

Climate Change and Energy

Useful resources

October 2021



Introduction

To support members, we want to refresh and develop our climate change and energy resources available on iema.net. This consolidated toolbox has been developed by members of the IEMA Climate Change and Energy Network, sharing tools, guidance, standards and web pages (resources that have been useful in addressing climate change). It will be annually updated and feedback is welcome and valuable in this process.

About the Climate Change and Energy Network

This network of IEMA members has a focus on climate action and transformative change. A small steering group has surveyed members and is embarking on a range of member led initiatives, such as this toolbox. Other activities include newsletters, a developing webinar programme and new guidance. The network has helped IEMA to deliver a number of leading-edge national events at EMEX and in association with partners (presentations available on the network web page). It also supports and helps inform IEMA responses to government and wider consultations.

The network is formative with real opportunities for members to influence and engage.

For more information visit: www.iema.net/knowledge/networks



Link to resources

When you see this icon, remember to click on the section heading to access the resources.

Note: This is a compilation of resources supplied by IEMA members in the Climate Change and Energy network. We are sharing content that our members find useful and IEMA is not responsible for use of the information contained in or linked from this document.

Contents

Section	Page
Climate Change Adaptation	4
Climate Change Policy	6
Communicating Climate Change	8
Carbon, GHGs and Energy	10
Mitigation with Adaptation	13
Vision / Strategy	15

Climate Change Adaptation

The climate and weather we experience is changing and direct and indirect effects are becoming more discernible. It is imperative that organisations adapt, build resilience and start to address the impacts on their activities strategically and operationally.

Climate Change Adaptation – adjusting natural or human systems (including organisations) in response to actual or expected climatic stimuli or their effects, and in doing so, to moderate harm or exploit beneficial opportunities.

Resources in other sections may also be valuable on this topic (e.g. section 5).

Independent Assessment of UK Climate Risk June 2021 (CCRA 3)



Use this report to understand key challenges facing the UK in terms of climate change risks and opportunities. This will be great for all IEMA members and especially specialists or members working at Full and Chartered Environmentalist.

Independent Assessment of UK Climate Risk (CCRA3)



Web page that collates a range of information from CCRA3 and covering the advice report, technical reports, national summaries, sector briefings, research, supporting analysis and downloads.

Climate-ADAPT



Climate-ADAPT aims to support Europe in adapting to climate change by helping users to access and share data and information.

Benefits of SUDS tool



Assess the potential benefits of green infrastructure installations, in terms of run-off reduction and temperatures.

IEMA EIA Guide to: Climate Change Resilience and Adaptation



Guidance by IEMA for adaptation and resilience within Environmental Impact Assessment. Includes case studies.

Climate Kic



To learn how to assess the costs and benefits of adaptation measures and a tool to assess them.

Making vulnerable investments climate resilient



Guidelines to help developers of physical assets and infrastructure incorporate resilience to current climate variability and future climate change within their projects.

State and Trends in Adaptation Report 2020



EU, national and transnational adaptation strategies and actions.

Adapt Now: A Global Call for Leadership on Climate Resilience



The case for climate adaptation, providing specific insights and recommendations in key sectors.

UK Climate Projections 2018



This resource can be used to determine key future climate and weather variables for use in climate change risk assessment.

Flooding Toolkit



Case studies, timelines, template packs and tips to help housing associations prepare in case of a flood, or manage in the event of a flood.

Climate Resilient Cities and Infrastructures



Practical and applicable means to support cities in designing and implementing local climate adaptation strategies.

Capability Framework for a Climate Ready Public Sector



Assess the maturity of your organisation's approach to adaptation and understand activities you can take to build your resilience to climate change.

Connecting climate risk and strategic priorities



Understand how to undertake strategic climate change risk assessments for an area or organisation.

Climate Impacts Tool: understanding the risks and impacts from a changing climate



Guidance for Environment Agency staff on using the Climate Impacts Tool to help understand potential risks and impacts from a changing climate.

Liability Risk and Adaptation Finance



This high-level briefing paper explores the legal implications of adaptation to climate change-related impacts.

