

# **CLIMATE CHANGE: AN ETHICAL FRAMEWORK**

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## STATEMENT OF RELEVANCE

Despite the scientific basis supporting climate change and the inexplicable role of anthropogenic activity in spurring this phenomenon, policy initiatives and public opinion outside of the scientific realm fail to wholly address the complexity and seriousness of this issue. Climate change presents a new kind of ethical dilemma impacted by the various confounding interests of the continually developing world.



# ETHICAL SIGNIFICANCE

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Source: Canva (2019) [Computer Software]. Sydney, Australia: Canva, Inc.

## BLAME GAME

- Political decision making
- Developed versus developing: Who is impacted versus who is primarily driving the issue?
- Determining cause versus effect

## ECONOMIC GROWTH

- Embedded industry practices
- Uncertain causal relationship between energy consumption and economic growth of a country

## SUSTAINABILITY

- Ethical responsibility to maintain habitable world
- Is sustainability feasible for continued growth?

# IMPLICATIONS

## HUMAN HEALTH

- Direct
- Ecosystem-mediated
- Human institution-mediated (Watts et al., 2018)

## LABOR

- Rural labor capacity down 5.3% between 2000 and 2016 (Watts et al., 2018)
- Product of temperature change
- Most notable in low-middle income countries

## WEATHER- RELATED DISASTERS

- Weather related events = more than 90% of all disasters worldwide since 1998 (Watts et al., 2018)

## FOOD SECURITY

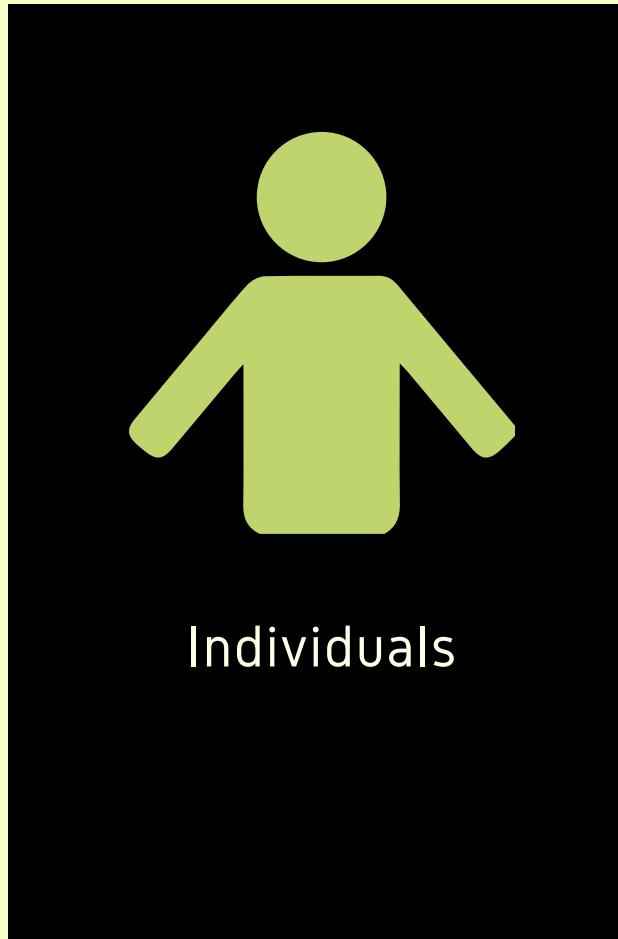
- Marine productivity
- Crop dependence
- Highest vulnerability for undernutrition = predicted high impact of climate change (Watts et al., 2018)

## POPULATION DISPLACEMENT

- Currently: 4400 solely climate change-related migrants (Watts et al., 2018)
- Multifactorial nature of migration

# STAKEHOLDERS

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Individuals



Health  
professionals



Agriculture and  
Industry



Countries (High  
vs low-middle  
income)

# CULTURE AND CLIMATE

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Source: Canva (2019) [Computer Software]. Sydney, Australia: Canva, Inc.

## BELIEFS ABOUT SCIENCE

- Resorting to rule of thumb amidst complexity rather than reviewing evidence (Hornsey, Harris, Bain, & Fielding, 2016).
- Consensus = correctness?

