

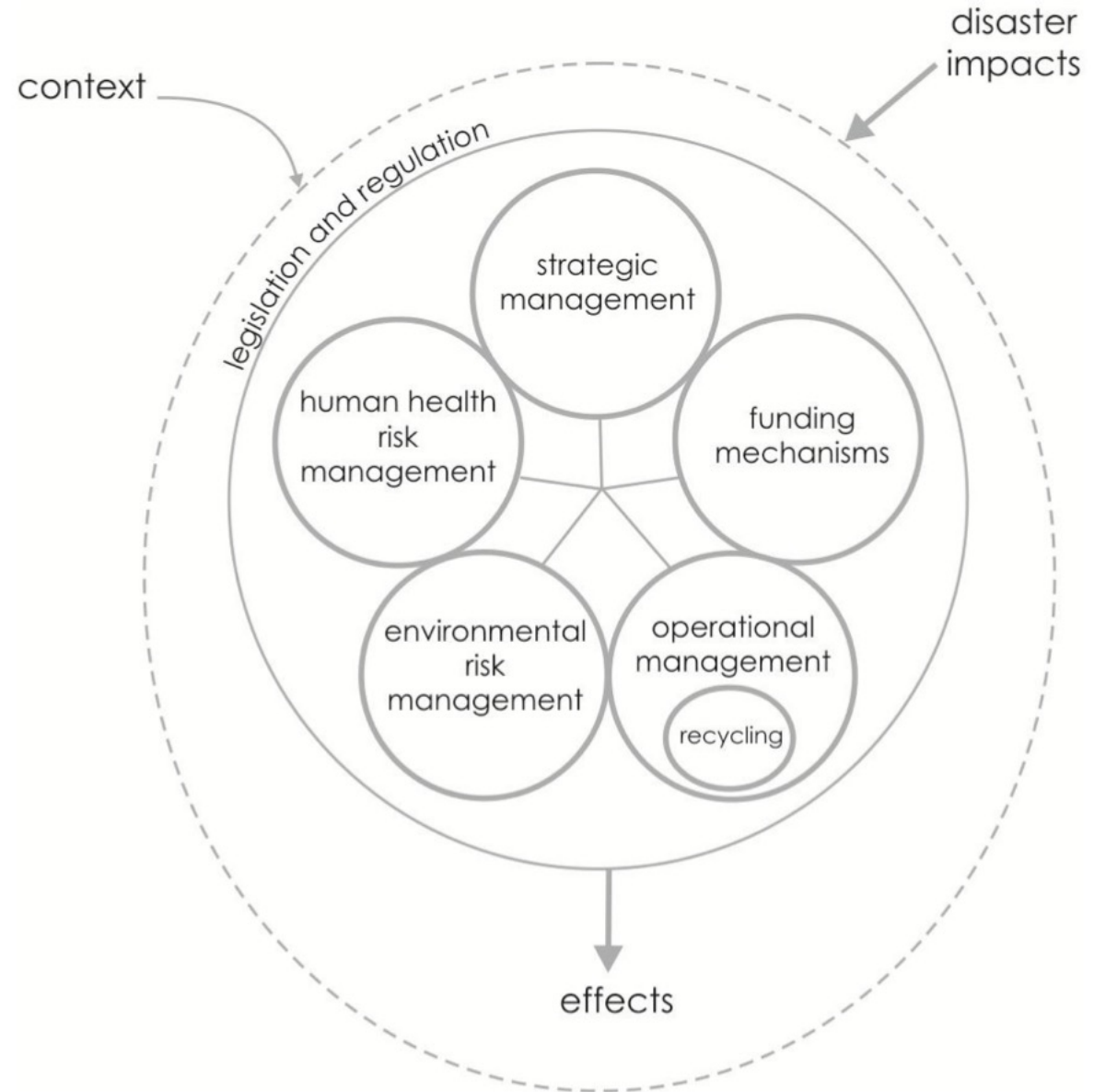
After an earthquake: the impacts of disaster waste

