INFLUENCING SOCIAL NORMS TO PROMOTE GREATER CLIMATE CHANGE ADAPTION MEASURES TO MINIMIZE FLOODING

ABSTRACT

Drawing on a PhD project that focuses upon the UK calling upon international case studies, this research specifically addresses changing people's attitudes, beliefs and values so that socially sustainable behaviour is adopted instead of "collective conservatism" (Thaler, R.H and Sunstein,C.R.,2008), promoting climate change adaption measures in the form of rain gardens, under the umbrella of climate change neighbourhoods.

By examining current methods of climate change adaption, and via a thorough understanding of community action and the social norm approach, this research contributes to the broader discussion around social nudges, assessing whether they are effective at shifting attitudes to encourage citizens to adopt socially beneficial behaviour, ultimately increasing participation in and responsibility for the environment.

RATIONALE CONTEXT

1. Climate-related extreme impacts such as heat waves, droughts, floods, cyclones, and wildfires have been shown to be increasing, revealing a significant vulnerability for people and ecosystems. All continents are experiencing more of these events, and recent findings starkly illustrate how ill prepared we are to meet extreme climate impacts(IPCC, 2014).

2. Global risks from climate change are more prevalent and concentrated within urban areas. These include increased extreme precipitation leading to surface water flooding, inland and coastal flooding. Urban centres are particularly impacted due to building densities, increased impervious surfaces, and high population concentrations (CIRIA, 2013).

3. Throughout history, people and societies have adjusted to and coped with climate, climate variability and extremes with varying degrees of success. Adaption is becoming embedded in some planning processes, with adaption policy in Europe being developed across all levels of governance including coastal and water management, environmental protection, land planning and disaster risk management. Engineered and technological options are common responses that adapt to climate change, but "soft" solutions have increasingly been seen as preferable to "wicked problems" (Rittel et al.,1973) and more recently as defined "super wicked problems" (Lazarus, R.J., 2009; Levin et al., 2012).

METHODOLOGY

A. Drawing upon extensive research by Stern,P., 2000 into drivers for ecological citizenship and pro-environmental behaviours, this research looks at utilising personal values and beliefs to alter norms, which will incentivise and motivate people into adopting "personal responsibility".

B. By highlighting the "misperception hypothesis" (Perkins, H.W and Berkowitz,A.,1986) and salience of the norm (Cialdini et al., 1990) this research seeks to explore ways of correcting those misconceptions and repositioning salience through community engagement methodologies, in so doing forging collective action that promotes localised prevention of flooding, reducing vulnerability and increasing resilience; with the aim of incentivising people into adopting pro-environmental behaviour that encourages rain garden adoption and become climate resilient neighbourhoods.

GAP

1. Increasingly there is recognition of the value of social, institutional and ecosystem-based measures, but in spite of this, there are still considerable barriers and constraints to adaption.

2. Adaption to "(super) wicked problems" is undertaken both as top-down and bottom-up approaches, but all too often emphasis is placed on top-down approaches leading to an over reliance on experts managing the issues and problems on our behalf, reducing "personal responsibility".
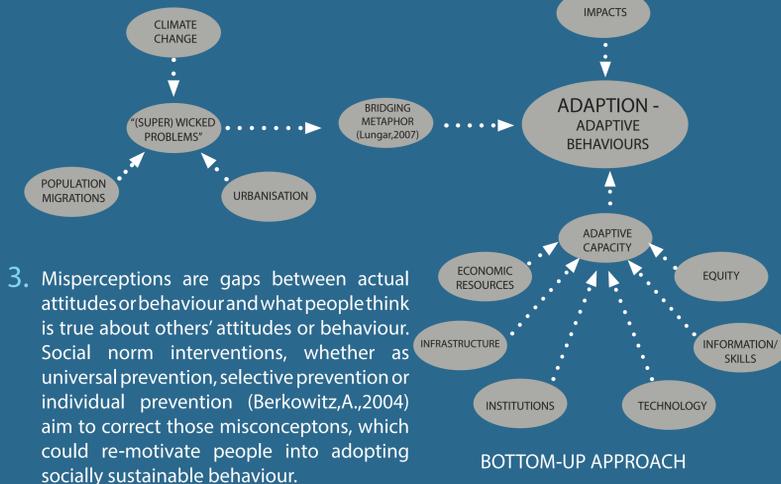
3. Misperceptions are gaps between actual attitudes or behaviour and what people think is true about others' attitudes or behaviour. Social norm interventions, whether as universal prevention, selective prevention or individual prevention (Berkowitz,A.,2004) aim to correct those misconceptons, which could re-motivate people into adopting socially sustainable behaviour.

