



ECGE7007Q: Sustainable Communities

Theme 4: Additional Theme – Challenges for Contemporary Society



What did we cover in our Theme?



Challenges for Society

- In Theme 2 we looked at the climate change debate
- In Theme 3 we explored the concept of sustainable communities
- We will now bring these two themes together to explore the contemporary challenges to society in this context.



What Challenges is society faced with?

For purposes of brevity, we will focus on two main challenges, namely;

- The impact of climate change on communities, and;
- urbanization,



CLIMATE CHANGE

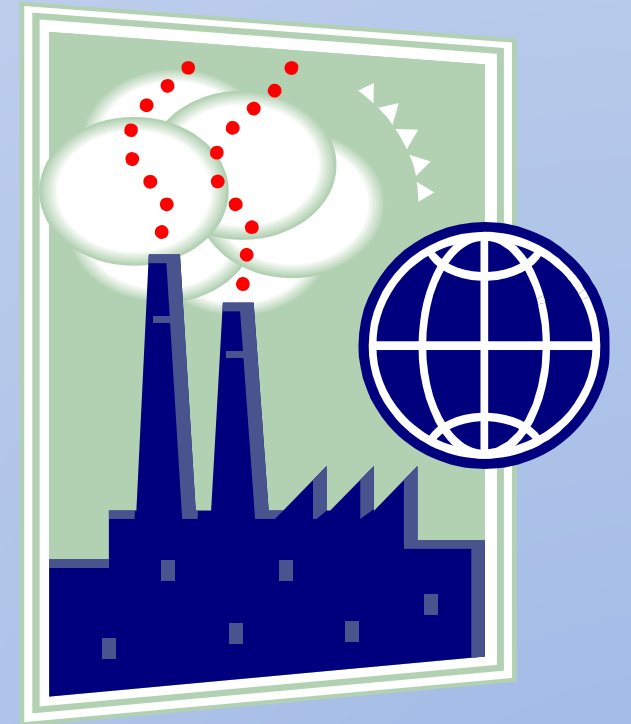


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Image Source: NASA

Climate Change

- The Intergovernmental Panel on Climate Change (IPCC, 2023) has predicted that global temperature will rise by the end of the century by between 1.4C and 5.8C.
- Most of the warming that has occurred over the last 50 years is, according to the IPCC (2023), as a result of human action



Climate Change

What the IPCC says about climate change:

- ‘Human activities, principally through emissions of greenhouse gases, have unequivocally caused global warming, with global surface temperature reaching 1.1°C above 1850–1900 in 2011–2020’.
- ‘Global greenhouse gas emissions have continued to increase, with unequal historical and ongoing contributions arising from unsustainable energy use, land use and land-use change, lifestyles and patterns of consumption and production across regions, between and within countries, and among individuals (*high confidence*)’



Climate Change

What the IPCC says about climate change:

- ‘Widespread and rapid changes in the atmosphere, ocean, [cryosphere](#) and biosphere have occurred’.
- ‘Human-caused climate change is already affecting many weather and climate extremes in every region across the globe’.
- This has led to widespread adverse impacts and related losses and damages to nature and people (*high confidence*)’.
- ‘Vulnerable communities who have historically contributed the least to current climate change are disproportionately affected (*high confidence*)’

Climate Change

What the IPCC says about climate change:

- ‘Risks and projected adverse impacts and related losses and damages from climate change escalate with every increment of global warming (*very high confidence*)’.
- ‘Climatic and non-climatic risks will increasingly interact, creating compound and cascading risks that are more complex and difficult to manage (*high confidence*)’.

However, what does this mean for communities?

Take a moment to consider this question.

What challenges are you aware of?

Share your thoughts with the group?



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Effects of Climate Change on Communities

- We have, previously, discussed the difficulty in predicting future changes
- This is due to the interconnectedness of risks and challenges outlined by the IPCC above
- However, using Climate science, Chaos Theory and Complexity Theory, scientists can propose what is likely to occur
- Most sources agree that the risks and challenges will be many and varied
- They will be different in different parts of the world
- But there is agreement that every community will be affected

Effects of Climate Change on Communities

- For example, [The Met Office](#) lists 13 separate effects (*any thoughts on the Met Office as a source having looked at their website?*)
- We will look at each of these in turn
- (N.B. all links used are in reference list);
- **Risk to water supplies**  [How will water supplies be threatened?](#)
- **Conflict & climate migrants**  [What is meant by climate migrants?](#)
- **Localised flooding**  [What examples do you know of?](#)

Effects of Climate Change on Communities

- Flooding of coastal regions ? [How many people might be affected?](#)
- Damage to marine Ecosystems ? [What examples can you think of?](#)
- Fisheries Failing ? [What does this mean?](#)
- Loss of biodiversity ? [How many species are threatened?](#) ***
- Change in seasonality ? What is this?, and
 [What could be the effects?](#)

Effects of Climate Change on Communities

- Heat stress  What is this and who is affected most?
- Habitable region of pests expands  Can you think of examples?
- Forest mortality and increased risk of fires  What is the risk to communities?
- Damage to infrastructure  What examples can you think of? ***
- Food insecurity  What do we mean by food insecurity?

URBANISATION



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Image Source: BBC

What is Urbanisation?

- The term is used to describe ‘the absolute and/or relative growth in the number of people living in urban settlements, with reference to a single country, region, or the world as a whole’ (Rogers *et al* (2013))
- ‘Urbanization is a complex socio-economic process that transforms the built environment, converting formerly rural into urban settlements, while also shifting the spatial distribution of a population from rural to urban areas’ (UN Department of Social & Economic Affairs [DSA], 2018a, p. iii).
- ‘It includes changes in dominant occupations, lifestyle, culture and behaviour, and thus alters the demographic and social structure of both urban and rural areas’ (UN DSA, 2018a, p. iii).