A changing climate for development



A full toolkit to assess the climate risks in built environment and infrastructure projects.

ISO Whitepaper - Climate Change Adaptation and ISO14001



Whitepaper produced by experts in ISO/TC 207 SC 1 and ISO/TC 207 SC 7: How to use ISO 14090 to support adaptation to climate change in an ISO 14001 environmental management system.

Race to Resilience



Global campaign on resilience - sibling campaign to race to zero.

Climate Change Policy

IEMA has worked to support and influence the development of effective policy frameworks, which in turn are essential in supporting action on climate change and energy.

A range of policy related information is available for IEMA members both in the UK and internationally.

Climate Change Committee (UK)



Independent, statutory body established under the Climate Change Act 2008. Purpose is to advise the UK government and devolved administrations on emissions targets and report to Parliament on progress made in reducing GHG emissions and preparing for climate change. The webpage hosts a range of useful reports, publications and condensed policy insights. These are often especially useful to professionals active in the UK.

The Intergovernmental Panel on Climate Change



The Intergovernmental Panel on Climate Change (IPCC) is the United Nations body for assessing the science related to climate change. Multiple reports that are widely referenced and which inform policy direction.

UNFCCC website



Provides technical expertise and assists in the analysis and review of climate change information reported by Parties and in the implementation of the Kyoto mechanisms. It also maintains the registry for Nationally Determined Contributions (NDC) established under the Paris Agreement, a key aspect of implementation of the Paris Agreement.

International Energy Agency



Past, existing and planned international policies and measures to reduce GHG emissions, improve energy efficiency and support the development and deployment of renewables and other clean energy technologies.

International Renewable Energy Agency



An intergovernmental organisation that supports countries in their transition to a sustainable energy future, and serves as the principal platform for international cooperation, a centre of excellence, and a repository of policy, technology, resource and financial knowledge on renewable energy.

World Economic Forum Climate Action Platform



Helping businesses, governments and NGOs accelerate and scale ambition and partnerships to drive a sustainable and inclusive future.

UK Department for Business, Energy and Industrial Strategy (BEIS)



UK Government Department with responsibilities covering business, industrial strategy, science, research and innovation, energy and clean growth, climate change.

UK Department for Environment, Food and Rural Affairs



UK Government Department with strategic responsibilities on climate change and energy, sustainable consumption and production, including responsibility for the National Waste Strategy, protecting the countryside and natural resource protection, sustainable rural communities, a sustainable farming and food sector including animal health and welfare.

Scottish Government Climate Change



Microsite with details of policy actions in Scotland.

Energy & Climate Intelligence Unit - ECIU



Energy and Climate Intelligence Unit is a non-profit organisation that supports informed debate on energy and climate change issues in the UK.

E3G



Independent European think tank. Informative reports and briefings on climate change policy developments.

Carbon Brief website



Covers climate science and climate and energy policy, specializing in clear, data-driven articles to improve the understanding of climate change and related policy developments.

Tyndall Centre for Climate Change Research



Partnership of universities conducting cutting edge, interdisciplinary climate change research and providing a conduit between scientists and policymakers.

Grantham Institute - Imperial College London



Grantham Institute - London School of Economics and Political Science



Websites with leading information from universities that comprise the Grantham Research Institute on Climate Change and the Environment.

Aldersgate Group



Politically impartial, multi-stakeholder alliance championing a competitive and environmentally sustainable economy.

Reducing emissions from road transport:

Road to Zero Strategy (July 2018)



Outlines how the UK Government will support the transition to zero emission road transport and reduce emissions from conventional vehicles during the transition.

Communicating Climate Change

Effective communication around climate impacts and transitions requires planning and careful consideration. This is especially important in the context of the escalating 'Climate Emergency'.

A growing range of related research and information is available in the UK and internationally.

Advertising Standards Authority (ASA)



The Advertising Standards Authority (ASA) is the UK's independent regulator of advertising across all media. It applies Advertising Codes, which are written by the Committees of Advertising Practice (CAP). ASA is a useful reference point concerning green and climate related claims / communications (and including complaints and decisions).

