

# Climate Action Co-benefits and Community Planning

## **CITY OF VANCOUVER LUNCH-AND-LEARN**



*Source: Thom Quine*

**Dr. Robert Newell and Dr. François Jost**

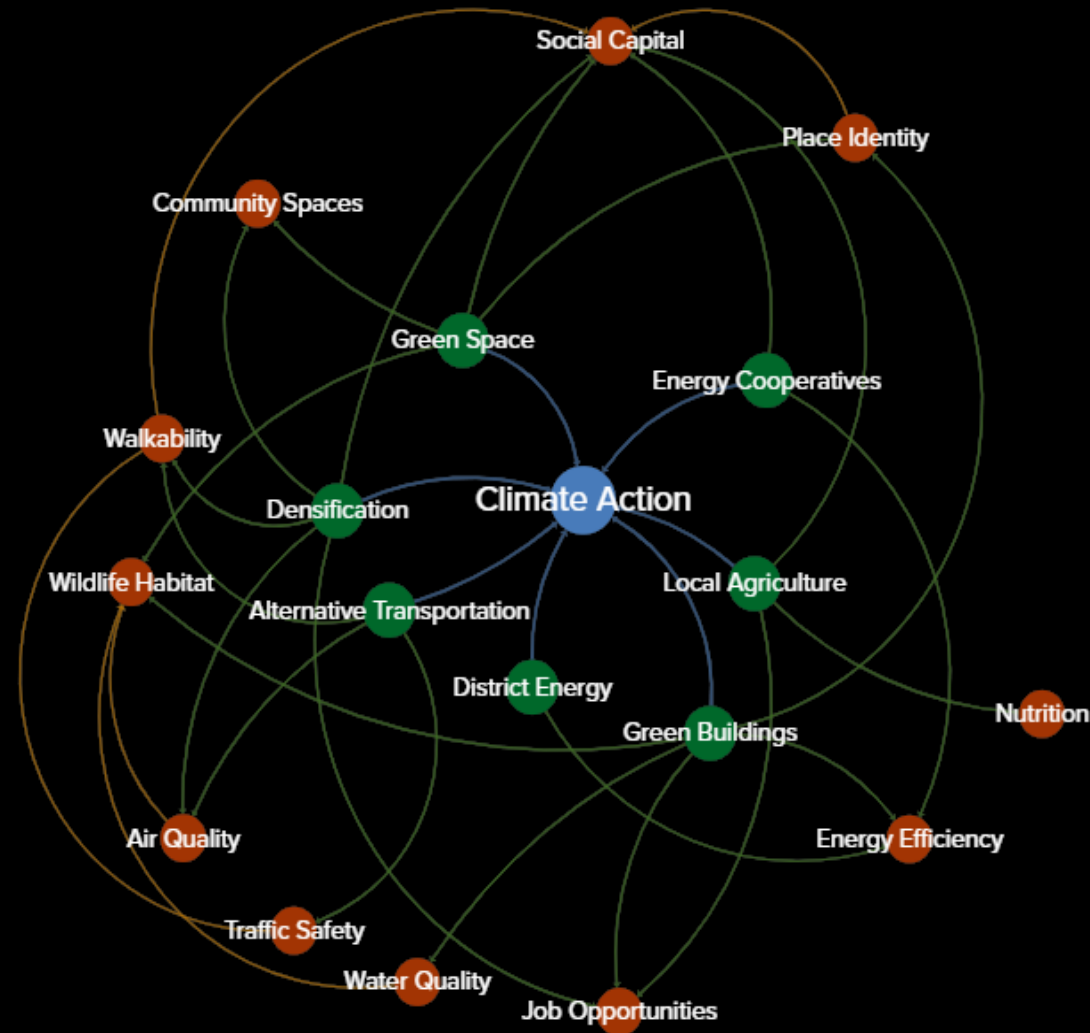
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# Climate Action Co-benefits and Community Planning