Charlotte Brown

Resilient 
ORGANISATIONS

Background

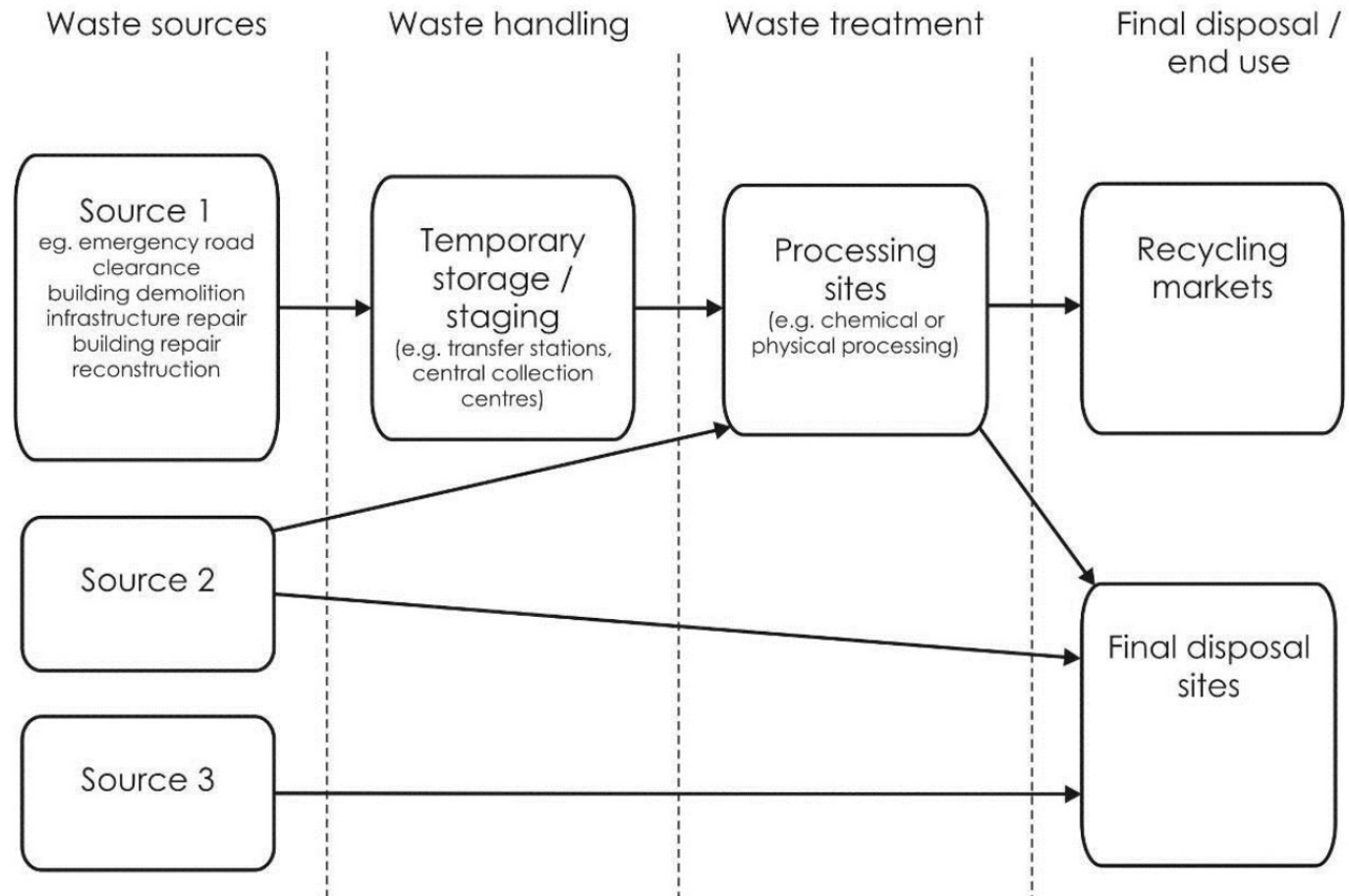
- PhD thesis
- 5 international case studies incl. 2010/2011 Canterbury earthquakes



Overview of DWM

- Waste generated from damage to built environment
- The way disaster waste is managed depends on
 - Size of event
 - Type of hazard
 - Funding (who is paying)
 - Governance and operational arrangements (private v public)
 - Legislation (pre and post event)
- How waste is managed impacts economic, social and environmental recovery
- Understanding DWM can potentially help to build case for functional recovery

Stages of DWM



Recycling of DWM

- Recycling rates depend on how demolition is carried out
- High value items recycled “pick’n’go”
- Low value materials mostly disposed
- Time:Cost:Safety:Environment



Rubble from the ruins stacked 25m high

DAVID WILLIAMS

Last updated 05:00 07/05/2011

0 comments

Text Size

Print

Share



DEAN KOZANIC/The Press

PILING UP: The makeshift landfill in Bottle Lake Forest Park.

Disposal of DWM

stuff.co.nz

NATIONAL

Stuff Home National

Kia or

Crime Education Health Politics Blogs Photos Videos Stuff Quizzes Weather Christchurch