## VALUES AND IDEOLOGIES

- Individualistic values may predispose elite values - less likely to believe that industry is harming the environment (Hornsey, Harris, Bain, & Fielding, 2016).
- Free market views

## CULTURAL PRACTICES

- Urban versus rural
- Emphasis on environment

# OPPOSITION AND CHALLENGES

## TREND SKEPTICS

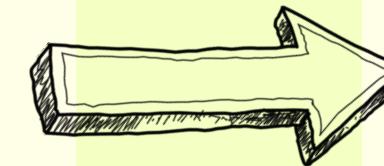
- Believe there is no trend in rising temperatures or sea levels (Steenjies et al., 2017)

## ATTRIBUTION SKEPTICS

- Believe climate change is meritable, but not caused by human activity (Steenjies et al., 2017)

## IMPACT SKEPTICS

- Believe climate change is real and caused by human activity, but won't be detrimental to the Earth (Steenjies et al., 2017)

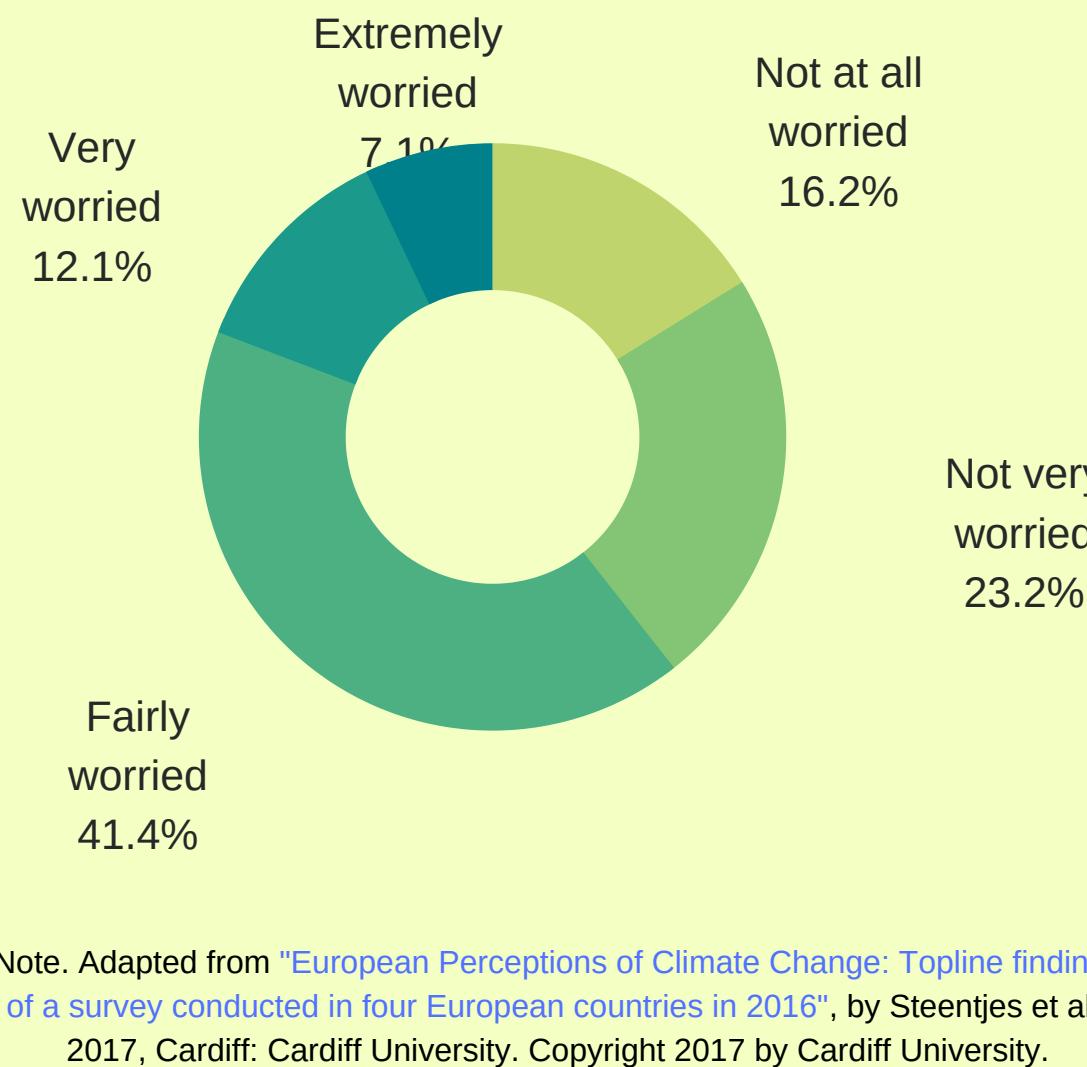


## DRIVEN BY...

- Cultural perceptions
- Attitudes towards science (education)
- Political climate
- Conflicting interests
- Media portrayal