TOP-DOWN APPROACH

SUSTAINABLE DEVELOPMENT → POLICY → REGULATIONS/ SANCTIONS → IMPACTS → ADAPTION - ADAPTIVE BEHAVIOURS

CLIMATE CHANGE → (SUPER) WICKED PROBLEMS → BRIDGING METAPHOR (Lungar,2007) → ADAPTION - ADAPTIVE BEHAVIOURS

POPULATION MIGRATIONS — URBANISATION

ADAPTIVE CAPACITY: ECONOMIC RESOURCES, INFRASTRUCTURE, INSTITUTIONS, TECHNOLOGY, INFORMATION/ SKILLS, EQUITY

BOTTOM-UP APPROACH

QUESTIONS

- What role do our personal values play in determining motivation and intent for adapting pro-environmental behaviour?
- To what degree can a series of "social nudges" that correct misperceptions and reposition salience increase the likelihood of pro-environmental behaviour encouraging "personal responsibility" to localised flood prevention ?
- Can engagement as community participation via "deliberate dialogue" act as a multi-component social norm intervention?

URBANISATION

1950

2010

2050
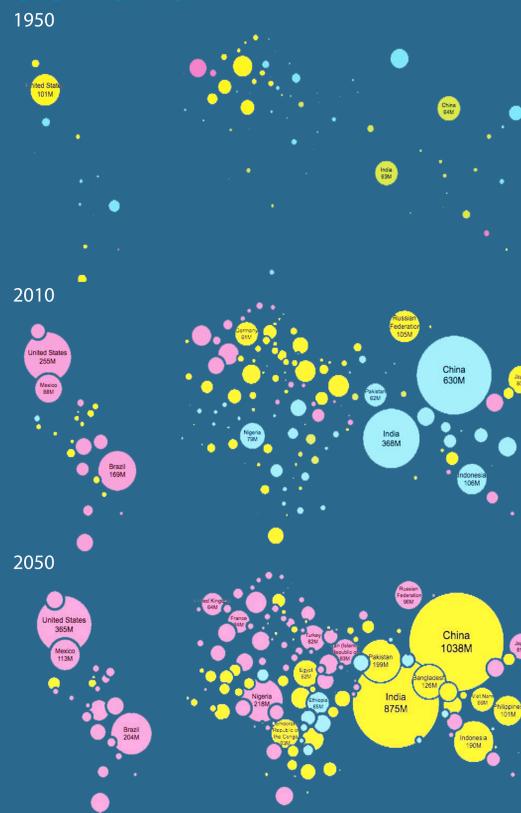
Floods affect more people and result in greater economic loss and spread of disease than any other natural disaster.

Populations are increasing with many people globally migrating from the rural areas into cities and major conurbations, "putting pressure on our existing water infrastructure and ecosystems"

Flooding remains a major issue for the world, with urban centres being particularly vulnerable due to building densities, increases in impervious surfaces, high population concentrations and vital infrastructure (CIRIA, 2013).
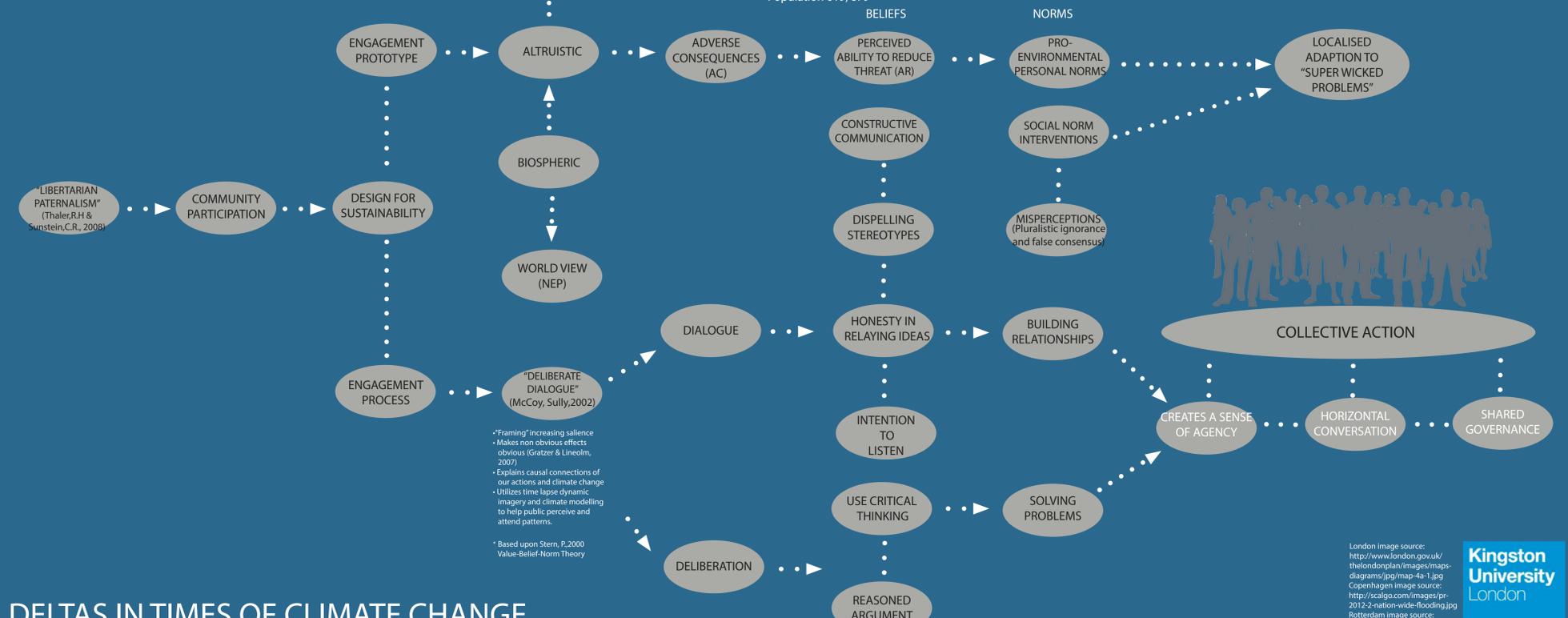
In England more than five million properties are at risk from flooding under current climatic conditions - that is nearly 1 in 6 (www.gov.uk, 2014), due to either a major river, coast or surface water runoff (Environment Agency, 2011). This is before likely changes to climatic conditions potentially vary the climate, exacerbating the problems.

