



# Transformational adaptation

April 2015  
Stakeholder workshop  
Summary report



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## Transformational adaptation

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### **This report should be referenced as:**

Lonsdale, K., Turner, B., Pringle, P. & Street, R.B. (eds). 2015. Transformative adaptation: April 2015 stakeholder workshop summary report. UK Climate Impacts Programme, University of Oxford, Oxford, UK

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What factors facilitate transformation, including those across different systems, and how are we, as a nation, currently placed to deal with this?

In what ways might a transformational approach provoke changes in the way we work and collaborate?

What capacities and competencies are needed to initiate and facilitate ethical and sustainable transformations?

### **UK Climate Impacts Programme (UKCIP)**

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UKCIP supports adaptation to the unavoidable impacts of a changing climate. It works at the boundary between scientific research, policymaking and adaptation practice, bringing together the organisations and people responsible for addressing the challenges climate change will bring. Based at the Environmental Change Institute, University of Oxford, UKCIP coordinates and influences research into adapting to climate change, and shares the outputs in ways that are useful to stakeholders.



The workshop was funded by the Natural Environment Research Council (NERC).

## Overview

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This report summarises key aspects of discussions held during a half-day stakeholder workshop on transformational adaptation to climate change. The workshop, hosted by UKCIP with funding by the Natural Environment Research Council under its University of Oxford Impact Accelerator Account programme, was held in London on 20th March 2015 as part of a small scoping project. The invitation-only workshop brought together over 20 people from government and funded agencies, NGOs, practice and research with interest in transformational adaptation.

The objectives of the workshop were to:

- Identify what a practical set of actions to deliver transformative adaptation action might look like;
- Consider what role researchers, policymakers and practitioners might play in delivering such actions;
- Bring researchers, policy makers and practitioners together to explore opportunities for collaboration; and
- Hear how others are defining and applying the concepts of transformation.

The day comprised 4 main parts:

- Introduction: Why are we running this workshop and what are hoping to achieve?
- Session 1: Transformational adaptation is... Exploring perspectives on transformation
- Session 2: What might practical steps to deliver transformative adaptation look like?
- Session 3: Exploring the knowledge gaps and scoping an agenda for future action

The following report summarises key discussion points that emerged during the workshop activities. Full reports of the conversations are available in the appendix accompanying the report.

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## Introduction

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### Why is UKCIP interested in transformational adaptation?

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A growing sense that incremental adaptation isn't enough to address the serious threats posed by climate change, along with concerns that 'no regrets and low regrets' options will not be sufficient, has led UKCIP and others to question the limits to adaptation within existing systems and regimes.

The term 'transformational' is increasingly being used in the literature to describe adaptation that goes beyond business as usual but it is often not clearly explained and is applied in different ways by different people. UKCIP thus decided to host a workshop to discuss the concept and the practice of transformational adaptation specifically:

- **Is it a meaningful concept?** Can it lead to more effective adaptation and proportional adaptation?
- **Is it a useful concept?** Is there substance behind the 'transformation' rhetoric?

As a practice focused organisation that exists in the space between policy, practice and research UKCIP wished to explore from the concept of transformational adaptation and how the type and scale of adaptation required in a +2-4°C world can be made possible. UKCIP both facilitated and participated in this event. We viewed this workshop as an opportunity to bring together academics and practitioners who are working on, or interested in transformational adaptation, and potentially as an 'opening conversation' which might lead to future collaboration.

To begin the workshop, participants, divided equally around three large tables, were asked to engage in a conversation mapping exercise in response to the trigger 'Transformational adaptation is...'. Conversation mapping is a systems thinking technique used to:

- In the first stage of the exercise participants' responses to the trigger phase were shared and discussed and recorded on large pieces of paper as a 'map' of the conversation. In the second stage, participants are asked to look at the map they have created and ask themselves the following:

- [illegible]

The emergent themes and insights resulting from this exercise were then shared with the whole group. The full findings are given in the appendix to this report and a summary is provided below.

### Summary of the emerging themes and insights from the three groups

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There were many responses to the conversation trigger 'Transformational adaptation is...' indicating a diverse understanding of what transformational adaptation implies, bridging research, policy and practice. Transformational adaptation is to some 'simple' and others 'challenging' it is 'rare' and 'beyond what we are already doing' but also 'underway'. It is 'hard to observe' but 'easier to recognise than define'. There is a clear sense from the maps that transformational adaptation was considered to be important, as 'not doing transformation could be maladaptation'. That said, one participant did raise the question 'we are barely doing incremental so why should we be investing in transformational adaptation?' A number of common themes emerged from the three groups and are summarised as follows:

- Transformational adaptation is an action that is beyond 'Business As Usual' (BAU);
- Transformation may occur at different levels and dimensions, mediated by power relations, but usually implies a systemic or paradigm shift, possibly triggered by intolerable losses;
- The change is likely to be radical and challenge the current status quo, although the experience of the change and whether it is radical, incremental or transformational depends upon where you are in the system;
- It is likely to be painful, scary, exhausting and engage strong emotions requiring us to be developing our own personal praxis. Opportunities for intermediation and shared learning also need to be developed and effective leadership for change although whether this is through strong centralised decision-making or the distribution of power to make more localised decisions, was not agreed; and
- To achieve transformational adaptation we need to pay attention to the timing of interventions. The process of transformational adaptation was described as a 'journey', a 'plan' and a 'route map' with moments (e.g. decision points) where radical change was possible and a path dependency at other times where radical change might be blocked for decades.



## Session 2: What might practical steps to deliver transformative adaptation look like?

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A simple scenario for 2050 was outlined using three parameters:

- 80% emissions reduction in greenhouse gas;
- 33% decrease in water use per person per day; and
- Population increase of 13 million people.

