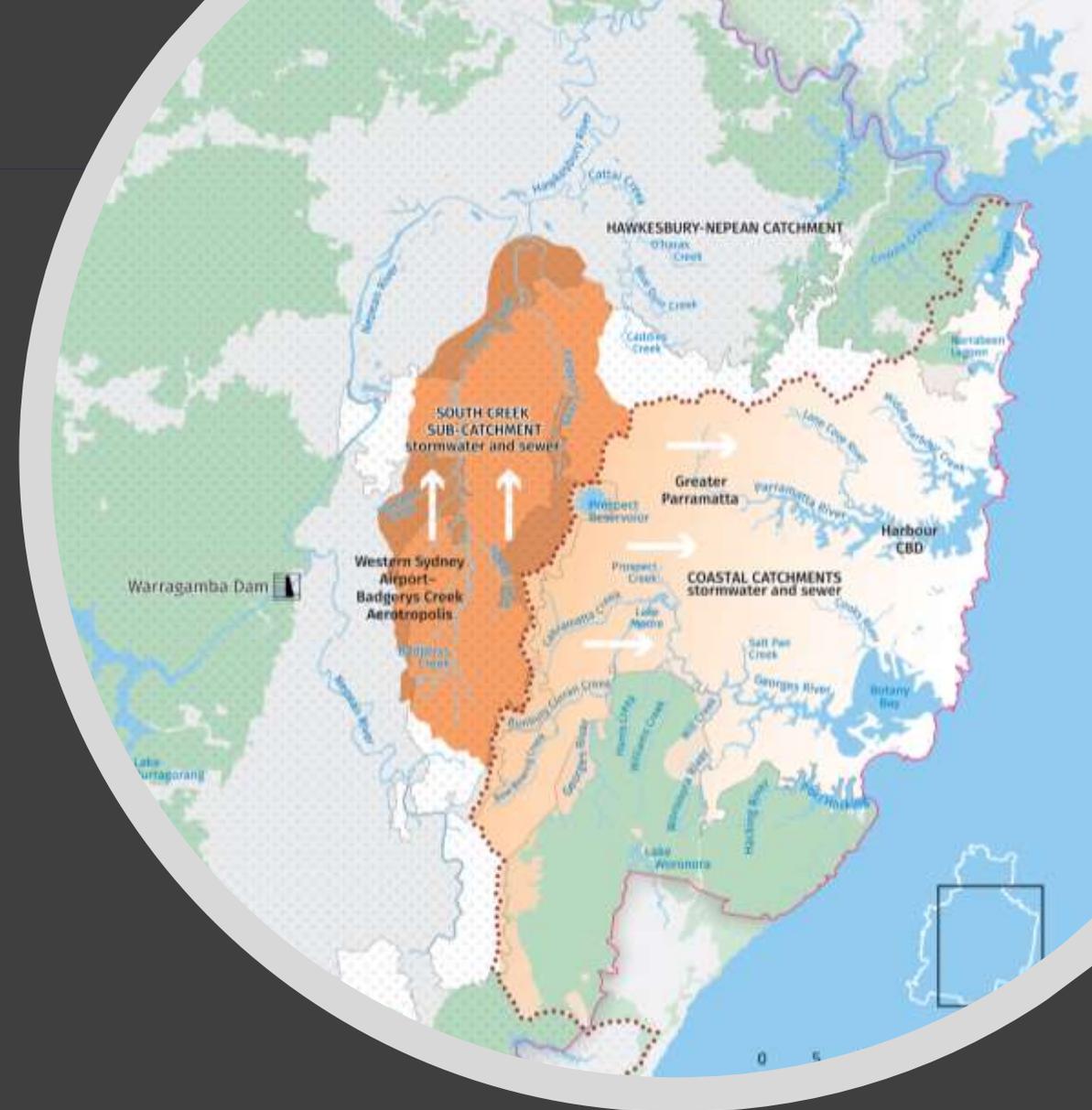
Werribee River, Victoria

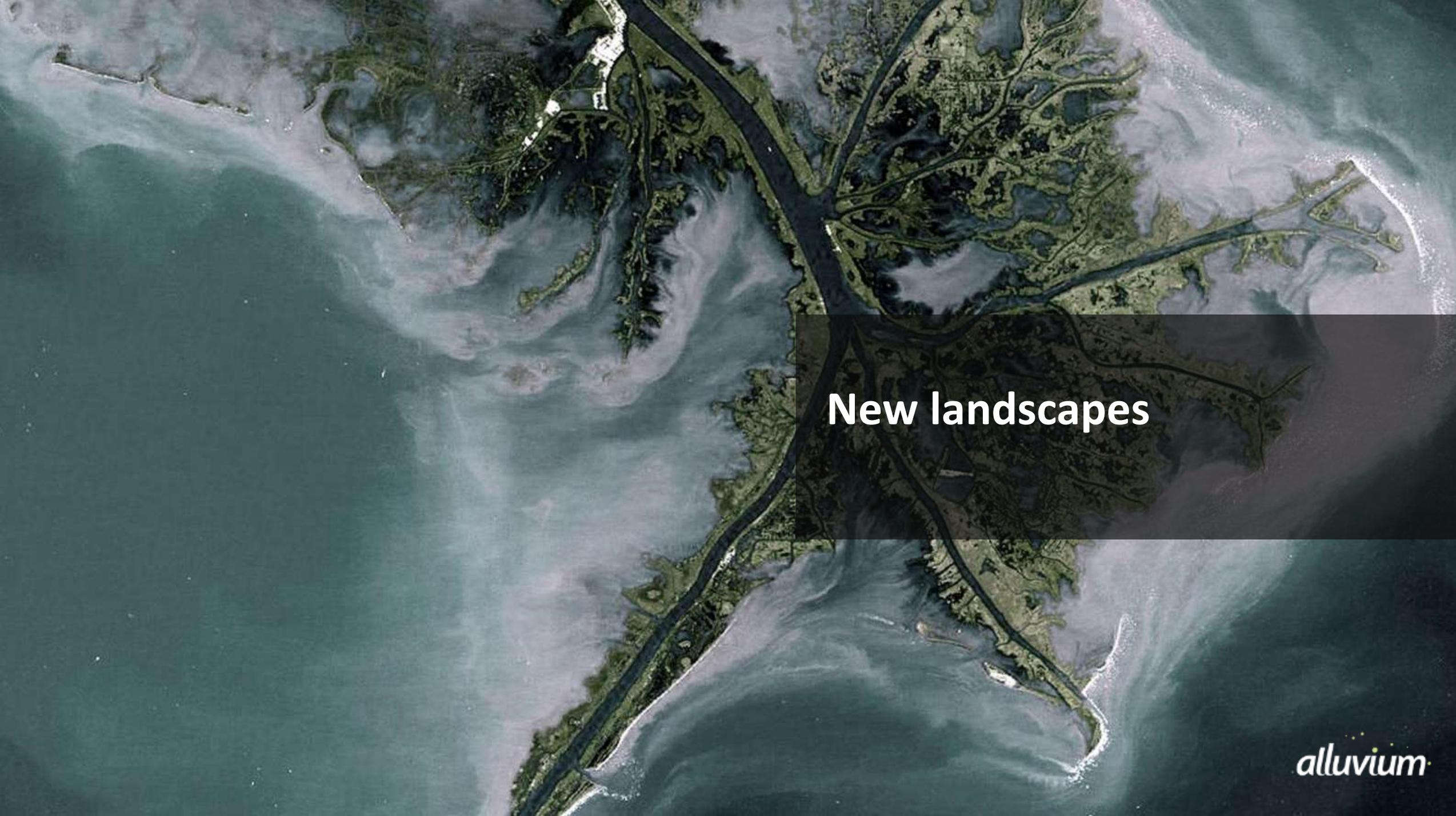
- 27% population growth
- 36% of Victoria's vegetables
- Extracted and salty recycled water
- Nature-based recreation
- Culture-based recreation



South Creek (Wianamatta), NSW

- An extra 0.8 million people by 2056
- 80% of proposed Western Parkland City
- Meeting ecological targets
- Orientation of high density and high quality spaces



An aerial photograph of a river delta, showing a central river channel that branches out into a complex network of smaller channels and distributaries. The land is a mix of green vegetation and light-colored sediment deposits. A semi-transparent dark grey rectangular box is overlaid on the right side of the image, containing the text "New landscapes".