CASE STUDIES

COPENHAGEN
55°41'N, 12°43'E
Population 569,557*

LONDON
51°30'N, 0°7'E
Population 9,787,426*

ROTTERDAM
51°55'N, 4°28'E
Population 619, 879*

PROCESS

1. Assessment (collection of data) – determining attitudes and behaviours associated with "super wicked problems" of climate change, urbanisation and population migration.

2. Selection of "normative" messages – devised through initial surveys and focus group discussions highlighting values and beliefs to improve salience.

3. Testing the message with the pilot groups – focus grouping, ensuring the messages are persuasive.

4. Selecting the normative delivery strategy engagement process involving:

   - On-going process of talking, dialogue and deliberation encouraging multiple forms of speech and communication that connects and grounds discussions. This will build trust and create a framework that explores a range of issues, encouraging analysis and reasoned argument and develop judgement that creates a sense of agency and shared governance;
   - Normative media strategy illustrating information;
   - Interactive peer theatre;
   - Normative feedback that extends the interactive format determining most salient and relevant influences; and
   - Designing engagement intervention making sure norms are corrected.

5. Determining dosage of the messages, the types of intervention, the timescales for each and timing between each measure.

6. Evaluation of the engagement strategy through grounded theory.

VALUES *
INDIVIDUAL
EGOISTIC
ALTRUISTIC
BIOSPHERIC
WORLD VIEW (NEP)

ENGAGEMENT PROTOTYPE
ADVERSE CONSEQUENCES (AC)

BELIEFS
PERCEIVED ABILITY TO REDUCE THREAT (AR)
CONSTRUCTIVE COMMUNICATION
DISPELLING STEREOTYPES

NORMS
PRO-ENVIRONMENTAL PERSONAL NORMS
SOCIAL NORM INTERVENTIONS
MISPERCEPTIONS (Pluralistic ignorance and false consensus)

LOCALISED ADAPTION TO "SUPER WICKED PROBLEMS"

"LIBERTARIAN PATERNALISM" (Thaler,R.H & Sunstein,C.R., 2008)
COMMUNITY PARTICIPATION
DESIGN FOR SUSTAINABILITY
ENGAGEMENT PROCESS
"DELIBERATE DIALOGUE" (McCoy, Sully,2002)

DIALOGUE
HONESTY IN RELAYING IDEAS
BUILDING RELATIONSHIPS
INTENTION TO LISTEN
USE CRITICAL THINKING
DELIBERATION
REASONED ARGUMENT

COLLECTIVE ACTION
CREATES A SENSE OF AGENCY
HORIZONTAL CONVERSATION
SHARED GOVERNANCE
SOLVING PROBLEMS

- "Framing" increasing salience
- Makes non obvious effects obvious (Gratzer & Lineolm, 2007)
- Explains causal connections of our actions and climate change
- Utilizes time lapse dynamic imagery and climate modelling to help public perceive and attend patterns.
- Based upon Stern, P.,2000 Value-Belief-Norm Theory

DELTAS IN TIMES OF CLIMATE CHANGE

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