The future described was positive, stable and well adapting. The participants were divided into 3 groups representing three scales: household, community and nation. Considering the period from 2050 – each of the groups were asked to:

- Discuss the components of a positive vision for their scale of interest; and
- Identify key moments or trends that occurred to enable this positive future.

Conversation prompts were offered to encourage the discussion. For successful transformation what might be the:

- Barriers and enablers?
- Key moments?
- Key trends?
- Key variables? – personal, cultural, political, institutional and ecological factors
- Key capabilities? – strategies and skills

### Factors that facilitate transformation

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#### Household scale

- Do we need extreme weather and systems failure to trigger transformational adaptation or can it be anticipatory and planned in advance?
- How do we find out how this is experienced by households?

### Community scale

- Where are decisions made?
- Alignments related to where there are decision points – these are the opportunity spaces – we need to learn and reflect and vary the vision.
- Monitoring and evaluation – this is dependent on agreed rules at the national, regional, and locals scales. Unlocking the current 5 year regulatory cycle.
- Operating systemically.
- Relationships between private, public and society.

### National scale

- Adaptation pathways for infrastructure and the services they provide- and should be developed for all climate sensitive key areas of policy – infrastructure, planning, biodiversity, water.
- Building ecologies and societies that work in synergy not against each other.
- Reflexive process of adaptation governance. Do national plans work?
- What is the nature of trigger events – do they ignite change?
- National School for Transformative Praxis focused on the process – how might my own praxis shift?
- Leadership and praxis development a key focus.
- New business models, new sets of rules recognising that HMT sets the rules.
- Courage at the personal level to make the moral argument, take risks and make mistakes. What is it you want to sustain?
- Incubation as a safe way to make mistakes?
- Agile skills and willingness to take on risk.

### Barriers:

- Articulation of the case for why we need to transform and the triggers for transformation. Because it is not clearly articulated people are not hearing the need.
- Transformational change may clash with existing vested interests.
- The perception that it is 'too difficult'.
- The 'blanding' process involved in making policy summaries that effectively remove any possibility to articulate the need for radical change.
- Understanding the basis for investment. How can the treasury be persuaded to take this seriously?
- Acceptable levels of risk are not generally agreed or discussed.
- Policies to deliver change.
- The 'here and now' losses and the economy were considered to currently be more vocal and the current focus.
- The ability of the National Adaptation Programme (NAP) to deliver transformative change was challenged.
- The attitude to learning needs to change – courage is needed to make mistakes, learn and to make the moral argument against vested interests towards what it is we want to sustain.

## Session 3: Exploring the knowledge gaps and scoping an agenda for future action

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### Now what? Summary of the final discussion

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#### Applied practice

Any future work on transformational adaptation needs to be context specific as a general conversation can only take us so far. The focus of future work thus has to be on action and not on abstract conversations. Future work should be embedded in the real life practice of making interventions in the system of concern.

The Adaptation Sub Committee of the Committee on Climate Change and Defra recognise the need to engage research (NERC) in thinking through transformational climate change based on the existing evidence gap and are starting to ask questions such as 'what are the consequences of this not taking place' and 'how can you measure it?' The group convened for this workshop could also potentially contribute to describing research gaps and needs.

#### Learning from practice

Learning has to be an intentional aspect of designing and progressing future work in order to obtain the level of detail and depth that we need to understand the complexity of the systems of concern we are working with. The role of brokerage and intermediation becomes important in developing intentional learning; carrying it to other places and creating the space or 'enabling environment' for change. This begs the question, are we learning effectively from what is already happening in relation to transformational change and could this research and practice be more effectively shared in the future?

Good examples of frameworks to enable transformation already exist and we need to be learning what enabled these to take place (e.g. TE2100) and to understand the messiness of transformation in practice. We should honour this and teach this example. Can TE2100 be written up so it can be replicated and shared more widely? For example, as a multiple-voice 'learning history'. We need to learn 'What it is like to do this?' and 'How could it happen again or be improved?' In considering examples it is useful to recognise adaptation planning that includes transformational adaptation alongside incremental changes (i.e. it is not necessarily a choice between transformational and incremental).

Ensuring the necessary richness and depth of learning requires honesty and profound enquiry. The people involved would have to take a risk in doing this as it involves moving away from 'best practice' accounts to the real, messy practice. It can also be hard to tell stories about good practice relating to capacities and processes when we are working through technical organisations. To do so effectively requires a new set of skills and can seem risky and countercultural. We need to move from 'case studies' to learning from the pain and frustration of real practice and exploring why things did not work or did not work well. How we can develop our capacity to notice things and learn from our experiences?

### A systemic approach

Transformational adaptation requires taking a systems approach because of the interdependencies between sub-systems that can make transformation at this level more challenging. What is the institutional infrastructure that will allow us to take a systemic approach? What impedes or enhances our ability encourage transformational change? How might we fund it? How should we decide to invest our resources? EU ESPACE was what set the TE2100 project in motion and allowed it to operate at multiple scales. It was suggested that a national adaptation pathway (or a combination of complementary and coherent pathways) could set the overall context for transformation.

The term 'pathway' implies quite a rational approach and for transformational adaptation we need something more revolutionary. What can we learn from socio-technical literature (e.g. Geels & Schot, 2007<sup>2</sup>) about developing new visions, utopias, alternative worlds entrepreneurs, niche experiments, 'sharp breaks', small scale initiative, learning and innovation. How does this help us to decide where to focus effort and resource? Do we need to be more 'directional' (or 'choiceful') in promoting this? A recent [Rockefeller programme](#) has been considering such questions.

As well as creating new ways forward we need to simultaneously be destabilising and dismantling old ones (e.g. coastal defences as a response to sea level rise). Such dismantling can evoke a sense of fear, especially to those with high vested interests in the existing system, but seems to be a necessary, and often overlooked, element of transformation.