Misleading by emissions? Environmental claims and the CAP Code



Explains 'Climate Change and the Environment' a current (2021) project that takes stock of the rules regulating environmental claims, and guidance about how to make environmental claims in the meantime.

Planet Placement



A website containing guidance on how sustainability-related themes can be incorporated into TV programmes, films and other content. Its findings can be transferred to other forms of communication.

Climate Visuals



A website containing a library of images, many of them free to use, showing various aspects of climate change. The images are chosen on the basis of research that shows the positive impact they have in communicating climate change.

The Climate Communication Project



A study of existing climate change communication in the UK, with recommendations for improvement. Contains user-friendly infographics.

Greenhouse Morning News



Communications specialists on a mission to drive positive social and environmental impact. Sign up to the Greenhouse Morning News for a daily digest of the top climate news stories.

Rapid Transition Alliance



Storytelling plays a crucial role in how we share knowledge and learn about the world around us. This initiative is collecting stories of change to share and demonstrate how rapid transition has happened in the past, remove excuses for inaction and show the way ahead. Transformative changes are called for to prevent climate breakdown and create the conditions for people to thrive together.

Climate & Development Knowledge Network - Practitioner guide on communicating climate change



This guide shares tips for communicating climate change effectively. It is intended for communications practitioners and other champions of climate action working in developing countries.

Communicating the Emergency (Guide published in Australia and available via CAT)



Considers ways of engaging people in conversation about the gathering climate crisis and the need for an emergency response.

Global Weirding



A series of videos which explain climate change in engaging, user-friendly ways.

Carbon Literacy



'Carbon Literacy' is a not-for-profit with the aim of everyone receiving a day's worth of learning on climate change. The website contains the "standard" (curriculum) for what should be covered to enable training delegates to be certified as carbon literate, and shows the pathways to certification.

Focus on the framing, not just the facts



An article highlighting the need to focus on the audience's core values when discussing climate change, as opposed to just stating facts.

Guardian and Observer Style Guide



A short glossary of the changes made to the Guardian's style guide, for use by their journalists and editors when writing about the environment.

Principles for effective communication and public engagement on climate change



6 principles for effective communication to engage audiences with climate change.

Enhancing accessibility of climate change data visuals



Data visuals support communication of climate change. Yet they can be difficult for diverse stakeholders in society to understand. This report, developed in collaboration between the Tyndall Centre for Climate Change Research and the Schools of Psychology and Environmental Sciences UEA, provides guidance for researchers on how the accessibility of data visuals can be enhanced while also maintaining scientific rigour.

Local Government Association best practice (UK)



Resource highlighting emerging best-practice communications of those local authorities who have declared a climate emergency and are now communicating their approach to both residents and businesses in their area.

Climate Assembly UK



Climate Assembly UK was the first UK-wide citizens assembly on climate change. It was commissioned by six House of Commons Select Committees and published its final report in September 2020.

Carbon, GHGs and Energy

Often referenced under Climate Change Mitigation, actions to limit the magnitude or rate of long-term global warming and its related effects, an extensive range of tools and resources are available for quantifying and reducing GHG emissions and for energy management.

Net Zero Explained

An IEMA explainer on the background to Net-Zero



Pledge to Net Zero

Website encouraging commitments to science-based GHG reductions and the setting of targets for net-zero emissions. Includes guidance, references to wider GHG standards and examples. IEMA has signed up.



Environmental reporting guidelines: including Streamlined Energy and Carbon Reporting requirements

Guidance to help companies and LLPs in complying with Streamlined Energy and Carbon Reporting Regulations (in UK). Can also help all organisations with voluntary reporting.



Energy Savings Opportunity Scheme (ESOS)

Guidance about the mandatory energy assessment scheme for UK organisations that meet the criteria, administered by the Environment Agency.



Government conversion factors (UK) for company reporting of greenhouse gas emissions

These emission conversion factors can be used to report on GHG emissions by UK based organisations of all sizes, and for international organisations reporting on UK operations.