## CO-BENEFITS AND INTEGRATED PLANNING

*Climate action co-benefits* are community benefits that occur from acting on climate change that extend beyond mitigation and adaptation

*Mapping co-benefits* can provide a comprehensive 'picture' on the relationships between different community strategies and goals



# Climate Action Co-benefits and Community Planning

## MEETING THE CLIMATE CHANGE CHALLENGE (MC<sup>3</sup>)



### Community interviews (2012 and 2016)

- Vancouver
- North Vancouver
- Surrey
- Eagle Island (West Vancouver)
- Victoria
- T'Sou-ke First Nations
- Campbell River
- Dawson Creek
- Prince George
- Revelstoke
- Carbon Neutral Kootenays

### Coded data and examined relationships

- Strategies
- Benefits
- Problems (e.g., challenges, trade-offs)



## 'MAPPING' CO-BENEFITS, TRADE-OFFS AND CHALLENGES

## Light blue nodes – strategies

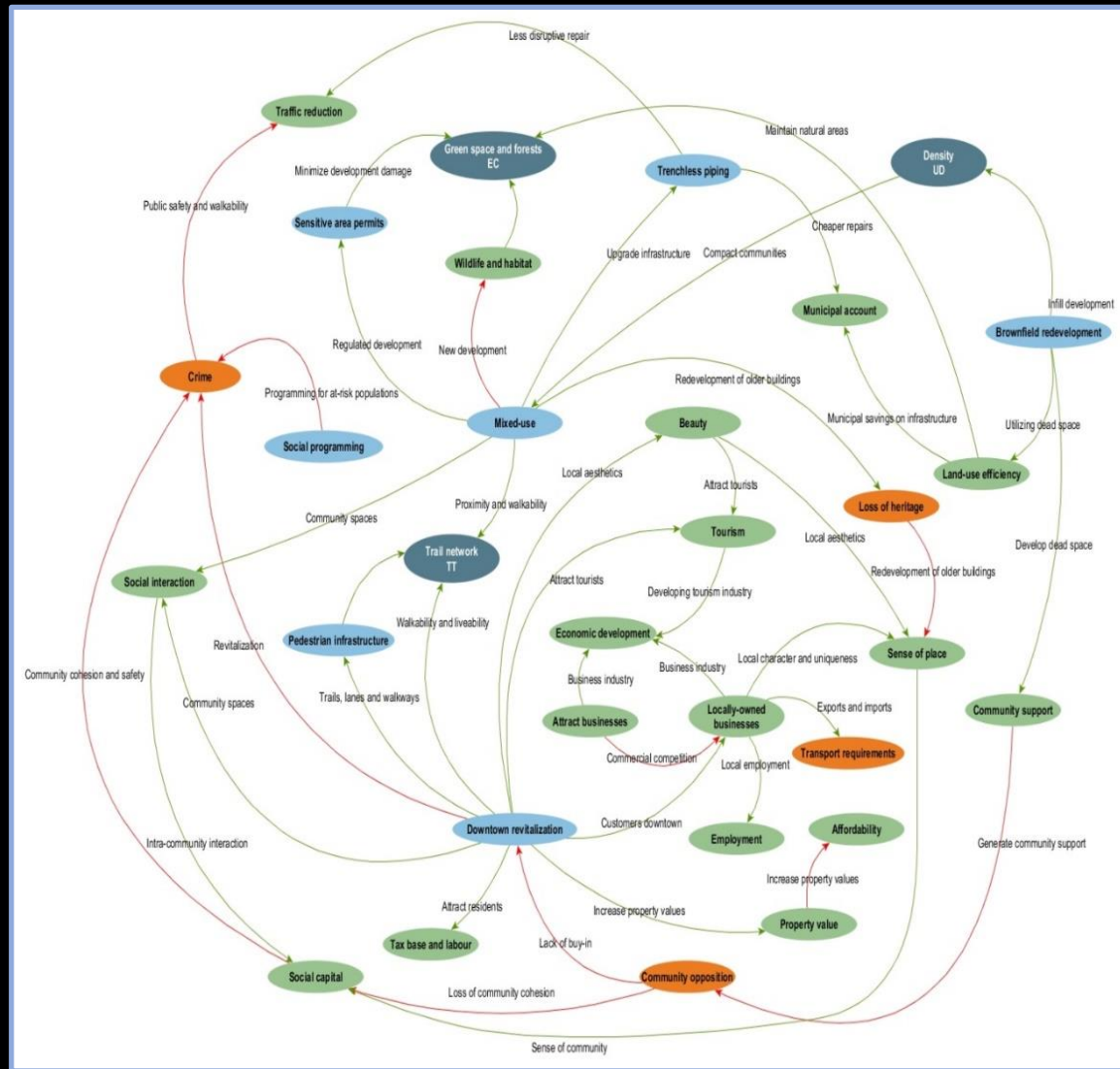
**Dark blue nodes** - strategies linking to another model