# CASE STUDY: UNITED KINGDOM

FIGURE 1: LEVELS OF WORRY REGARDING CLIMATE CHANGE



- First Western country to exploit fossil fuels (Steenjes et al., 2017)
- World leader: Climate Change Act of 2008 -> temporary consensus
- Dilemma: media portrayal - importance placed on highlighting skeptic views within media, despite fact that only a small portion of UK citizens negate climate change (Steenjes et al., 2017)
- People vs Politics: political interests driving nuclear energy despite public disapproval

# Resolution Framework

## TRANSDISCIPLINARY APPROACH

- Optimally shift policy to reflect impacts of human preference as dependent on external factors (Creutzig et al., 2018)
- Policy as a tool for behavior change

## URBAN RE-DESIGN

- Compact cities
- Impact of built environment on transportation behaviors
- People-centric design

## PEOPLE-FIRST STRATEGY

- Emphasize personal impacts of climate change
- Shift portrayal and communication strategies

# 1. TRANSDISCIPLINARY APPROACH

## POLICY AND BEHAVIOR CHANGE

- Demand-side solution
- Policy measures to change human preferences
- Humans as encultured agents (Creutzig et al., 2018)
- Human nature + the natural environment



# BEHAVIOR CHANGE



## DIRECT VS INDIRECT BEHAVIORS

- Indirect: voter support for climate change initiatives (Tobler, Visschers, & Siegrist, 2012)
- Direct: individual lifestyle changes to mitigate climate change factors (Tobler, Visschers, & Siegrist, 2012)

## LOW COST AND CONVENIENCE

- Policy environment should rely on changes being convenient and low cost enough for environmental concern to take precedence in everyday life (Tobler, Visschers, & Siegrist, 2012)

## LOCUS OF CONTROL

- Focus on humans as capacitors of change
- Powerlessness = lack of action

## 2. URBAN RE-DESIGN

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### TOWARDS NEOTRADITIONAL NEIGHBORHOODS AND CITIES



- Present = lack of connectivity
- Urban environment as accelerant or deterrent of transport options
- Quality of the built environment
- Convenience and accessibility

# CASE: CURITIBA, BRAZIL

## INTEGRATED PUBLIC TRANSPORT

- Express route system
- Mass transit financed almost entirely by fares (Nationen, 2013)
- Increased ridership and decreased use of automobiles

## LAND USE

- Polluting industry not allowed in Curitiba Industrial City (Nationen, 2013)
- 60 square meters green area/inhabitant (Nationen, 2013)
- Policy protection of waterways
- Incentivization in low income communities; increased access

## PRIORITIZATION

- Challenge: ongoing growth requires shift in policies (Netionen, 2013)
- Embracing sustainable action = societal benefit

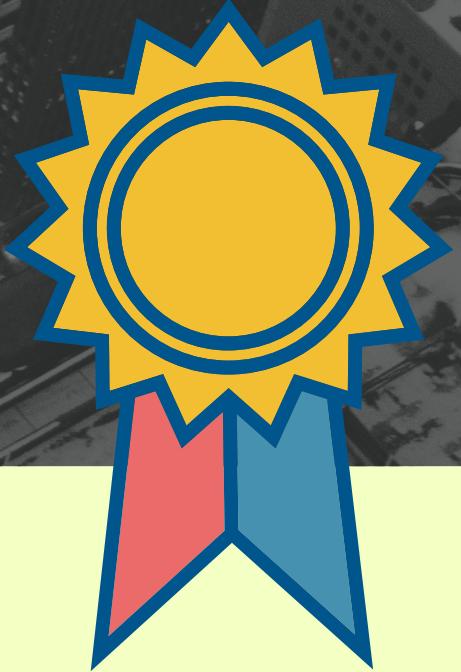
# 3. PEOPLE FIRST STRATEGY

## DISSEMINATION OF CLIMATE CHANGE KNOWLEDGE

- Extrinsic incentives + intrinsic appeal (Van der Linden, Maibach, & Leiserowitz, 2015)
- Certain versus potential loss
- Relevancy framing
- Experience driven communication



# Key Factors: People First



## NOW OR LATER?

- Loss portrayed as far in the future
- Undermines urgency

## WHY ME?

- Can one individual really make a difference?
- Making issue locally relevant

## HOW DO I BENEFIT?

- Natural disaster risk
- Impact on future generations

# THE FUTURE OF CLIMATE AND HUMAN HEALTH

## LOOKING FORWARD

- Can we stop climate change in time?
- Bridge the divide between economic viability and sustainability
- Existing ethical framework - too deep rooted?
- Climate change as a political bargaining chip



Source: Canva (2019) [Computer Software]. Sydney, Australia: Canva, Inc.

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