Standards by ISO/TC 207/SC7 Greenhouse gas management and related activities

Summary of ISO standards on GHG management and related activities under the responsibility of ISO TC 207. Includes ISO14064-1 that specifies quantification and reporting of GHG emissions and removals at the organisation level and the wider ISO series including ISA14067 (carbon footprints of products).



GHG Protocol Standards

Globally produced standards on GHG accounting and freely available methods. Includes the GHG protocol for organisations. Also for scope 2 and scope 3 emissions and broader applications (e.g. cities).



Science Based Targets

Developing standards - provides companies with a clearly defined target pathway by specifying how much and how quickly they need to reduce their greenhouse gas emissions.



CDP disclosure services

Widely used international disclosure platform. Range of resources and services available.



Embodied carbon - The ICE database

A leading embodied carbon database, available for free, for over 200 building materials broken down into 30 main material categories.



PAS 2050 Specification for the assessment of the life cycle greenhouse gas emissions of goods and services

Free specification, revised and published in 2011. May be particularly useful when: a carbon footprint estimate or hot spot analysis is required; when GHG accounting is required for estimates of materials with longer lasting biogenic storage potential; when using PAS 2050-1:2012, Assessment of life cycle GHG emissions from horticultural products or PAS 2050-2:2012, Assessment of life cycle GHG emissions - Supplementary requirements for the application of PAS 2050:2011 to seafood and other aquatic food products.



International Standard ISO 14067:2018

Is available for product carbon footprinting.



Energy and emissions data and statistics



Evidence and data useful to inform strategy and plans. IEA work spans a variety of programmes and initiatives, helping ensure energy security, tracking clean energy transitions, collecting data, providing training around the world.

The Big eBook of Sustainability Reporting Frameworks



Non-exhaustive guide to 29 voluntary and mandatory environmental reporting frameworks.

Energy Saving Trust



Supports businesses with strategy, research and innovation, energy efficiency tools and evidence-based assurance and communications. Provides consultancy services on sustainable energy, sustainable transport and energy modelling.

Carbon Pulse



A subscription-based B2B service providing news and intelligence on carbon pricing and climate change policies; plus free CP Daily, a summary of news and bite-sized updates from around the world.

RE100



A global corporate leadership initiative bringing together influential businesses committed to 100% renewable electricity.

Renewable Energy Purchasing and the Market-based (Scope 2) Method



Collated articles and research including considerations / critique of market-based GHG accounting.

Homeworking emissions calculation



Methodology for quantifying emissions from homeworking.

Guidance document for PAS 2080



Guidance on PAS 2080, the world's first specification for managing whole life carbon in infrastructure.

Carbon Infrastructure Transformation Tool



New software for carbon accounting for infrastructure.

Fleet Reviews



Green fleet reviews are usually fully funded by the UK Government and evaluate how sustainable a fleet operation is and identify opportunities to reduce emissions, fuel costs and expenditure. The review will take the form of a comprehensive report, providing advice on vehicle choice, fuel economy, mileage reduction strategies, grey fleet management and staff engagement.

Community Home Energy Check



A tool to help communities provide home energy advice. As well as providing a tailored report on energy saving for everyone who uses it, the community HEC enables community groups to track how many people they have advised and gain an overall picture of home energy efficiency in their area. Communities can use this tool to collect pledges of energy saving behaviour and to gauge levels of interest in energy saving measures within their area.

Climate Neutral Now



Programme to encourage and support organisations and stakeholders to take climate action (connects also with Race to Zero).

Race to Zero



Global campaign that includes scheme guidelines. A key reference point on emerging pledges and shared definitions.

Oxford Principles for Net Zero Aligned Carbon Offsetting



Principles for carbon offsetting. Includes a forward view outlining how offsetting practice will transition over time (in order to align with net-zero practice and claims).

Pathways to Net Zero - Using the IEMA GHG Management Hierarchy



Considers the increasing use of ambitious carbon targets and the developing practice context for sustainability professionals. Updates the IEMA GHG Management Hierarchy, adding new schematic diagrams and guidance (and principles) for use in net-zero transitions.

International Carbon Reduction and Offsetting Alliance (ICROA)



The International Carbon Reduction and Offset Alliance is a non-profit organisation of leading carbon reduction and offset providers in the voluntary carbon market.

