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Cover picture: Earthlights courtesy of NASA Design by birdy

About the author

Joe Smith is Professor of Environment and Society at the Open University, specialising in cultural, historical and political dimensions of environmental issues. He has worked at the join between media decision-makers and research and policy communities for 25 years, and has served as academic advisor on over 30 hours of climate change-related broadcasting.

About IBT

IBT (the International Broadcasting Trust) is an educational charity working to promote high quality media coverage of the wider world. Our aim is to further awareness and understanding of the lives of the majority of the world's people and the issues which affect them. IBT regularly publishes research and organizes events to encourage a greater understanding of the role the media plays in engaging people in the UK with the rest of the world. We are a membership-based organisation. If you are interested in joining or in accessing previous research reports, see www.ibt.org.uk

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FOREWORD

IBT has a longstanding interest in climate change. Several years ago we published *The Environment on TV – are broadcasters meeting the challenge?* That report highlighted a creative gap – broadcasters wanted innovative and engaging content on climate change but they struggled to find the right ideas to bring to the screen. Since then, we have worked with independent producers, broadcasters and a wide range of experts to stimulate their creativity and to make the case for reframing climate change so that it is not just seen as an environmental issue but one that affects very many aspects of our daily lives.

A year ago, the Paris Agreement was signed and governments committed themselves to

major reductions in their carbon emissions. These commitments imply far reaching changes to everyday life. Since television is one of the main sources of information for the UK public about climate change it is timely to examine the way that it has covered this issue over the past year.

In this report, Joe Smith talks to a range of broadcasters, independent producers and academics. He argues that television has a good track record of making issues related to climate change accessible to mainstream audiences and he makes some concrete suggestions for ways in which it could continue to tell a range of stories about climate change that will engage audiences and better equip them to respond to this dynamic story.

Mark Galloway

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INTERVIEWEES*

Media

Will Anderson Executive Producer, Keo Films

Sam Bagnall Creative Director, Current Affairs TV, BBC

Jamie Balment Commissioning Editor, BBC Documentaries

Richard Bowron Former Executive Producer, Love Productions

Hannah Brownhill Head of Development, Boundless Productions

Steve Burns EVP, CuriosityStream

Tom Edwards Commissioning Editor, Formats and Features, BBC One and Two

Jill Fullerton-Smith Former Science Commissioning Editor, Channel 4

Aidan Hansell Head of Development, Love Productions

Helen Hawken Vice President, Production and Development, Factual, Discovery Networks International

John Hay Head of Specialist Factual, Channel 4

Craig Hunter Commissioning Editor, Specialist Factual and Natural History, BBC

Ralph Lee Deputy Chief Creative Officer, Channel 4

Selina Mehta Director of Development, TV & Radio, zinc media

Siobhan Mulholland Factual Commissioning Editor, Sky

Hattie Park Sustainable Production Adviser, BBC

Tim Scoones Executive Producer, Natural History Unit, BBC

Academics/others

Abbie Barnes Natural history vlogger

Richard Black Director, Energy and Climate Intelligence Unit

Mark Brandon The Open University

Nick Comer-Calder Director, The Climate Media Net

Kris De Meyer Kings College London

Ruth Dixon University of Oxford

Tamsin Edwards The Open University

Aaron Matthews Industry Sustainability Manager, BAFTA **Emma Pinchbeck** Executive Director, RenewableUK

Matt Ridley Author and Member of the House of Lords

Renata Tyszczuk University of Sheffield

^{*}Most were interviewed. In a few cases respondents shared written contributions.

EXECUTIVE SUMMARY

This report asks a simple question: what responsibilities, challenges and opportunities does climate change present for TV producers and executives?

The Paris Agreement, signed in December 2015, marked a major global commitment to decarbonise economies and societies within decades, and has been supported by all major international economic, business and policy bodies. And yet there is a lack of public understanding of the scale of change required.

TV remains one of the most influential and accessible ways that people make sense of change in the world, and receive and respond to new knowledge. But climate change is generally considered to be an 'awkward' topic for broadcasters.

The lack of clear and direct attribution to human suffering in the here and now, and the very dispersed distribution of responsibility make it difficult to develop the human angles that are so central to the majority of broadcast storytelling.

Nevertheless, television has a good track record of making climate change related issues accessible to a range of audiences – and lessons have been learnt about what works and what doesn't. Above all, broadcasters emphasized the need to avoid anything that could be construed as 'preachy.'

Many of those we interviewed wanted a nuanced conversation about whether to pursue climate change on TV or in TV. It was argued by several that headlining too much content as 'about' the topic would result in rapidly diminishing returns, whereas finding the right places to plant relevant storylines within existing strands or magazine programmes had been shown to work.

Natural history, travel, adventure and landscape shows all draw good audiences, and often weave in appropriate reference to climate change. This can be seen in the BBC's Countryfile and Springwatch. and Channel 4's Grand Designs and Food Unwrapped. Simon Reeve's travelogue/current affairs hybrids for BBC Two frequently feature climate change related issues with notable success.