Shock at proposed quake waste dump

SAM SACHDEVA AND NICOLE MATHEWSON

Last updated 05:00 15/09/2011

58 comments

Text Size

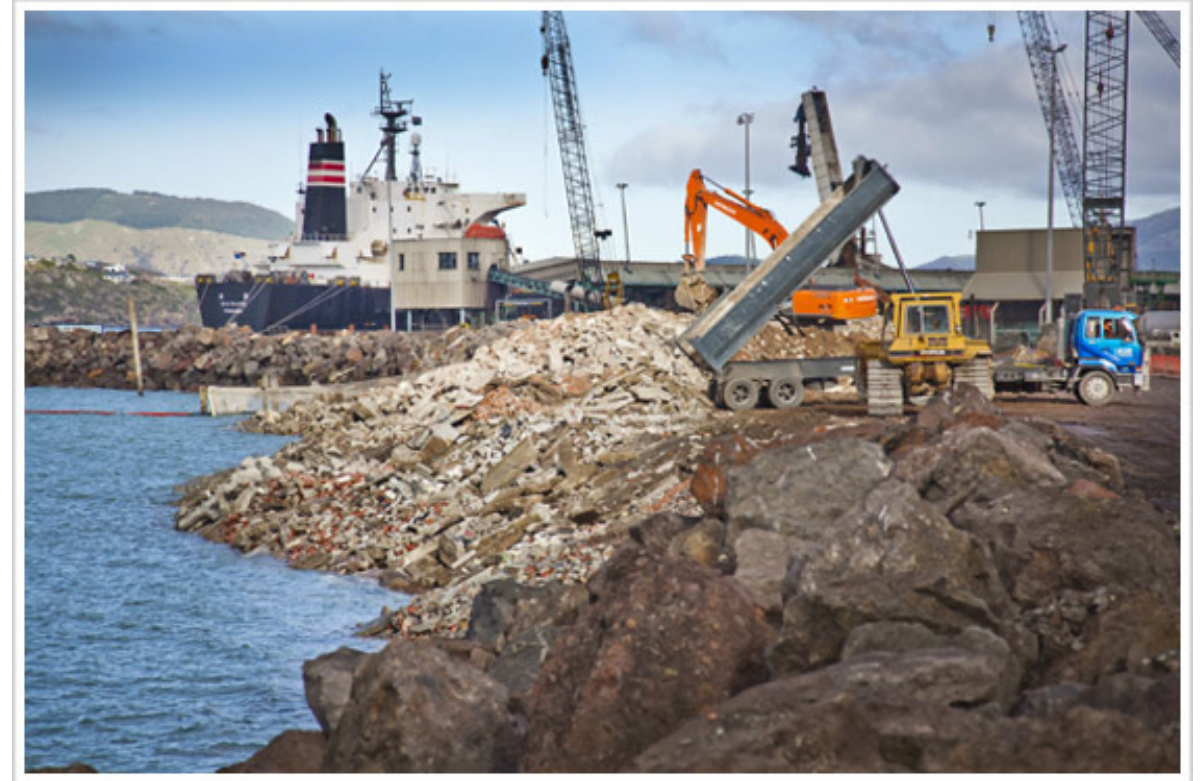
Print

Share



DON SCOTT/Fairfax NZ

NOT IMPRESSED: George Kear, left, and David Moorhouse present their submission opposing dumping rubble in their suburb to a Shirley-Papanui Community Board Meeting at the Papanui Youth Centre yesterday.



- Landfill
- Specially created earthquake disposal facilities
- Illegal disposal

Environmental and human health risk

- High risk situation
 - High volumes of waste
 - Cowboys (unqualified people doing demolition and waste management)
 - Mixed waste and hidden hazards
- Environmental and human health protections sometimes reduced for perceived savings (time and money)

Environmental and human health risk



THE PRESS **stuff.co.nz**

Christchurch Earthquake

February 22, 2011

Stuff Home The Press News Christchurch Earthquake 2011

Your Stories Earthquake Map 2011 Quake Victims Blog: Where there's a Will Car

Illegal quake-waste dumping under spotlight



THE PRESS
press.co.nz

Stuff Home The Press News

Press Communities Quizzes Contact us Pike River Disaster Christchurch Earthquake 2011

BREAKING NEWS Kiwi soldier killed in Afghanistan identified as Doug Grant ... Read more

Asbestos material dumped in riverbed

Dangerous asbestos found near Kowai River

MICHAEL WRIGHT

Last updated 05:00 15/07/2011 14 comments Text Size Print Share



Environment Canterbury (ECan) aims to stamp out illegal dumping after 240 kilograms of asbestos was found in a riverbed near Amberley.

The Hurunui District Council was alerted to the dump, on the banks of the Kowai River, last week and was able to have the asbestos removed before rising water could wash it away.

The material was thought to be white asbestos, commonly used in outbuildings, warehouses, garages and for interior walls until about 20 years ago.

Its importation was banned in 2002.

Hurunui District Council environment manager Judith Batchelor said: "Just imagine if a child had picked this up and started playing with it, inhaling the particles in the process."



Implications for Functional Recovery

- C&D waste is ‘not normal’ following an earthquake
 - Lower recycling rates (more waste to landfill +CH4 emissions)
 - Higher degree of hazards (human and environmental)
- Costs of C&D waste can be higher than in BAU
- Disempowerment through demolition by ‘others’
- Psychological impacts of destruction and time needed to enable rebuilding



Thank you

 www.resorgs.org.nz

or contact us directly:

Charlotte Brown

 +64 21 142 5420

 charlotte.brown@resorgs.org.nz

Resilient 
ORGANISATIONS