### Capacity and skills for action

Transformational adaptation requires leaders and others to make what are often seen as unpalatable decisions. This requires courage and a capacity for us to reflect on our own practices. Doing this work can, potentially, be very demoralising for some while uplifting for others.

Where is the energy for action and is it locked into the existing regime? Individuals, organisations or groups within the system of concern need to want to, or to recognise the need for, change. Who is this? Who has autonomy/influence/power over decisions and the motivation and sustained energy to make necessary changes? The amount of control someone has, their pressures, targets and what they have seen and understand of the whole system, depends on their position in the system. Small transitions at a farmer level might be a result of more radical decisions higher up.

### Questions remaining/provoked from the workshop

Everyone was asked to think about what questions were coming up for them now, having had the morning discussions, that they would want to have answered to be able to move forward on addressing transformational adaptation. The full list of questions is provided in the appendix.

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2 Geels, F.W. & Schot, J.W. 2007. *Typology of sociotechnical transition pathways*, *Research Policy*, **36**(3), 399–417.

## Summary of the key themes

- **Clearer understanding and definition of the concept**  
e.g. Do we need a standard definition of transformational adaptation?
- **How we enact this concept in practice**  
e.g. How do people, organisations and systems recognise the decisions that need to change? How do we recognise the decision or intervention points where transformational change is necessary/possible? Or How might I develop my own praxis?
- **Learning by example**  
e.g. Are there examples of transformational adaptation that we can learn from?
- **Measuring transformational adaptation**  
e.g. Can we develop criteria for ethical and sustainable transformative adaptation processes?
- **Communicating the need for transformational change**  
e.g. How do we better articulate the need for more than incremental change?
- **Developing a vision**  
e.g. How can we articulate a positive vision of transformative change that resonates with decision makers?
- **Funding and finance**  
e.g. What are the costs and consequences of not transforming?
- **Links beyond climate**  
e.g. Can transformational adaptation be separated from societal transformation? Will it drive change for dependent issues outside of climate?
- **Going to scale**  
e.g. How do we scale up and out from projects to system level and paradigm shifts?
- **Fairness and inclusion**  
e.g. What are the different types of support that different stakeholders in decision making and outcomes need?

Participants were asked to fill in cards to explain what knowledge gaps they thought there were, what they would like from the group and what they could offer the group. This led on to a useful discussion about the 'we' implied in the question 'what might we do next?' and the assumptions being made about what others in the room might want from these (and potentially future) discussions. A table of offers and requests is available in the appendix.

## Workshop key messages and themes

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It is always challenging to summarise the key messages from a detailed workshop where many alternative perspectives were provided. The following key messages are drawn from across the material produced by workshop participants:

- There is confusion over what transformational adaptation is, both as a concept and in practice. This hinders progress as people talk about transformative change but may mean different things. If it were possible to develop a well-articulated case for specific contexts this would help in persuading others in the system of concern to take an interest. This also applies to potential funders, as it would help to explain why funding work in this area requires funding new approaches to collaborating and experimenting.
- There is a dearth of examples that enquire into the real messy practice involved in trying to transform an existing system with sufficient depth and honesty. Learning history and other action research approaches could be used to profoundly enquire into existing examples e.g. Thames Estuary 2100 so that the richness and depth of that learning might be more easily shared and used elsewhere.
- Linked to the lack of examples, there would appear to be the potential to enhance knowledge exchange and shared learning between those working on issues relating to transformational change. The challenge will be to acknowledge the context specific nature of work in this area while drawing out broader lessons, but without this leading to purely theoretical discussions based solely on the framing of the issue.
- Transformation is not something that just happens 'out there', performed by someone else – it requires us to build our own reflexive awareness and set up opportunities to enquire into what needs changing, how to change it and learn throughout the process.

## Next Steps

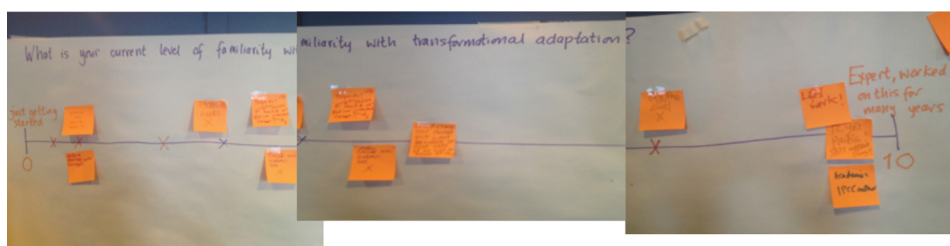
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From a UKCIP perspective, this work was very much about 'opening a conversation' with those with an interest in transformational adaptation and to enable ideas and views to be shared. With this in mind, we hope you will follow up with relevant participants as you see fit. The list of needs/offers in the annex to this report may be a useful starting point and, subject to participants' wishes, we hope to make these available in a form attributable to each participant. In the meantime please do contact Briony Turner ([briony.turner@ukcip.org.uk](mailto:briony.turner@ukcip.org.uk)) if you have identified a need/offer you would like to discuss further so that the appropriate introductions can be made. This report will also be shared with NERC.

UKCIP would like to explore further the development of a 'learning history' of existing examples of transformational adaptation and if you have a specific interest in such an approach please do get in touch. We would also appreciate feedback on the usefulness of this event and the appetite for a similar (possibly more focused event) in the future.

## Appendix

### Spectrum question



What is your current level of familiarity with transformational adaptation?

