

Climate Change - Action Needed in the UK

1. ISSUE

How best to deal with Climate Change's eventual impact on the provision of energy, potable water and food. CC will cause extreme weather, with increasing heat, wildfires, flooding, lengthy periods of drought, and serious disruption to food production. Progressively severe problems are likely to emerge within the next three to five years.

2. RECOMMENDATION

- 1) The Government to act aiming for the UK to become self-sufficient in renewable and nuclear ENERGY and in WATER within 8 years, by 2032.
- 2) (b) Energy and water are indispensable elements of food production and provision. Move rapidly towards becoming much more self-reliant in FOOD. Aim for at least 75%.
- 3) To plan and co-ordinate action form a new Government Department, the Department for Climate Change (DfCC) with overarching powers across all of Government. Reduce size of relevant Ministerial Departments, because of the scope of the new DfCC.
- 4) Form a Government of National Unity, with representation from all major political parties within the next 3 years.

3. PRESENTATION

People are increasingly aware that Climate Change is happening. Many though will not know that the consequences will unavoidably worsen and eventually food supplies will be affected. The Government can be seen to be on the ball and allay some fears by announcing a positive, comprehensive plan to deal with these consequences. **Announcing: "We will work with farmers and climate experts to substantially increase the supply of home-grown food."** Also say: **"A new Government Department, the Department for Climate Change, will be set up. The DfCC will have broad powers and underline our determination to deal with CC outcomes. It will also steer our absolute resolve to reach the net zero carbon target before 2050."** Important to demonstrate a firm commitment to change by giving a timetable for completion and by taking swift action. The new DfCC department must be formed ASP.

4. FINANCE

- 1) Private providers will be able to pay for necessary new infrastructure to establish the energy and water needs. They will have to recoup their investments from higher customer charges. The government can ensure a smaller charge increase but over a long-time scale. To speed up nuclear provision the government may have to invest perhaps £2 billion. The poorest in society will need some government help, dependent on energy costs. A spin-off benefit will be the provision of new jobs and technological development in a burgeoning industry which may be exported. Farmers must be encouraged to produce more food. Subsidies will be needed for some years until the production cost of home-grown food becomes less than any that can be imported. Tax increases will be required and spread over more than a 10-year period, Gaps in the level of Government funding requirement should be filled by borrowing from the IMF at fixed interest rates.
- 2) Increases in government spending are unavoidable if the widespread, very deadly, consequences of Climate Change are to be ameliorated. Doing little or nothing will cost much more in the long run and result in many avoidable deaths.

5. ARGUMENT

Everyone, most especially national Government, must take serious steps to adapt to the consequences of inevitable Climate Change.

The Conservative Government's Third National Adaptation Plan (July 2023), falls well short of what is needed. Its own advisory committee, the UK Committee on Climate Change (UKCCC), said so. Until now most focus has been on how to slow down Climate Change and keep below +1.5c above pre-industrial level, however:

- 1) Keeping below the global aim of +1.5°C is now a pipe dream. In November 2023 the pledges that countries have made in advance of the COP28 climate summit, would, if kept – a very big ‘if’ - result in a 2% reduction in global carbon emissions by 2030. But what is needed if the +1.5°C figure is to be achieved is a far, far bigger figure, a 43% to 45% cut. In addition, it is a significant sign of where we are heading in that COP28 President was Sultan Al Jaber. He is the head of Adnoc, one of the largest oil companies in the world. A few months before COP28 Adnoc announced plans to increase its oil production by 600,000 barrels a day by 2030.
- 2) In December 2023 the Copernicus Climate Change Service said 2023 was the warmest year in recorded history. The CCCS also said that in November 2023, for the first time, global temperatures exceeded pre-industrial levels by +2°C. January 2024 was also the warmest month globally on record.
- 3) All the inaction, delayed action, or wrong action (as above), will lead to an inevitable climate temperature increase averaging over 2°C. In October 2022 The UN said it was on course for +2.8°C. Experts say it could easily run away to well over +4°C. CC will happen. It cannot be stopped, although major efforts to curtail it or slow it down must continue.
- 4) **In November 2023 the UN Secretary General, Antonio Guterres, warned that “This year has seen communities around the world pounded by fires, floods, and searing temperature – and the impact is devastating. Record global heating should send shivers down the spines of world leaders.” In February 2024 he went further saying: “Climate chaos and food crises are serious and mounting threats to global peace and security.”**
- 5) This demonstrates the UK and other countries need to make and implement Climate Change adaptation plans as soon as possible.