Guide to Carbon Offsetting



A guide to using carbon offsets.

Woodland Carbon Code



Voluntary standard for UK woodland creation projects where claims are made about the carbon dioxide sequestered. Independent validation and verification to this standard provides assurance and clarity about the carbon savings of these sustainably managed woodlands. Website also provides information on the UK Land Carbon Registry.

Carbon calculator for wind farms on Scottish peatlands



The 'carbon calculator' is the Scottish Government's tool provided to support the process of determining wind farm developments. The purpose of the tool is to assess, in a comprehensive and consistent way, the carbon impact of wind farm developments.

Peatland Code



Voluntary certification standard for UK peatland projects wishing to market the climate benefits of peatland restoration.

Rail Carbon Tool



Software for carbon accounting to assist the UK rail industry understanding its carbon footprint so it can be reduced throughout the supply chain.

GHG Protocols Calculations Tool



Methodologies for calculating GHG emissions in a consistent and transparent way.

The Tyndall Carbon Budget Tool



The Tyndall Carbon Budget Tool presents climate change targets for UK local authority areas that are based on the commitments in the United Nations Paris Agreement, informed by the latest science on climate change and defined by science based carbon budget setting.

Rising to the Climate Change Challenge



Range of established resources including briefings and reports, as well as widely used / freely available GHG standards and guidance.

ZapMap



Free resource on the latest charging points, vehicles and developments for PHEV and BEVs.

Net Zero Carbon Business – Support Hub



New (developing) web hub compiled through the Broadway initiative and provides a range of advice and simple support for businesses

Mitigation with Adaptation

In addition to topic specific resources, guidance and tools are also developing to address the twin agendas of mitigation and adaptation (i.e. together).

User guide to Climate Related Financial Disclosures



User guide produced by a joint working party set up by the Institute and Faculty of Actuaries (IFoA) and Institute of Environmental Management & Assessment (IEMA).

TCFD Knowledge Hub



Case studies, online courses and other resources to understand and implement the TCFD recommendations. TCFD physical risk relates to adaptation. TCFD transition risk relates to mitigation.

Driving Climate Actions through Environmental Management Systems



Guidance on addressing climate change through an EMS (e.g. as developed using ISO 14001). It works through the main EMS clauses and outlines how the EMS can identify and address adaptation and mitigation.

Environment Agency



Environment Agency main page - extensive resources and information across mitigation and adaptation agendas.

Evidence for Farming Initiative



EFI will be launched in England as a pilot phase in 2021, focusing on the environment and net zero, to address the lack of evidence on the impact on business profitability of applying environmental measures. There will be examples of best-practice to improve farmers' productivity and drive towards net zero.

Natural Capital Protocol



A decision-making framework that enables organisations to identify, measure and value their direct and indirect impacts and dependencies. Resources and information also now available under the 'Capitals Coalition'.

Doughnut Economics Action Lab



Network and resource described as turning Doughnut Economics from a radical idea into transformative action.

Climate Change: Financial Risks and Opportunities



Free course, to explore the risks and opportunities that climate change presents to financial market.

Supply Chain Sustainability School



Provides over 90 e-learning courses on different sustainability topics including energy efficiency and carbon.

ICAEW - Sustainability and Climate Change Community and Climate Hub



ICAEW has now created the Sustainability and Climate Change Community. Its purpose is to provide inspiration, insights and collective ambition for professionals delivering on sustainability and acting on climate change. Also a resource for sustainability professionals to draw on when collaborating with finance colleagues.

Nature-based Solutions for Disaster and Climate Resilience



Find out how people around the world are building resilience to disasters and climate change impacts through nature-based solutions.

Climate Change Publications - UNEPFI



Series of publications on climate change mitigation, adaptation and climate finance.

Project Drawdown



Sector-based analysis of the potential impact of a variety of practices designed to help the world reach 'Drawdown', the future point when it is envisaged that levels of greenhouse gases in the atmosphere stop climbing.