A recent body of 'living off grid' shows including Channel 4's Eden has prompted audiences to consider questions about consumption. Hugh's Fish Fight (Channel 4) and Hugh's War on Waste (BBC One) offered a different, more campaigning model of programming and Arctic Live (BBC Two) has demonstrated that event television can have a real impact.

So how could television do better? While there were a number of positive examples of the embedding of relevant threads within existing shows respondents suggested there were opportunities to push this principle further. They referenced The Apprentice, Top Gear, food and home improvement shows and natural history and travelogues as places in the schedules where good creative judgment can deliver appropriate references and raise pertinent issues.

Innovation in storytelling and form offers another route to embedding sophisticated climate change related content in the schedules. In international content there are powerful recent examples of creative approaches that have served diverse audiences with 'difficult' stories. The Chronicles of Nadiya, Exodus, The Refugee Camp (all BBC) and The Tribe (Channel 4) are instances of experiment and innovation in making 'other people's lives' more familiar to wider audiences. These examples prompt the question: where are the parallel innovations around climate change coverage?

Several interviewees suggested that broadcast 'champions' could make a big difference. Senior executives making a clear invitation for ideas to be offered in this area would incentivise producers to develop and pitch more climate-centred content. Broadcasters could commit to experiment with innovative new climate related content, and to reflect upon and share what they learn.

Media executives acknowledged that they needed to be consistently brought back to the topic in order that they are reminded to 'keep trying' with innovative ideas. There was recognition too that producers and commissioners need to spend more time with specialists, keeping up with this broad and fast-moving field.

MAIN REPORT

INTRODUCTION

This report asks a simple question: what responsibilities, challenges and opportunities does climate change present for TV producers and executives? 195 governments signed the Paris Agreement in December 2015, and hence committed themselves to demanding actions and regular reviews. In signing they also recognised the need to prepare to adapt to climate change. What role should television play in helping societies to understand and achieve all this?

The NASA Earthlights image that appears on the cover of this report is a composite of satellite photos of the Earth at night. It tells a story of extraordinary human achievement across the last century, but also of high stakes risks. It signals billions of people gaining access to light, learning, leisure and livelihoods. But just as satellites have captured these extraordinary images they have also played a big part in revealing global hazards generated by fossilfuelled economic development, above all in the form of climate change. What role should broadcasters play in communicating the threats and opportunities and the debates and dilemmas posed by climate change? How might the media help society to respond?

UN talks in December 2015 led to a new global deal on the need for ambitious action on climate change - The Paris Agreement. Both the climate change that humanity will inevitably experience as a result of past and current emissions, and the policies and wider actions designed to mitigate it, will have far reaching consequences. In the past prominent research and policy figures have tended to think that TV has failed to play its part, and that climate change is 'the greatest story never told'. This report shows that there is more climate-relevant content across a wide span of TV outputs than is often recognised. However the Paris Agreement does mark a new era for the media's relationship with climate change. All of the world's governments that participate in the UN system have decided that there is no longer any doubt that climate change is a major risk to their societies, and that human activity is the primary cause. It follows that people need to be informed about the causes and consequences of climate change, and supported as they debate or take actions. These actions reach into every part of the economy and every day life. Some pose significant challenges; others generate opportunities to make the world a better place.

TV remains one of the most influential and accessible ways that people make sense of change in the world, and receive and respond to new knowledge. Yet climate change is generally considered to be an 'awkward' topic by broadcasters. They tend to think of it as difficult to attract audiences to, and too big and sprawling to 'capture'. It also has a reputation amongst some as being contentious, or of leaving audiences with unresolved and uncomfortable feelings.

With a burgeoning of media forms and platforms, and consequent competition for scarce resources, media decision-makers are in their own battle for survival – be it individually or institutionally. Media insiders hence view climate change as a very difficult topic arriving at a very difficult time, with mutiplying media platforms and channels competing for limited audience attention. The result is a mismatch between the operatic scale of the issue and what can seem a comparatively muted and episodic response from television.

This report outlines the Paris Agreement, summarises the media-climate dynamic, reviews TV outputs that are considered to have 'worked', and sketches out some potentially fertile themes and approaches for the future. The report concludes with some concrete proposals aimed at helping TV to tell 'the greatest story never told' in engaging but accurate ways. It argues that broadcasters should make their own commitments. But rather than telling viewers to think in a particular way the report asks them to: allow climate change to be interesting as well as important, to garner resources for experiments in engaging diverse audiences, and to share learning from these, and to invest time in staying connected to the dynamic intellectual and economic forces that climate change is generating.