What is Urbanisation?

- ‘A major consequence of urbanization is a rise in the number, land area and population size of urban settlements and in the number and share of urban residents compared to rural dwellers’ (UN DSA, 2018a, p. iii).
- ‘An increasing share of economic activity and innovation becomes concentrated in cities, and cities develop as hubs for the flow of transport, trade and information’ (UN DSA, 2018a, p. iii).
- ‘Cities also become places where public and private services of the highest quality are available and where basic services are often more accessible than in rural areas’ (UN DSA, 2018a, p. iii).

Urbanisation is Increasing

Cities with a Population of 1,000,000+	
Year	Number of Cities
2000	371
2018	548
2030*	706

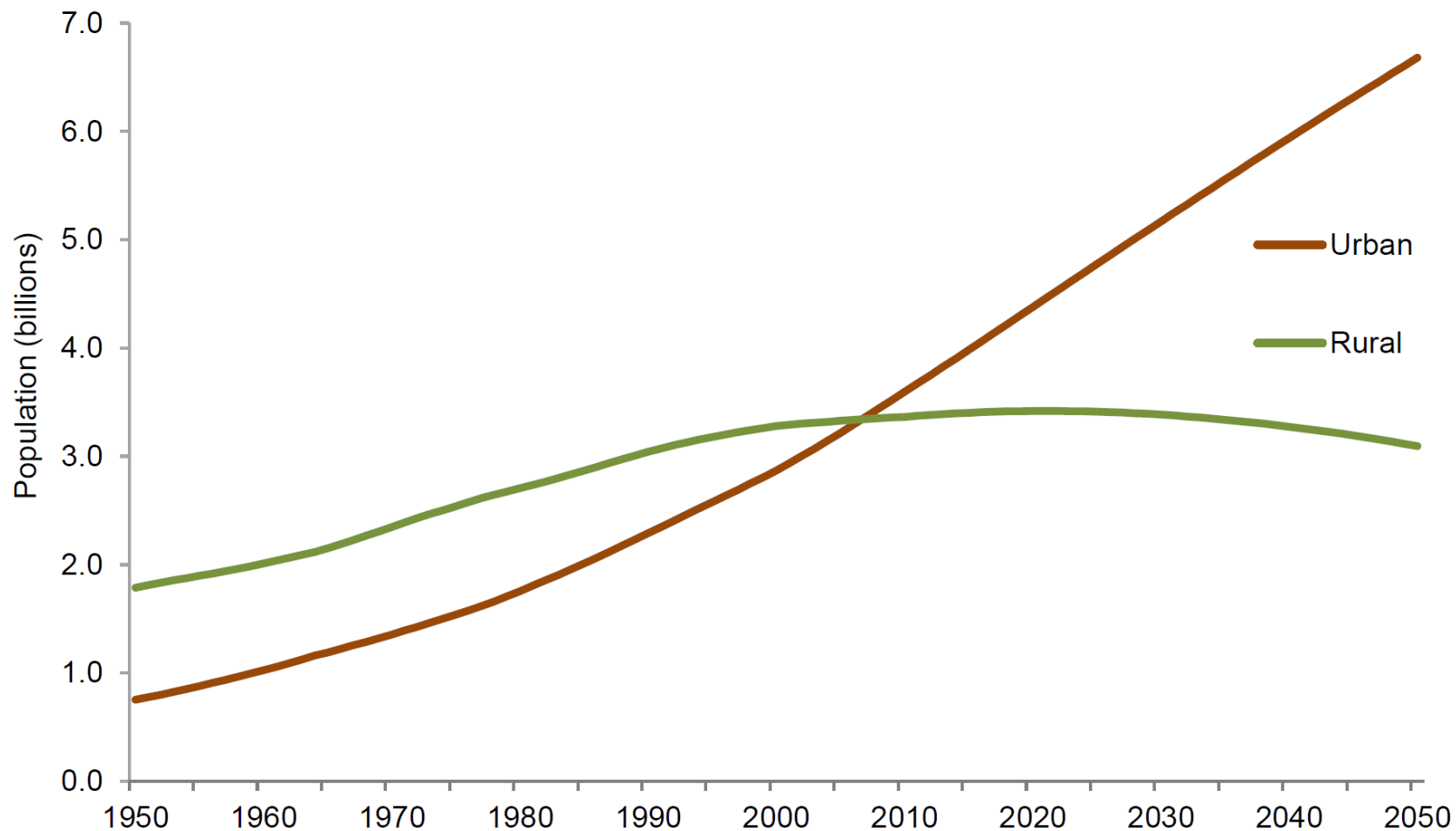


Urbanisation is Increasing

- In 1950, more than two thirds (70 per cent) of people worldwide lived in rural settlements.
- In 2007, for the first time in history, the global urban population exceeded the global rural population, and since then the number of the world's city dwellers has continued to grow faster than the rural population
- In 2018, 55 per cent of the world's population resided in urban areas. Overall, 4.2 billion people resided in urban

Urbanisation is Accelerating

Figure 1. Urban and rural populations of the world, 1950-2050



Urbanisation and the Future of Cities

Watch this short Ted Ed video.

Make a note of any key points



(Kite, V. 2014)

What do you think the implications of urbanisation are?



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Final Thought



Link to UN Act Now campaign

- [Act Now | United Nations](#)



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