Point on the spectrum	People at this position	Notes
0–1 (just starting)	1	
1–2	3	"Puzzling over how to apply it" "Getting familiar with the concept"
2–3	1	"Systemic level"
3–4	4	"Depends! Only just heard of it but can understand the concept" "Familiar with the academic level"
4–5	2	"Understand the concept but what would it look like in practice?"
5–6	0	
6–7	0	
7–8	1	"Organisational/project level"
8–9	0	
9–10 (very familiar)	3	"Life's work!" "12 years practice – still learning" "Academic – IPCC author"
<b>Total</b>	<b>15</b>	



## Session 1: Exploring perspectives on transformation using conversation mapping

**Table 1: Transformational adaptation is...**

- not necessarily called this
- possible at moments
  - *may be blocked for decades*
- opportunistic migration
  - *Nijmegen*<sup>3</sup>
- a system property
- an action that is beyond BAU
  - *I agree!*
    - » *incremental or radical change?*
    - » *make rules*
  - *"they won't do it themselves"*
    - » *means different things to different actors*
  - *the challenge of working with diverse perspectives*
    - » *how to foster change?*
  - *reflexive change*
    - » *transforms the system in which it takes place*
    - » *BAU (e.g. insurance betterment policies) block it*
- very rare indeed
  - *More common than we imagine*
  - *Can be driven by different visions*
  - *Hard to observe*
- in need of tools that support it e.g. "economics"?
  - *is the GGGI transformational? e.g. Ethiopia...*<sup>4</sup>
- underway
- confusing
  - *unclear*
- includes biodiversity responses that are halfway adequate
- what does it mean with respect to good adaptation?
- difficult
  - *simple*
  - *with current institutions*
    - » *and role of governments and politicians*
    - » *risky business*
      - *maintaining the status quo... why redistribute power and wealth? And investments*
  - *challenging and opportunistic and necessary*
  - *extremely exhausting and painful to try to do*

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<sup>3</sup> [www.future-cities.eu/?id=23](http://www.future-cities.eu/?id=23)

<sup>4</sup> <http://gggi.org/national-green-growth-plan-for-ethiopia/>

- implies the long term future
  - *touching death and deep loss helps me to develop my transformational praxis*
    - » *extreme events can provide that trigger*
      - *'disasters'?*
- easier to recognise than define
  - *uncertainty is not a reason for inaction*
- we have barely done incremental adaptation so why would we be investing in transformational?
  - *questions of existence of a continuum from incremental*
    - » *how is this continuum framed? What are the alternatives?*
      - *working with liberating framings*
    - » *decision pathways and decision points – a practice question*
- TIMING! Enthusiasm for multiple agendas e.g. Nijmegen

### Table 1: Emerging themes and insights

Our understanding is diverse! Our understandings cover and bridge research policy and practice. Breaking path dependencies – specify and commissioning projects. Moments of spontaneity. Start conditions matter.

1. Transformation happens at different levels and dimensions. Power relations mediate these – Power matters!
2. Transformation engages strong emotions in personal praxis. Working with socio-technical – ecological systems matters!
3. How do incremental and transformational adaptation interact? Timing matters! Intermediation practice matters!
4. Power shapes framing... ...and how we frame transformation shapes praxis outcomes.

### Table 2: Transformational adaptation is...

- simple
- different to resilience
- scary and challenging
  - *but proportional!*
- strong centralised decision
  - *leadership*
  - *tipping point (? 20%)*
  - *acceptance*
- more than we are already doing
  - *the bit not done yet*
- challenges power structures
  - *conflict potential*
- transforming what?
  - *infrastructure*
  - *societal structures*
- a change to our way of life
  - *and livelihoods*
  - *inequality?*

- a journey
  - *transformative thinking*
  - *imagination*
  - *visions of end point*
  - *conscious?*
    - » *ideological*
  - *a plan or a route map*
  - *recognise unknown societal changes and use them*
  - *needs lead times*

**Table 2: Emerging themes and insights**

- Themes and insights
  - *Transformational adaptation requires a vision and a sense of the journey*
  - *It has stages and pathways*
  - *It requires consciousness*
  - *It is radical and challenges the status quo*
- Practice
  - *Not doing transformation could be maladaptation*
  - *Longer term decision-making*
  - *Monitoring and allow for unknown*

**Table 3: Transformational adaptation is...**

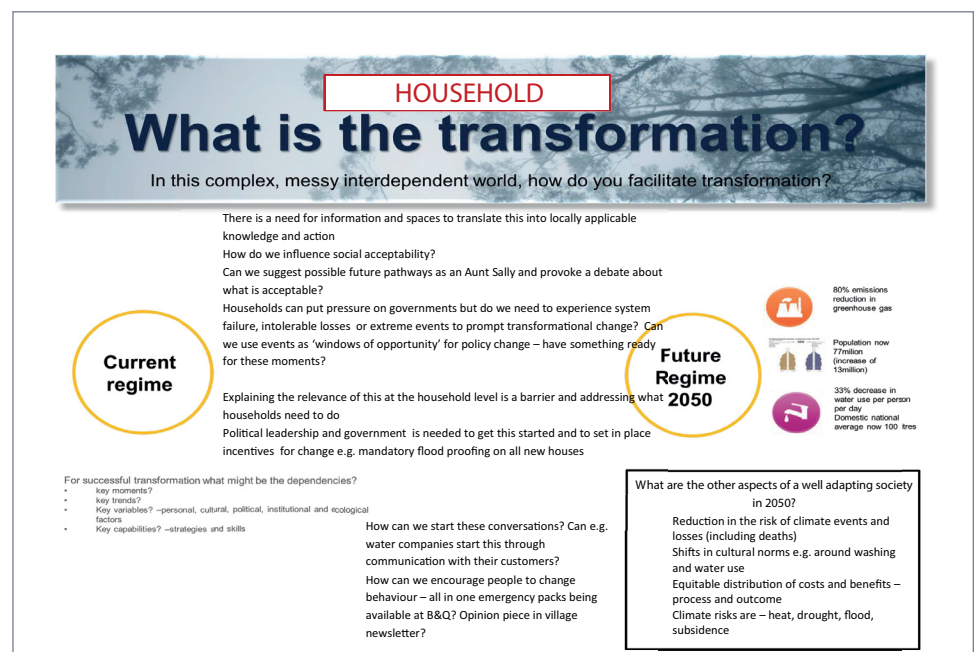
- not incremental or responding to proximate impacts
  - *moving beyond current stability(?) through discontinuity /step change. Available options no longer sufficient*
- approaching and passing a limit (distinct from a barrier)
- when you run out of options and climate pressure is a substantial proportion of the pressure triggering change
  - *when you run out of technical options to overcome the challenges posed by climate change*
    - » *or reach the biophysical limits that breach human coping capacity necessitating systemic change*
- transformations happen already – climate change could be an addition! (climate often not the trigger)
  - *planning horizons shift from win-win (immediate benefit) to long term gain/short term pain because the current trajectory is unsustainable*
- triggered by experience of intolerable loss (a strong trigger for many radical transformations)
  - *quantification of loss (£)*
    - » *short term vs long term(change in mind set and economics)*
- a combination of technical and human capacities
  - *organisation of groups of e.g. smallholders*
  - *structure – changing constraints on agency*
    - » *barriers to options being different from existence of options*
      - *whose transformation is it? Smallholder to global landscape?*
    - » *transformative change is inter-institutional change –systemic paradigm shift*