6. ENERGY

- 1) Energy sufficiency is a basic requirement for both water and food provision. It is, of course, also fundamental for both heating and cooling. We must take speedier action to ensure we have sufficient carbon free energy. Wind, solar and nuclear power are key elements. In the UK this issue is now recognised by both Conservative and Labour parties.
- 2) Hastening much needed nuclear power production is vital. Sizewell C should be on stream within 8 years, not the 9 to 12 years originally planned. A budget of £2 billion may be needed to get EDF to safely speed up Sizewell C. Once complete it will power 6 million homes. An estimated 70,000 jobs will be supported.
- 3) Work should be progressed at Hinckley Point C, so that, at a minimum, it is kept to its operational timetable, i.e. 5 years' time. Construction costs, should not be an issue for Hinckley Point C. They are funded privately, by EDF, and will be recouped through a fixed price agreement. Hinckley Point's power output will be similar to that of Sizewell C.
- 4) SMR's (Small modular reactors) development must be prioritised. SMR's are more adaptable and locatable. When fully developed they should be safer, quicker and easier to build than traditional reactors. Westinghouse has plans to build 4 AP300 SMRs in North Teeside and have them in operation by the early 2030's. GE Hitachi and Holtec are also developing SMRs which the UK have an interest in.
- 5) In January 2024 the UK Government restated it's aim for 24GWs to be produced by nuclear power by 2050.

- 6) Solar and wind power must be quickly expanded to enable them to meet at least 80% of the UK's requirement within 8 years. That's a big increase on the current 40% figure (varies), but doable with determined commitment. Solar is now the cheapest forms of energy but is weather dependent, hence the need for nuclear and battery back-up. Private sector involvement should result in minimal cost to national and local government of boosting and speeding up these power sources.
- 7) New legislation should require all new builds, for both private and commercial property, to have:
 - very high insulation levels; solar panels, large-scale battery storage and both rain and waste water collection facilities. Private investment should be sought for this; and for ground sourced electric heat pumps.
- 8) Solar power should be installed on all government buildings and establishments, some 13,900 of these. This could cost the government £150 million, depending on deals struck with private providers.
- 9) It will also be important to provide further energy back-up for wind and solar power through large scale battery storage facilities. This paid for by private investment.
- 10) Gas fired, carbon capture, power stations should be avoided. They are extremely expensive and encourage and support the oil and gas industry,
- 11) Tidal schemes, especially of the Severn, must be considered as should developments in use of biomass power stations, combined with carbon capture. The DfCC must keep an eye out for new technologies that offer large scale carbon capture. This includes using Ai.
- 12) Farm tractors and other farm machinery must be given priority for new hydrogen and electric power engines. All farms should generate their own solar power and/or wind power. This must be incentivised.
- 13) Way down the track geothermal and Nuclear Fusion may become viable energy sources.