## Green nodes - benefits

## Orange nodes – problems

## Green connector – positive

## Red connector - negative



## ‘MAPPING’ CO-BENEFITS, TRADE-OFFS AND CHALLENGES

**Light blue nodes** – strategies

**Dark blue nodes** - strategies linking to another model

**Green nodes** - benefits

**Orange nodes** – problems

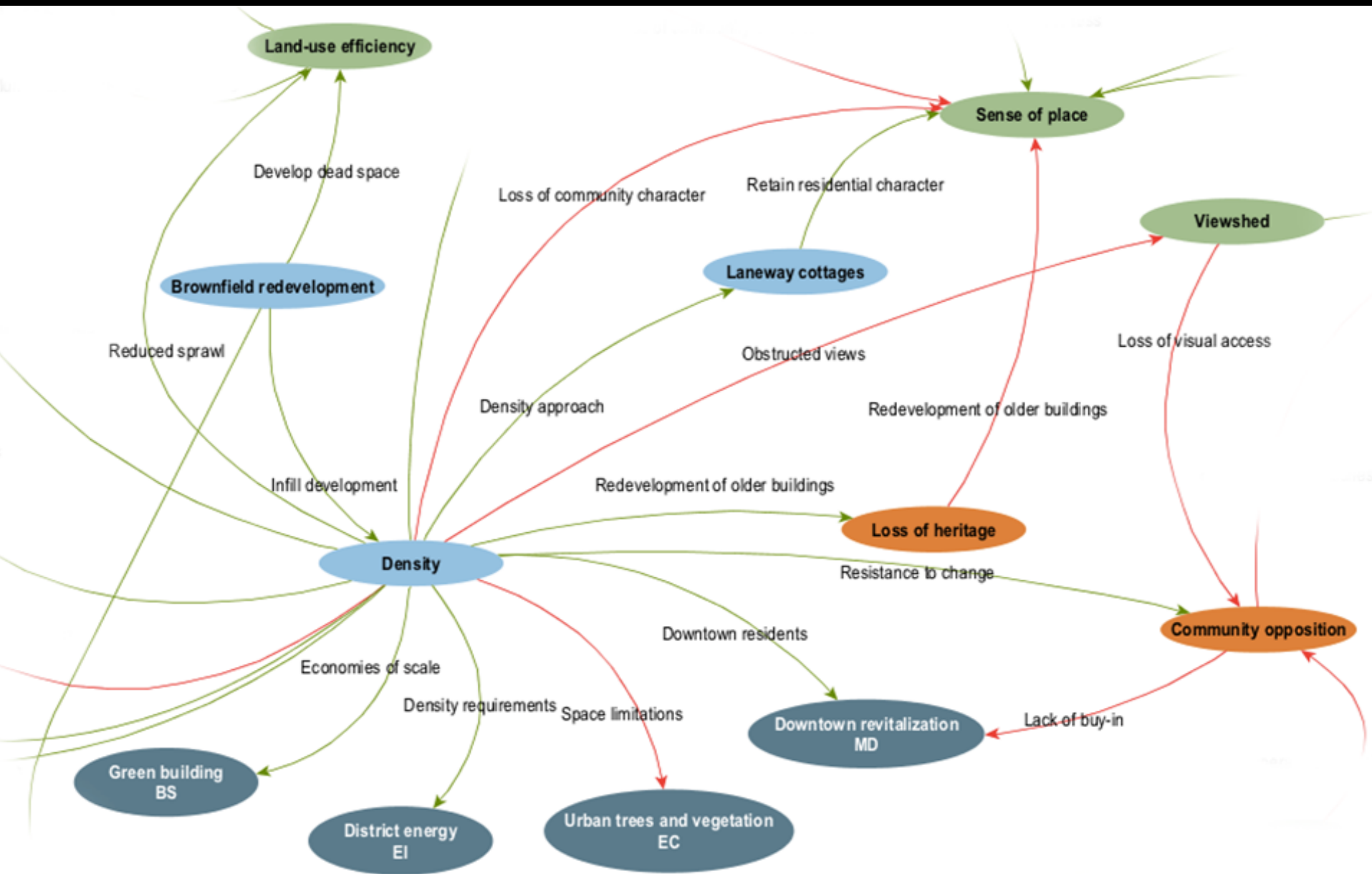
**Green connector** – positive

**Red connector** - negative

- 
- **Densification**
  - **Mixed-use and downtown revitalization**
  - **Buildings**
  - **Energy Innovation**
  - **Trails and transportation**
  - **Ecological capital**
  - **Waste and water**

# Climate Action Co-benefits and Community Planning

## 'MAPPING' CO-BENEFITS, TRADE-OFFS AND CHALLENGES



# USING CO-BENEFITS MODELS FOR COMMUNITY PLANNING

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Image source: The *Spaces, Places and Possibilities* research project, [www.crcresearch.org/spaces-places-and-possibilities](http://www.crcresearch.org/spaces-places-and-possibilities)