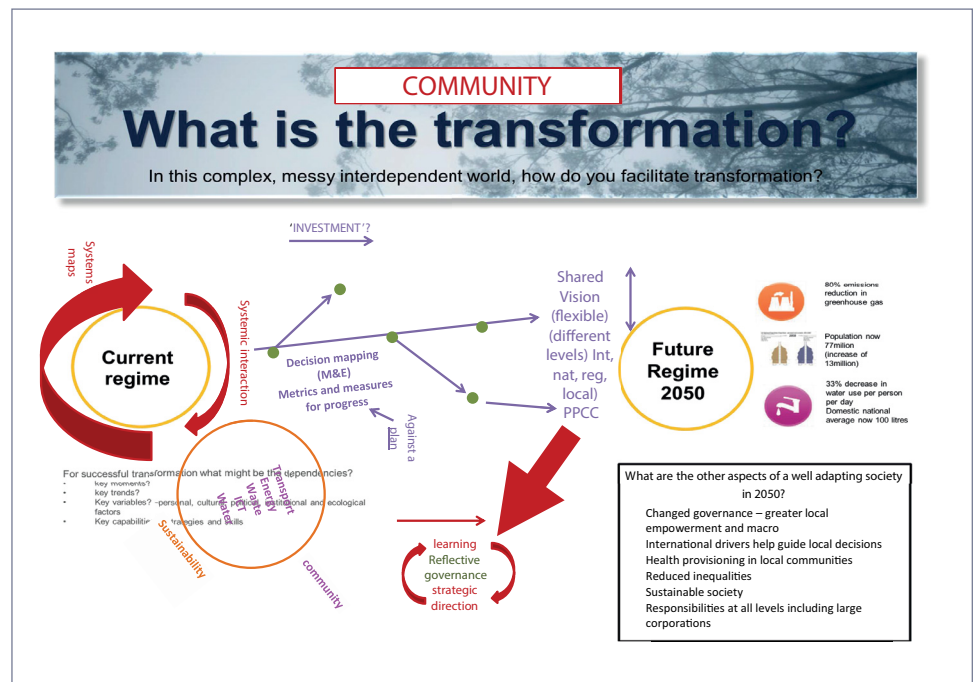
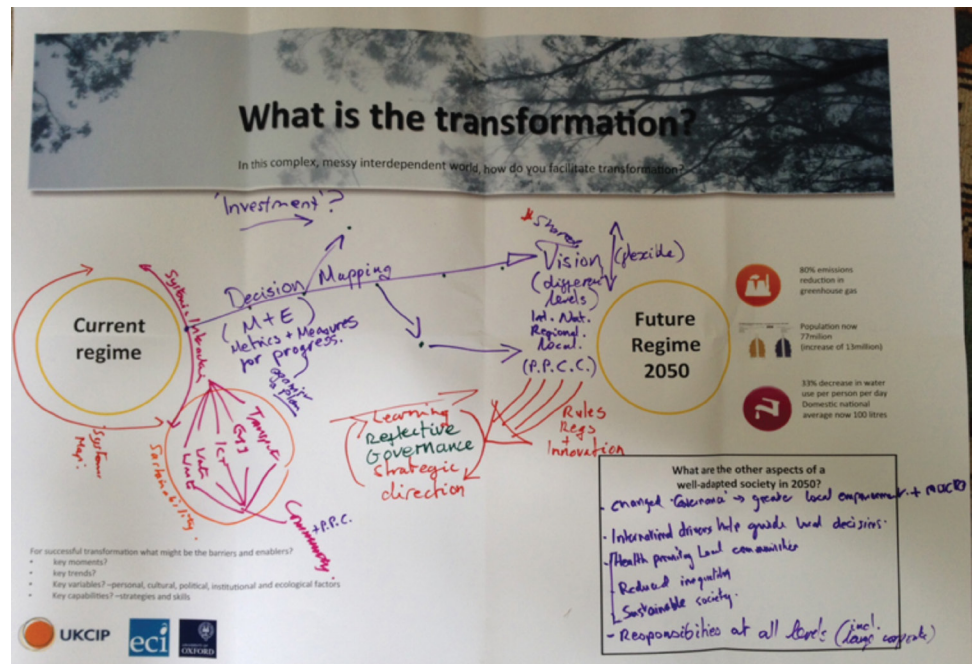
**Table 3: Emerging themes and insights**