New landscapes

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Meta-landscapes

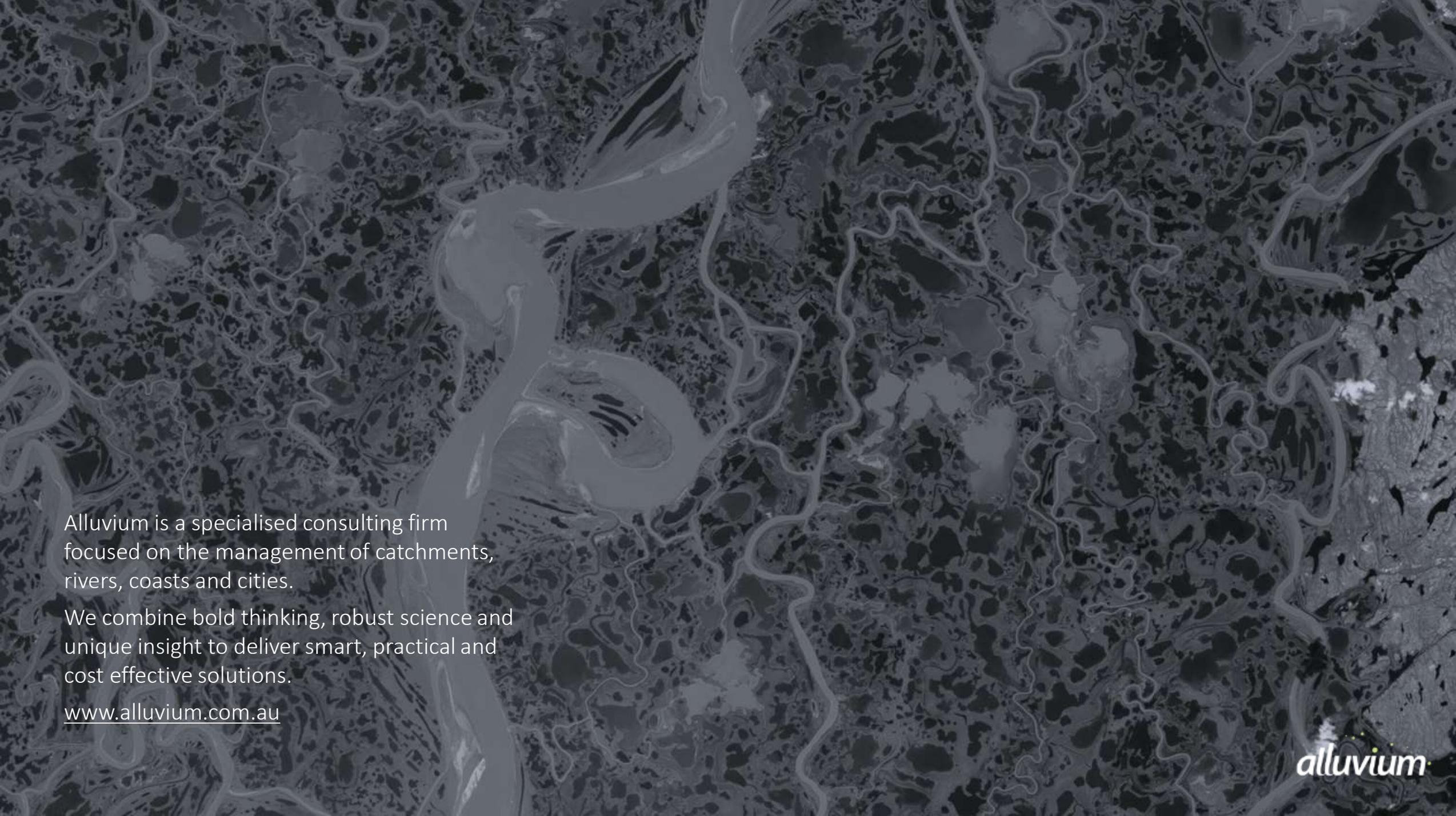


- Ecological landscapes
 - Urban ecosystems
- Social landscapes
 - Rivers as amenable spaces
- Melded landscapes
 - Reconnecting people with nature, people with people, places of nature and people (novel ecosystems)
 - Creating the arteries of the city (waterways corridors)
 - Concepts of new enlightenment – Liveability; National Park City

Strategic opportunism

- Urban renewal
- Related healthy waterway improvements
- Climate change adaptation
- Social infrastructure

Rethinking rivers within city-scale meta-landscapes

An aerial photograph of a river network, overlaid with a semi-transparent map showing the same network. The map overlay is a lighter shade of gray, highlighting the river channels and their confluences. The background is a darker, more detailed aerial view of the same area.

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focused on the management of catchments,
rivers, coasts and cities.

We combine bold thinking, robust science and
unique insight to deliver smart, practical and
cost effective solutions.

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The logo for Alluvium, featuring the word "alluvium" in a lowercase, sans-serif font. Above the letter "i" in "alluvium", there are several small, yellow-green dots of varying sizes, arranged in a slightly curved pattern, suggesting water droplets or a natural landscape feature.