Climate Change Adaptation in Land Policy using Property Rights: an Australian perspective

Professor John Sheehan,
Deputy Director,
Asia-Pacific Centre for Complex Real Property Rights,
University of Technology, Sydney (UTS)

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Vulnerability of flood-liable Lands

The recent focus on sea level rise and coastal erosion has obscured the public view of changing climatic conditions in Australia.

Coastal impacts from changing conditions present issues which go to the heart of property and survey law, which will necessarily change in response to increased destructive events.

World Bank Report 2010

"Storm intensity will be higher. And sea levels are likely to rise by about one meter. Floods, droughts, and extreme temperatures will be much more common"

(*World Development Report 2010: Development and Climate Change* (Washington), 88)

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Such developments are reflected in the growing body of Australian case law which is concerned with the propriety of development in an environment of increasing climatic change. The Kyoto Protocol is evidence of the importance the global community attaches to climate change impact.

Compensation for climate change?

Four Crucial Questions:

1. If private property rights are to be inevitably and irreversibly damaged by sea level rise and flooding, and have no longer any practical private utility, what practicality remains for the former tidal boundary (known at common law as the mean high-water mark (delineating the public and private land title in such circumstances?

2. Is the permanently (or regularly) flooded private land effectively confiscated, and transferred by default to the State?

3. Where rapid changes to the coast occur through increased storm events, the swift erosion known as avulsion does not ordinarily result in any change to the property rights prior to the avulsive event. Is avulsion no longer appropriate in a stressed environment where increasing storm events of greater magnitude now occur?

4. What compensation mechanisms ought to be created to respond to these events?

If Australian States or local government have only limited ability or even unwillingness to meet compensation claims, perhaps other tools may be more acceptable.

Using Transferable Development Rights (TDRs) and Inverse Leaseholds (ILs)

Example: Transferable heritage floor space under the Central Sydney Local Environmental Plan 1996 provides a good explanation of this first radical interventionist property rights-related tool.

TDRs can crystalise the development potential of flood-liable properties, with the development potential transferred to other less impacted land in the adjacent low risk zone.

An appropriate multiplier factor is required to insure the value of the TDRs is such as to allow effective transfer of development potential away from the coast or river.

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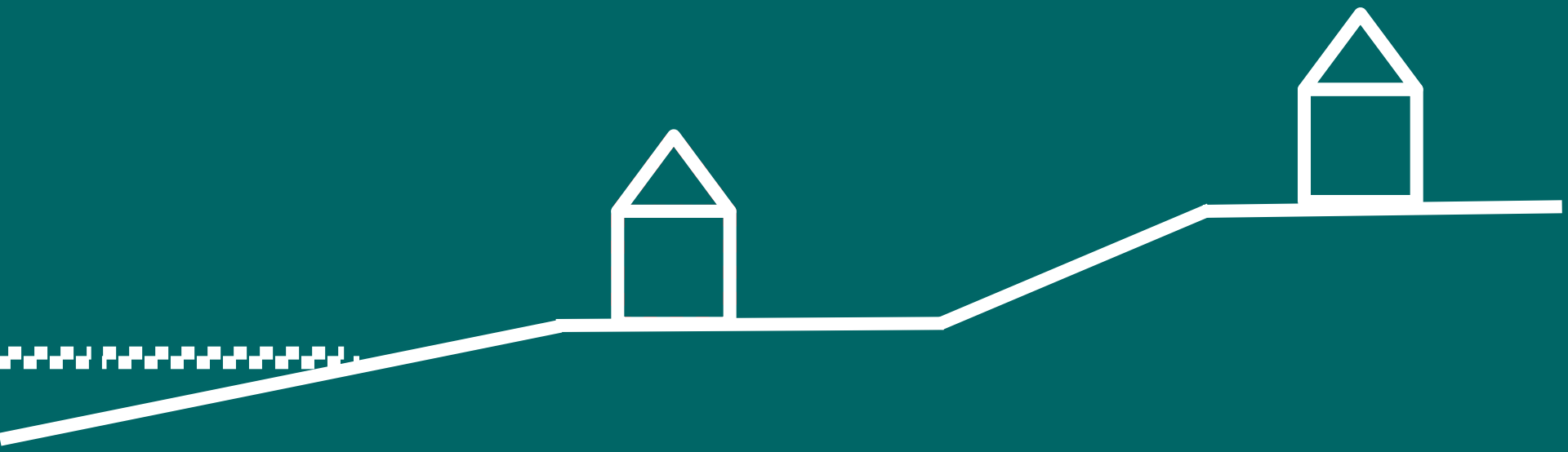

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TDR INTERVENTIONIST MODEL:

SEA FRONT LAND
1000 sqm FSR 3:1
@ $200/sqm = $600,000

REAR LAND
1000 sqm FSR 1:1
@$50/sqm = $50,000

REAR LAND WITH TDR
1000 sqm FSR 4:1
@ $200/sqm =$800,000

INVERSE LEASEHOLDS (Ils)

- An alternative to acquisition of upstream lands which maintains generally the utility of agricultural and forestry lands, whilst permitting their use for temporary or more frequent flood water retention.
- Payment of upfront premiums (rents) and annual or capitalised payments for the lease term in return for the flood retention use.

QUESTIONS?