- Transformational adaptation is a change in the state – a radical discontinuity and systemic shift
- Triggered by intolerable losses – how does this change our value systems? – cost/benefit?
- Coping capacity of different parts of society varies
- Need to consider the scale of action and linkages
- Has a significant structural component

## Session 2: What might practical steps to deliver transformative adaptation look like?

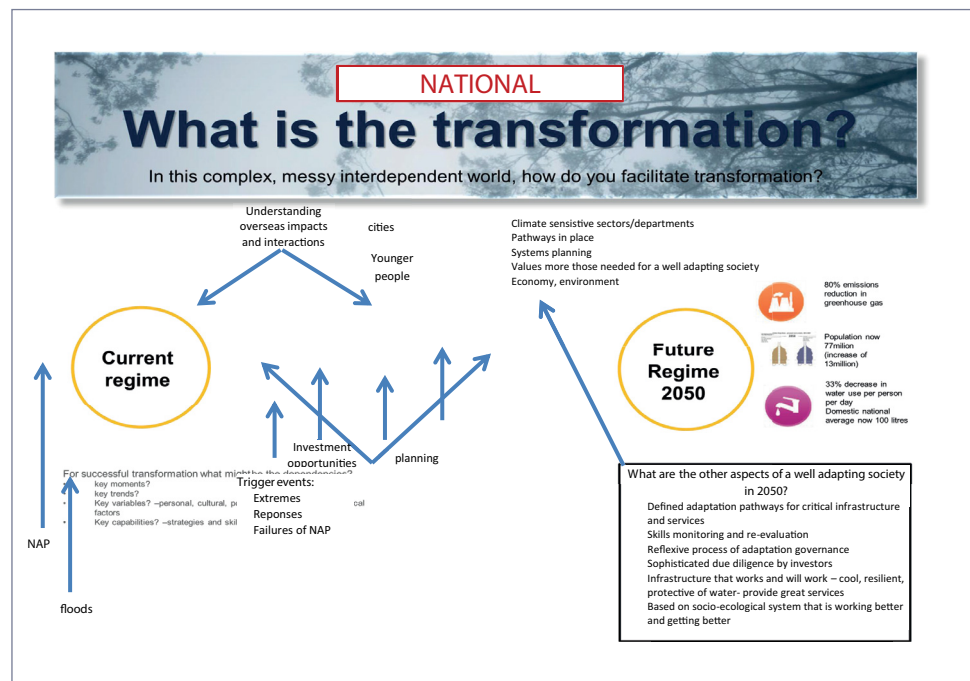
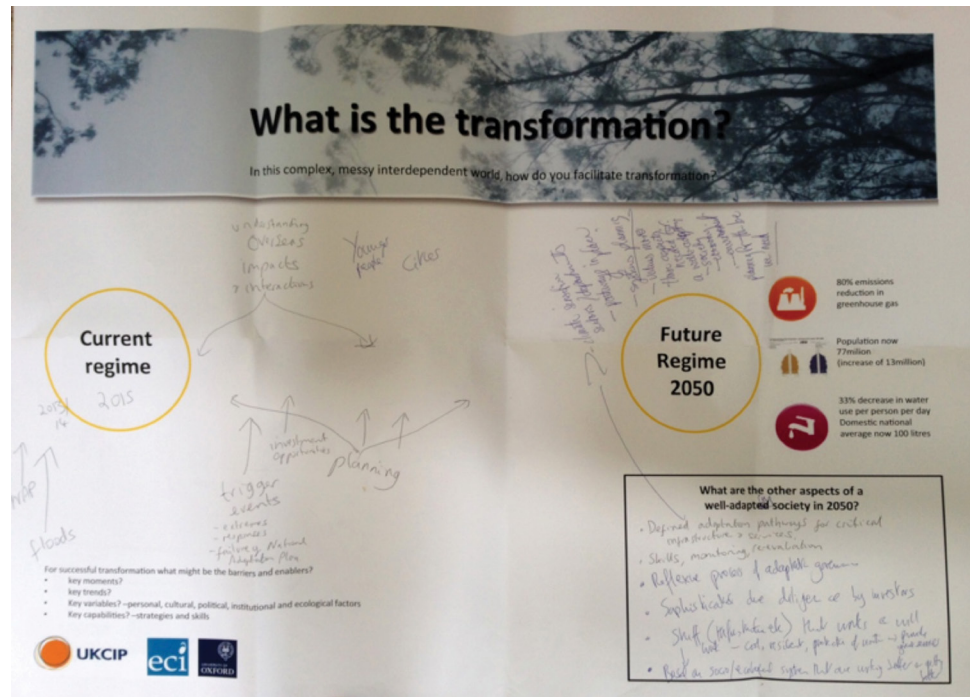
### Household







## National



## Session 3: Exploring the knowledge gaps and scoping an agenda for future action

### Questions we need to answer now...

We have organised the questions raised by participants during Session 3 into some broad categories, recognising that a number of these span more than one category.

## Definitions and terminology

- Do we need a more clearly articulated/shared definition of transformative adaptation/ What would it be?
- Do we need a standard definition of transformational adaptation?
- Definition/elaboration of a framework for transformative adaptation incorporating BAU adaptation as well. I've done a lot of this but can do more.
- How can we better understand the different understandings of transformation and how they are being used?
- How do we distinguish between transitional and transformational and does this matter in practice?
- What actually (in practice) constitutes transformative adaptation?