7. WATER

- 1) There is likely to be occasional very heavy downpours, causing flooding and damage. Much worse though, CC will mean hotter weather and probably prolonged periods of drought. In hotter weather, more water will be needed for farming, gardens and personal use. Much more will be lost through evaporation and run-off. The number of UK households are projected to increase by 1.6 million in the 10 years from 2018 to 2028. Water will be needed to supply these households. It will also be required to put out many more wildfires.
- 2) Existing Government plans are based on a 5-year-old, 2018, report, "Preparing for a Drier Future". These plans must be revised and made more ambitious, based on the latest data.
- 3) The Government must legislate to require all water companies to produce and enact on plans to ensure continuance of water supply no matter what the impact of Climate Change. They should also be required by law to link up the water supply systems of England, Scotland, and Wales to ensure greater certainty of supply to the whole of GB during times of drought. The piped system should feed into both new and existing reservoirs at appropriate times of the day and year when usage has slackened off. Larger bore pipework may be needed in some instances.
- 4) New planning laws are needed to ensure that consultation and challenge periods for new reservoirs and pipe work are reduced. It must be made possible to start work on constructing a new reservoir within 9 months of the original decision to go ahead.
- 5) The requirement for new sewerage treatment plants needs to be assessed and acted upon. Costs must be mostly covered by company owners.

- 6) All new properties must be required to have water collection and waste-water treatment systems. Existing property owners should be encouraged to have similar systems. Bermuda is a good example of such systems.
- 7) The Thames Water desalination plant, serving 900,00 Londoners, cost £250 million. Detailed research is needed before decisions are made about the need for further desalination plants nationally. This has to be based on emerging weather patterns. Assuming that eventually 3 desalination plants will be needed for each of the 5 English Regional Groups, this would cost £3.75 billion.

8. FOOD

- 1) Climate Change combined with increasing populations will cause severe global food shortages eventually. The population of the UK is projected to increase by more than 2 million in the next 10 years, so increasing pressure on food supplies. The current Conservative Government's own advisory, Climate Change Committee, has raised the issue of food security five times. This has not resulted in significant, co-ordinated and timetabled action by Government. The PM's comments at a mid-February 2024 NFU conference mentioned the importance of food security. It remains to be seen how this translates into practical, effective measures.
- 2) The IPCC said in 2023: "The increase in extreme weather and climate events has exposed millions of people to acute food insecurity and reduced water security."
- 3) On average the UK imports about half its food, but, at times, 80% is imported, this includes coffee and tea. It will be impossible to maintain these levels as Climate Change increasingly impacts on countries we import from. In 2023, fruit supply, pears especially, were badly hit in Italy and France. There were also reduced yields for tomatoes and aubergines.
- 4) British farming must be substantially encouraged, mainly by financial means, to produce much more food, appropriate to the new climatic conditions. Failure to act in time will eventually mean empty supermarket shelves. At the 2023, 16 May "Food Security Summit" the PM commitment to 50% of our food being British is a long way short of what is needed. In addition, no detailed, timetabled measures, were set out.
- 5) Up to 75,000 acres of farming land are lost each year at present to development, roads, railways and re-wilding. New planning laws are needed to make it extremely difficult to build on land that might be farmed, even if it is of very poor quality. Farm land has to be kept for food production.
- 6) Energy and water planning must take account of the needs of an expanding farming industry.
- 7) Rewilding must not take place on any land capable of growing food. It should be mainly achieved through requiring all existing farm fields to have a hedge that does not reduce the area of farming land. Plants appropriate to the changing climate must be used. These hedges also have the benefit of acting as wildlife corridors.
- 8) All central and local Government, National Trust, English Heritage and Wildlife Trust sites should substantially increase food production on their land. Land capable of being farmed has to be kept for that purpose.
- 9) The needs of the fishing industry and type of food that could be encouraged, or farmed, without damage to the sea's eco system. This should be kept under review.
- 10) Allotments use should be encouraged and fully utilised. Councils must make it a requirement that every allotment has a large water butt and a means of collecting rain water.
- 11) People should be encouraged to grow vegetable and salad plants that are suitable for the new climatic conditions. These could be grown in their gardens, no matter how small they might be, even window boxes and containers can be used.

