

The continuing saga of how we keep shooting ourselves in the foot by failing to balance mitigation and adaptation needs in forming public policy: case of heat waves in BC

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MITIGATION:

Governments, at various scales, promote building sector GHG mitigation through: standards and incentives for builders.

In BC, the default condition for developers requires adherence to the building code. However, going beyond the standards in GHG reductions opens up many opportunities for exemptions to byelaws that decrease the net revenues to developers (e.g., square footage of developed space, required parking spaces, etc.)

The challenges:

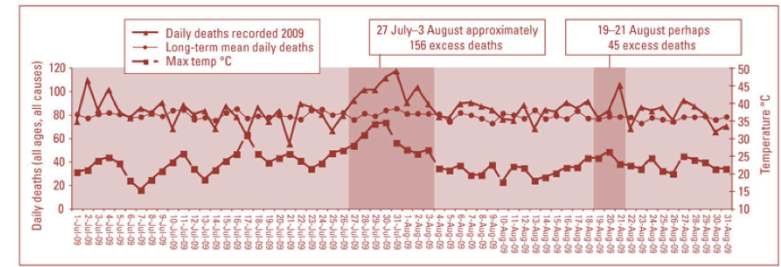
- 1) *The greatest exemptions are possible if no provision is made for air conditioning.*
- 2) *Green buildings receive additional premium from buyers who have no experience in such buildings.*
- 3) *Green architects believe they can build passively cooled buildings without recognizing how low the temperature of an effective refuge needs to be.*

Adaptation:

Governments, at various levels, have developed a heat wave response plan.

The challenges:

- 1) *Most city planners believe all they need is access to green spaces.*
- 2) *The plan does not include monitoring where the vulnerable live, and how they should be transported to refugia.*
- 3) *Metro Vancouver will require refugia for at least 180,000 vulnerable residents. There is an outline of a plan, but no planning for refugia through having an appropriate building stock.*



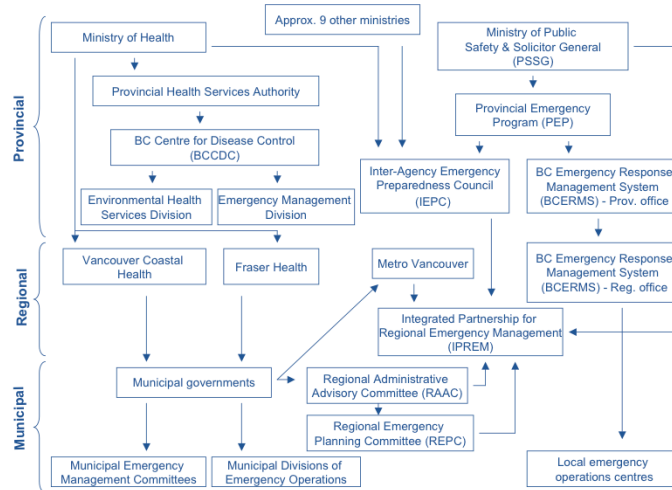
Impacts:

~200 excess deaths attributed to two 2009 heat-waves in Vancouver (pop. 800k). The region's very mild weather results in higher sensitivity to temp anomalies (Kalkstein, 1997).

The challenges:

- 1) *Local authorities are adopting inappropriate heat wave warning thresholds.*
- 2) *Refuge needed for 2-4 hrs @ 24°C.*

1. Recognize psychology of decision-makers and phenomenon of focus on one objective.
 2. Develop some method (maybe public choice game) to deepen appreciation of interactions between mitigation & adaptation.
 3. Evolve building codes and developer incentives to reflect the dual objectives more completely through using lifecycle energy-use & GHG targets/m² and awareness of solutions like solar heating/absorption chillers.



Institutional Framework for Emergency Planning and Response in British Columbia

Solutions?