## Objectives of, and challenges for, transformational adaptation

- How helpful is the concept, or rather the word? What we are talking about is the process of change.
- What are the goals of transformative adaptation – according to whom? Adapting to 4°C? Addressing inequality (protecting who?)? Development?
- What do we need to transform and to sustain to ensure human wellbeing?
- What does transformational adaptation achieve compared to current adaptation?
- How does the concept of transformation help us adapt to climate change?
- Is transformation a robust approach?
- How do we know if a transformation will be adaptive?
- How can we articulate a positive vision of transformative change that resonates with decision makers?
- What are the goals of transformative adaptation – according to who? Adapting to 4°C? Addressing inequality (protecting who?)? Development?
- Can we identify the conditions under which transformative adaptation occurs?
- How can this approach to transformation adaptation move forward and impact on policy?
- Can transformational adaptation be separated from societal transformation? Will it drive change for dependent issues outside of climate?
- We need to look much more deeply at the climate space/biodiversity issue – it is beyond my own thinking so far, at least.
- What is the link between transformational adaptation and development? SEI has an initiative on Transforming Development and Disaster Risk Reduction<sup>5</sup>
- How can adaptation be taken to scale?
- How do we scale up and out from projects to system level and paradigm shifts?

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<sup>5</sup> [www.sei-international.org/projects?prid=2086](http://www.sei-international.org/projects?prid=2086)

- Do we need to change the way we refer to risk? Risk to the present will be less relevant if we develop adaptation pathways – sea level rise is certain – no risk of stopping.
- Is it possible for adaptation to be proportionate to the risks?

### Transformational adaptation in practice

- What are the top 3 issues where transformative change is necessary?
- How can we experiment/research in a short time scale? What should we chose to do?
- How do people, organisations and systems recognise the decisions that need to change?
- How can we facilitate deliberative decision making for transformational adaptation?
- How does transformation fit with current political and institutional structures in the UK?
- Is it feasible to develop adaptation pathways for organisations?
- Should the government have dedicated change management training?
- Transformative adaptation requires diverse knowledges, capacities and trajectories to collaborate – how do we organise this diversity?
- What capacities are needed to deliberately transform systems that address the fundamental problem of climate change and the vulnerabilities?
- What does a transformational adaptation plan look like? We need a plan and M&E is part of it.
- What does transformational capacity mean at different scales?
- What is the journey and does this work as well for public as well as private and research?
- Where to start? It is easy to get so caught up in the complexity that is becomes paralysing so we need some first steps.
- What are the institutional barriers to transformational adaptation?
- What has/could lead to transformational adaptation? What levels of governance are most responsive?
- What does a transformational adaptation plan look like? We need a plan and M&E is part of it.
- Who needs to get together to agree the vision that will drive transformative adaptation?
- What needs to be prioritised for transformative adaptation? How do we list these actualities?
- Are there enablers to promote consideration of transformational adaptation?
- How can I fund engaged work on adaptation – transformative and incremental?
- How can we finance deliberative decision making for transformational adaptation?
- What are the different types of support that different stakeholders in decision making and outcomes need?
- How do we empower and engage stakeholders, including those currently marginalised, in decision making on transformation?
- One person's transformational activity is another person's incremental activity – how do these relate across different systems?
- Is it feasible to develop adaptation pathways for organisations?



### Examples and evidence

- Are there examples of transformational adaptation that we can learn from? (x2)
- Can we use a definition of transformational adaptation to collect examples from existing knowledge bases e.g. weADAPT to help frame the issue?
- Most organisations don't know what good looks like – we could fill that gap.
- Case studies and experience exchange is a powerful way to share knowledge – is there evidence that can be used?
- What evidence is there to support the need for transformational adaptation vs business as usual?
- Under what conditions does transformation take place in the real world? (based on observed evidence)
- What are good examples of transformative adaptation?
- How do we form a baseline on which to measure transformative progress?
- Can we develop criteria for ethical and sustainable transformative adaptation processes?
- How do we measure and track the pace of change that is necessary/beneficial?
- What are the metrics of change and transformation for monitoring and evaluation? (Social, technical, financial, environmental, political)
- Under what conditions does transformation take place in the real world? (based on observed evidence)
- What are the costs and consequences of not transforming? e.g. in key areas- built/ natural environment.
- How transferrable / scalable are transformation examples?

### Communication

- How can we articulate this so that different scales 'get it'? It needs to appeal to different professions, perspectives and processes using different language.
- How do we best communicate the end state of your transformation and at what level it is defined and by whom?
- How do we better articulate the need for more than incremental change?
- How do we further influence the decision making community? Is this stronger than the current approach to dialogue on adaptation?
- How can we articulate a positive vision of transformative change that resonates with decision makers?