- 12) Innovative solutions need to be explored to produce food intensively underground or in disused buildings. Large scale artificial food may eventually become possible.
- 13) If eventually we become short of essential food rationing should be introduced, as it was in WW2. But this should be planned as a temporary measure.

9. DEPARTMENT FOR CLIMATE CHANGE

- 1) Climate Change has the potential to have a far bigger impact on the UK than World Wars 1 and 2 combined. In fact, experts indicate that eventually CC could be the worst catastrophe in the 300,000 years existence of us, Modern Humans. Globally many hundreds of millions, maybe billions, could die, that is if we reach +4°C. The UK will not be immune.
- 2) It's essential to have Government recognition of the scale of dire consequences which could begin to occur in less than 10 years' time. That requires setting up a new Government Department, the Department for Climate Change (DfCC). Its key remit would be to implement plans to ensure the UK continues to have sufficient power, water and food.
- 3) The DfCC would have co-ordinating power over all other government Departments. It would keep a close eye on new technological developments and take advice from expert, independent bodies.
- 4) As a result of the DfCC, other government Departments with overlapping responsibilities could be slimmed down, e.g. Depts. For Energy and Food and Rural Affairs.
- 5) Local Councils have an important role too. For the sake of the community they represent they must carefully consider the consequences of new housing and other development. Is valuable farming land being used? What are the consequences for local water and power supplies?

10. HOUSING

- 1) Another consequence of CC includes rising sea levels. Later this century there will need to be dramatic plans for re-location of people and businesses from coastal locations that cannot be protected. A study publicised in June, 2022 said 200,000 English homes and businesses could be at risk to rising sea levels before 2050. Valuable farming land will also be lost.
- 2) At the same time the population is predicted to grow by more than 2 million. This will happen in less than 10 years, unless net migration can be kept well below the 745,000 of 2022. Second homes and houses under-occupied will have to be intelligently utilised. Any homes not occupied for at least 6 months in a year should result in an increasing scalable charge on the owner.
- 3) Much higher density housing must become a legal requirement on developers and local Councils. Affordable, high-rise flats are a necessity. The UK should learn from past mistakes with flat design and from what other countries do that works well.

11. GENERAL

- 1) In coming decades there will be vast movements of people internationally. Globally as many as 400 million people will be displaced. Many, many more than this if we eventually reach +4°C. Because of our popular language and old commonwealth links many will want to come to the UK, needing further difficult decisions on grounds of humanitarianism and practicality.
- 2) In the recent past the heat from extreme hot weather, has killed 5 million people a year globally. This figure will increase exponentially in future years. The UK will have its share, unless serious action is taken.
- 3) There may also be major disputes, even wars, over water supply, especially where a major river runs through more than one country.

- 4) Clearly, extremely difficult and expensive decisions must be taken. Delay will mean more expense, and even become impossible to fund if the international banking system (IMF) eventually breaks down. What is certain is that delay will be deadly - dilatory action on COVID is a very mild example.
- 5) Severe food shortages, will cause malnutrition and, if unchecked, will result in a break-down in societal structures.
- 6) A single political party won't be brave enough to take timely decisions. What is needed, within the next three years, or even earlier, perhaps soon after the next general election, is a Government of National Unity.
- 7) Many of the actions required may appear unthinkable at present, but COVID has taught that the unthinkable can quickly become the norm. We must not wait until the unthinkable transforms into the deadly impossible. Politicians, and others have to be brave and avoid the easy, comfortable route of 'carry on as normal' and put off taking timely action. In the distant past major Climate Change has been an extinction level event.
- 8) The efforts to limit and slow down Climate Change and Global Warming should continue unabated alongside this new adaptation endeavour. The UK has to keep to its zero carbon commitments as originally announced at COP26.
- 9) These proposals may appear selfish because they focus exclusively on action to help the UK cope with Climate Change. But unless the UK establishes a secure, stable base it will not be in a position to help other countries. Countries in the G20 group should take similar action, as should all others, if they are able.

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