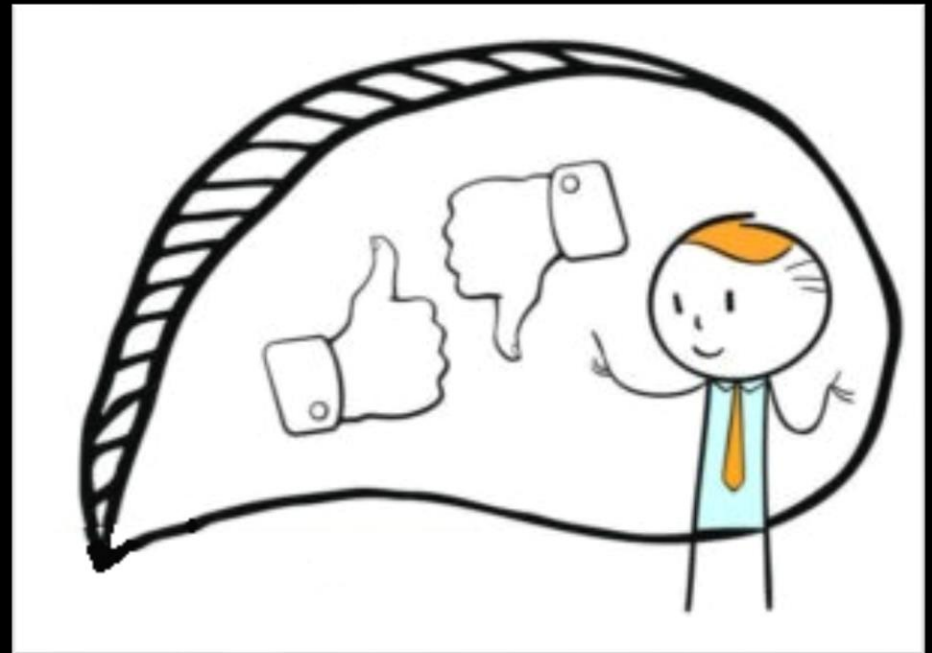
## VANCOUVER CASE STUDY

From interviews: Co-benefits **advantage in communicating**

People tend to disagree with parts of the narrative or **avoid CC** discussions (often associated with **negative sentiments**).

-> **Focus on co-benefits:**

Quality of life and health,  
energy conservation, or the economic  
benefits.





## VANCOUVER CASE STUDY

Explicitly stated co-benefits:

### Adaptation

To respond to flood mitigation & erosion from strong currents:

-> Building out the land was encouraged.

Could profit from  
**beach nourishment &  
build up the foreshore**  
(w/ green infrastructure).

-> Recreation, quality of life &  
health, env. education



# Climate Action Co-benefits and Community Planning

## VANCOUVER CASE STUDY

Explicitly stated co-benefits:

### Knowledge dissemination

Based on the reasoning that youth engage more:

-> use technology and social media for communicate

**Increased awareness &  
people's involvement  
w/ climate related  
issues**  
  
(discussions, daily  
activities, politics)



## VANCOUVER CASE STUDY

### Explicitly stated co-benefits:

#### Building code changes

Requirements for higher energy efficiency

-> Buildings are typically ventilated by just puffing the air it into the halls.  
(puffing in air from the parkades, including carbon monoxide)

By requiring **direct ventilation** in the suites the **air quality has improved.**



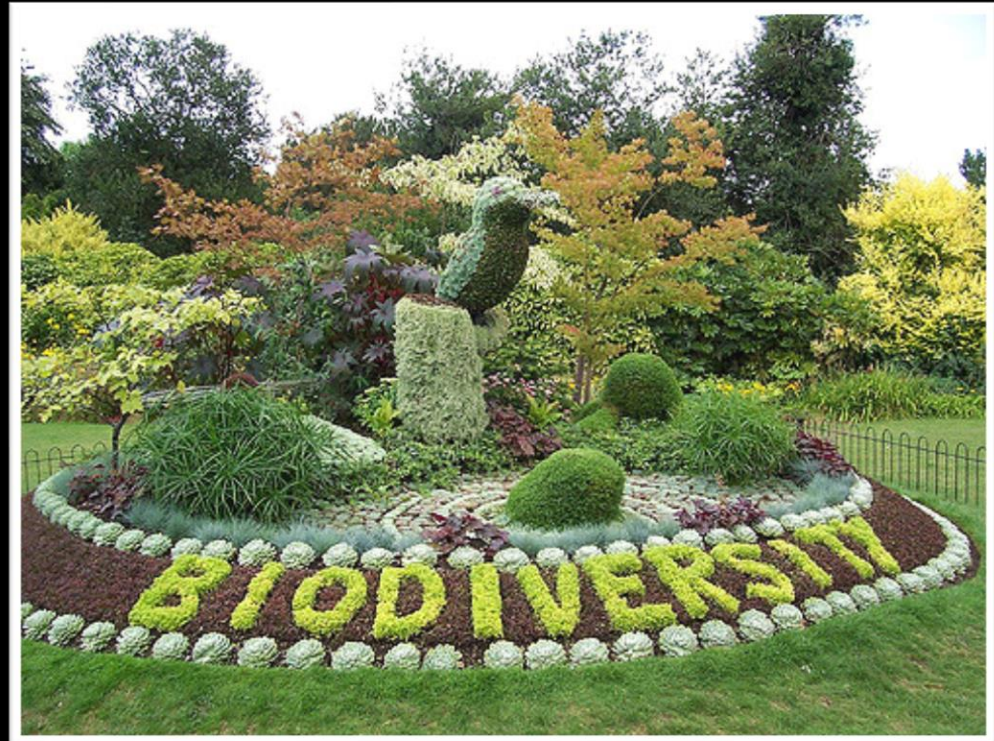
## VANCOUVER CASE STUDY

Explicitly stated trade-offs:

Trade-off: **Biodiversity**

Imperfect symbiosis between CC action & Biodiversity action:

-> **Efforts to support**  
endangered wildlife  
**are being diverted**  
towards carbon  
reduction.