HESTIA



Data from researchers, farmers, food processors, and other actors in the agri-food system on the sustainability and productivity of different products and production practices. These data are stored in a consistent format and are open access.

SHIFT services



SECR and ESG reporting, carbon roadmaps and, aimed at social landlords, the SHIFT Sustainability Standard to assess the full environmental impact of housing and deliver a bespoke action plan for embedding sustainability.

ASSIST Environmental Planner



A free, web-based tool to help farmers to identify the most suitable places for different environmental management options via easy to use, interactive maps. E-Planner uses environmental datasets to produce maps of the relative suitability of land for a range of different environmental outcomes. These include: water resource protection; woodland creation; sown winter bird food; flower-rich pollinator habitats; wet grassland restoration.

UK Green Building Council



Solutions library for mitigating and adapting to climate change, and other sustainability resources.

Climate Change guidance for Standards Writers - ISO Guide 84



This document provides guidance to standards developers on how to take account of climate change in the planning, drafting, revision and updating of ISO standards and other deliverables. A free download is available.

Self-assessment tool on science-based targets for nature



A rapid way to determine where to start in building a strong corporate commitment to protecting and restoring oceans, land and biodiversity. By setting science-based targets for climate, companies can reduce an important driver of nature loss and degradation. This tool is best used alongside the SBTN guidance for goals for four areas of nature: Land, Oceans, Freshwater, and Biodiversity. The tool supports risk reduction and improves resilience. It also builds powerful opportunities to create growth around nature positive activity.

Accounting for Sustainability



The A4S Academy is a CFO-sponsored programme, which empowers and equips finance teams with the skills needed for their businesses to succeed in the face of environmental and social risks and opportunities. The programme is for senior finance professionals.

Vision / Strategy

Resources are developing to support the process of setting a vision and developing strategies that can help professionals and organisations in building corporate ambition and their own transition journey. The following webpages include thought pieces and information.

See also the GHG section for information concerning the use of vision statements such as net-zero and carbon neutral.

Race to Zero



UNFCCC - Global vision and campaign to mobilise commitments. A key reference point on emerging pledges and shared definitions. See also the Race to Resilience.

Business Declares a Climate Emergency



Business Declares is a not-for-profit organisation formed by senior leaders with a vast range of experience from the SME, B Corp and FTSE100 sectors. They are official members of the UN Race to Zero team for COP26. They believe that business has a major part to play in tackling the climate, ecological and social emergency.

The Climate Group - various initiatives



To set GHG targets and plan how to meet them. Network and collaborate. International non-profit, aiming for a world of net zero carbon emissions by 2050 with greater prosperity for all.

BSR resources



Vision / strategy. BSR™ is an organization of sustainable business experts that works with its global network of the world's leading companies to build a just and sustainable world.

Ceres resources



Setting vision / strategy. Ceres is a nonprofit organization transforming the economy to build a just and sustainable future for people and the planet.

Climate Strategies



Setting strategy. Climate Strategies works at the science-policy interface, advancing climate policy through meaningful interactions between decision-makers and researchers across Europe and internationally. They are an international, not-for-profit research network with an expansive network of world-leading researchers.

ClimateWorks Global View



Setting strategy. Insights to drive effective climate philanthropy. From new funders to those with years of experience, we equip philanthropy and the climate community with insights to build and execute transformative climate strategies.

IEMA's Climate and Environmental Emergency



IEMA's strategic approach and declaration, also some wider resources and IEMA guidance updates.

UN Environment Programme climate action



Setting strategy. Explore the state of the climate, what's happening now, the progress made and what needs to be done to tackle the climate emergencies.

We Mean Business



Setting vision / strategy. The We Mean Business coalition is catalyzing business action and driving policy ambition to accelerate the zero-carbon transition.

Future-Fit Business



Translating 30+ years of research into practical and free tools that guide real progress toward a flourishing future.

One Planet Living



A vision of a world where we can live happily within the Earth's resources, and a straightforward framework to achieve this.



Why not contribute?

Let us know - Climate@iema.net

- what tools or resources have really proved valuable?
- importantly how have they helped you?

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IEMA Transforming the world
to sustainability