## Knowledge gaps / needs and offer cards

Description of knowledge gap/need	Request of the group	Offer to the group
<p>Deciding upon which new "shared visions" we are aiming at?</p> <p>People, organisations, and the 'systems' they form part of are not yet likely to recognise the decisions that need technical / human / financial capacity. Even when organisations do, they often do not know how best to improve their decision-making. The majority of climate relevant decisions require collaboration across many organisations and disciplines, and this can become overwhelming to many (it can appear too complex to engage with).</p> <p>Knowing who needs what support is critical in sharing and delivering transformational objectives. Knowing which decisions need to be taken or improved is also key to making sense of complexity and in seizing the opportunities for change to take place.</p>	<p>Create a community of practice that works across and between the technical, social, and financial components of change.</p> <p>Work together to co-create metrics and baselines for measuring and designing systemic change.</p> <p>Provide the support needed to deliver real change that is targeted to the roles, responsibilities and capacity of the people tasked with delivering it.</p>	<p>Climate Sense has metrics for the human, organisational and now 'systemic' change dimensions - I want to work with those interested and skilled in similar, and to work with other technical and financial experts to ensure optimum integration across disciplines – and to update all our approaches as new learning emerges.</p> <p>CaDD (Capacity Diagnosis + Development).</p> <p>CaDD is a system of software that collates and processes data to provide metrics for: baseline reviews of organisational and systemic capacity; monitoring and evaluating progress; designing programmes of implementation; designing enabling environments for systemic change; brokering relationships; and informing human transformations. I want to work with like-minded and technical/ finance-minded experts to merge and update our approaches for optimum impact.</p>
<p>Benefit of this approach, understanding how it moves the adaptation discourse forward.</p>	<p>We are joining a Coordination and support ICT action proposal.</p> <p>Would like to focus the question we can address using adaptation knowledge platforms/portals. Ideas would be useful.</p> <p>How can we (SEI Oxford) improve our influence on policy through transformative adaptation?</p>	<p>weADAPT case studies-all open info but might be a way to use semantic tagging to identify project or programs which would be considered transformational.</p>
<p>What is the evidence base for transformational adaptation-analysis of what, who, when, why, and effectiveness.</p>	<p>Examples of what is considered transformative action.</p>	<p>Engagement in discussion on TA pathways (esp. in context of IMPRESSIONS research).</p> <p>Expertise in biodiversity and ecosystem services – these will need to feed into/underpin many aspects of TA, especially if sustainability is involved in any form.</p>
<ul style="list-style-type: none"> <li>• Understanding what makes transformation different to incremental adaptation for specific contexts.</li> <li>• How can transformation proceed in a way that resolves rather than exacerbates conflicts and insecurity? Learning from experience.</li> <li>• What shifts in societal values/forms are needed.</li> <li>• Goals of transformation-who has which goals? (Explicit and implicit goals).</li> <li>• Examples of negative consequences of transformation.</li> </ul>	<p>Case studies that question and explore incremental-transformative frame-barriers to transformation, learning from attempts at transformation.</p>	<ul style="list-style-type: none"> <li>• Sharing experience and research from engaging with decision-makers in a real case-coastal adaptation in East Anglia.</li> <li>• Students wanting to research on this topic (for dissertations) and/or do internships with organisations.</li> </ul>



Description of knowledge gap/need	Request of the group	Offer to the group
<ul style="list-style-type: none"> <li>Who else is working in this space (e.g Dundee).</li> <li>Who has money that could be used to find innovative work here-what words we like to do if we found it.</li> <li>Who wants to get stuff done – Doogie’s devolved administrations, cities.</li> </ul>	There is/appears to be (perhaps it’s just me) a profound lack of the coffee-house conversations that fuelled the industrial revolution in Manchester and the deep and frequent communications that helped end the slave trade.	<ul style="list-style-type: none"> <li>Work on capacity (PACT) continues to move forward – how it is being used to investigate/ analyse the wider ‘framework’.</li> <li>‘Expertise in designing and facilitating learning systems with a transformative ‘edge’.</li> <li>A lot of stuff on financing adaptation in a transformative way.</li> </ul>
<p>The transformational journey – how is this different from change management?</p> <p>Do we know enough about mobilising systemic change-perhaps in other sectors they do e.g. medicine and education, should we learn?</p>	More dialogue, more challenge, is it useful?	<ul style="list-style-type: none"> <li>Get this discussed at built environment industry conferences and events.</li> <li>Bring this into discussion with built environment professional bodies about how they might change their CPD to provide their members with the capabilities needed to deliver it.</li> <li>The identified groups, help find the researchers with the knowledge and appetite to tackle it.</li> </ul>
Clarification of what the transformation concept brings to adaptation and to climate change. Is it needed? Is it useful? Who is it useful for? How can it be implemented, managed?	The group can bring together case studies of transformation (successful or unsuccessful) for researchers to study, understand and draw lessons and synthesise for the practical application of transformation.	I can offer rigorous academic research to study transformational adaptation answering specific research questions – what is it? Where is it observed? Who uses it? What are the benefits? Who wins, who loses? What is the difference between incremental and transformative? (and many more!)
Need to learn more about links to war-gaming techniques-real-time scenario systems etc.	Information share (can use existing groups e.g. LinkedIn or something less open)	Long experience of setting adaptation in long-term context. Development decision testing, adaptive pathway.
<ul style="list-style-type: none"> <li>What are the most important issues where incremental change/ autonomous adaptation won’t be sufficient?</li> <li>How do we articulate the costs and consequences of failing/postponing transformational change?</li> <li>How do we make the two issues above spatially specific?</li> </ul>	Evidence for CCRA; expertise in communicating and visualising adaptation issues; understand what in the pipeline in terms of new studies/ evidence.	<ul style="list-style-type: none"> <li>Route into Parliament, legislation and decision makers across government, delivery bodies etc.</li> <li>Helped understand the policy context, how government/ministers work make decisions.</li> <li>Opportunities for policy-relevant research (CCRA and ASC research programme)</li> </ul>
<ul style="list-style-type: none"> <li>Economic tools/instruments that foster transformational adaptation.</li> <li>Systemic understanding of “society” and what (key) services make this all work; from governance to supply chain and to include exogenous factors (like weather, diplomatic relations (?))</li> </ul>	Can we think/develop a short guide to transformative adaptation and its benefits or how it can bring benefits (by THEMES, not STATISTICS)	<ul style="list-style-type: none"> <li>The possibility of using the railway ‘TRoCCA’ [?] Programs. Next phase to look at strategic/ transformational adaptation on rail routes in Britain i.e. diverting lines or building new lines.</li> <li>Contacts across the UK infrastructure seen from operation to regulators and government.</li> <li>Route into international standards (ISO)</li> <li>Expertise in practical adaptation (especially hard engineering) and resilience building.</li> <li>Understanding/promotion of ‘systems thinking’.</li> </ul>
A database on adaptation and transformational adaptation case studies.	Additional info on these topics and developments.	Long-term perspectives on historical-ecological change.
		<ul style="list-style-type: none"> <li>Interested in lessons from developing country contexts and ongoing experiments into sustainability and [?] Marginalised groups.</li> <li>SEI has a number of tools and methods particularly impetus plate reproaches to assessment of sustainability.</li> </ul>