## VANCOUVER CASE STUDY

### Explicitly stated trade-offs:

Trade-off: **Housing density**

With single family zones > 70% of the city, and in spite of the benefits, residents not in favor of increasing housing density.

-> Residents **unwilling to change their status quo.**





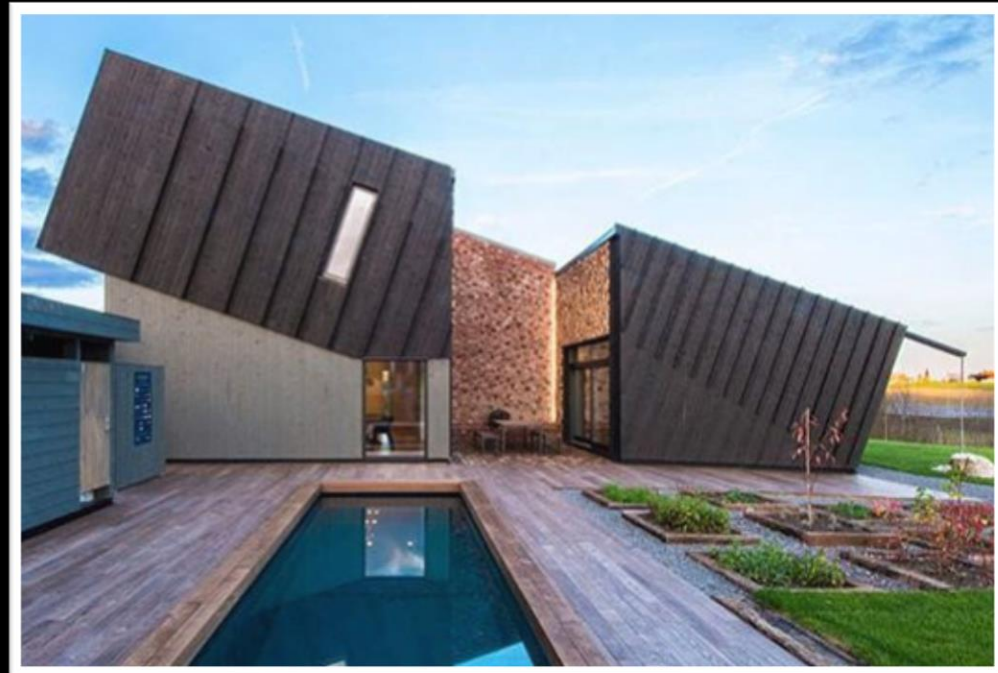
## VANCOUVER CASE STUDY

Explicitly stated trade-offs:

Trade off: **Affordability agenda**

Social circumstances make changes in residential development more problematic.

-> **Green** or zero-emission buildings **increase initial construction costs**.



# Climate Action Co-benefits and Community Planning

## VANCOUVER CASE STUDY

- Explicitly stated co-benefits: From Greenest City Action Plan

### Green Buildings

#### Zero Emissions Buildings

Building tools

Green Transportation

Zero Waste

Access to Nature



## Zero Emissions Buildings

For residents, zero emissions buildings:

- Improve comfort, by better managing temperature
- Improve health, by better managing fresh air throughout the building
- Reduce noise, through better insulation and airtightness
- Require less energy, helping you to lower your energy bills
- Are more durable