WHY THE PARIS AGREEMENT MATTERS

The Paris Agreement has set in train a rolling process of five-yearly reviews against targets that will play out across decades. It is rooted in the best available knowledge, and this has been generated by means of one of the most ambitious intellectual projects in the history of science, culminating in the biggest process of peer review and summary ever known: The Intergovernmental Panel on Climate Change, or IPCC. The IPCC was created to make sense of the past, present and future interactions between air, soil, sun, plants, clouds, economies, societies and more. Knowledge of the past derived from research on tree rings and ice core measurements is bound together with understanding of, say, the energy used in transport, and heating and cooling, to build physical and economic models of the climate. Knowledge is collated about greenhouse gas emissions from farms, cities, businesses and everyday life now, and assumptions are made about likely patterns into the future. Despite the huge diversity of this research effort there has been a remarkable and sustained level of confidence building since the late 1980s that humans have created unprecedented risks that promise loss and suffering on a potentially huge scale. The word 'unprecedented' is being used so often in conversations about climate change that it has started to lose its impact.

Nevertheless, the natural science of climate change has sometimes been represented as finished. Many in the climate change research and policy communities, as well as some of the commentators

'It's always about the human angle. Anything that has climate change on the box, if that's the wrapping, that's the wrong way to start.'

Will Anderson, Keo Films

who have been tagged climate change contrarians, are frustrated at this attempt at what feels like a short cut to 'activation' of public concern. Climate science research, in common with other science research, is ongoing. Indeed it is probably best to assume that this vast interdisciplinary project will continue into the foreseeable future. Many specialists who bridle at the tactical foreshortening of climate change's many complexities are happier with a framing of climate change science as a risk assessment, and climate policies as a gargantuan risk management exercise. Although these phrases might only rarely work as the explicit headlines for a programme they do free television producers and commissioners to allow both the research and the policy and politics to be interesting as well as important.

The commitment to decarbonise economies and societies globally, within decades, has been supported by all major international economic, business and policy bodies, including the G8, G20, OECD, the World Bank, International Monetary Fund and World Economic Forum. Their engagement in the topic at a time when they have a body of other major concerns on their agendas is one very sensitive measure of how profoundly concerned mainstream economics, business and political institutions are about the threats that climate change poses.

But climate change is also catalysing positive changes and opportunities. Long before the Paris Agreement, leaders in industry and design acknowledged climate change as one of the strongest drivers of innovation in their sectors in over half a century. These aren't just technical: experts in public health, welfare and planning also see rich opportunities to address a number of challenges around housing, energy, water, transport, food and health in an integrated way off the back of the momentum generated by the threat of climate change impacts. The opportunities but above all the threats have most significance in the global South. While climate change is accelerating the development of new energy technologies that support more environmentally sustainable development it is also, in the words of the US Pentagon, a 'threat multiplier' with the power to further destabilise vulnerable regions and intensify conflict.

A far subtler point, but one highly relevant to television producers and executives is that climate change knowledge also changes our culture. It is worth pausing to note that the idea that the aggregate of human actions around fossil fuel use is capable of changing the global atmosphere is strange and novel. That it has become widely accepted must surely change the way that humans think about their place in the world. Climate change promises to have cultural consequences on a scale equal to Darwin's ideas about evolution. Just at the moment when we start to gain some mastery of the nature of the functioning of the

Earth's systems we discover that we are threatening the conditions for a good life on the one home planet available to humanity.

Do television audiences know enough already? If not, why not? How much of it do they need to know? And if one of the greatest jeopardies facing humanity isn't a story – then what is?

MEDIA AND CLIMATE CHANGE

The message we often get from commissioning editors, is to reflect the public conversation, and to pitch into areas of life that people are talking about. I don't think they feel that it is one of those subjects. It should be and everyone knows it should be – it has this elephant in the room quality. Aidan Hansell, Love Productions

Climate change is urgent and important, but at the same time many feel threatened by the notion. Where the consequences of knowing about climate change contradict other beliefs or values people are well motivated to ignore it. By some measures it should fill the schedules: by others it is unwatchable. While on the one hand it is proclaimed as urgent and important, on the other hand it presents a vast sprawling and tangled web of issues that are impossible to summarise. The lack of clear and direct attribution to human suffering in the here and now, and the very dispersed distribution of responsibility makes it difficult to develop the human angles that are so central to the majority of broadcast storytelling.

To add to the challenge, the issue has emerged in parallel with changes in media production and consumption that have seen radically intensified competition for consumers and consequent downward pressure on most television budgets. The number and nature of media platforms has been transformed within the space of a generation. In this environment commissioners and channel controllers have to anticipate and serve the expectations of audiences in order to keep their job, or, indeed, sustain their institution. Faced with the thicket of challenges that climate change presents it is perhaps not surprising that the topic has tended to languish on the 'too difficult' pile as producers seek to develop winning pitches or commissioners work to draw audiences to their offer.

Nevertheless, despite these challenges there are some important – even unlikely – achievements in terms of public opinion and engagement in climate change issues. Polling suggests broad majority support for action on climate change. This could not have been achieved without TV coverage of the topic. Although media 'audience effects' research is very wary of any simple association between issue-related coverage, awareness, attitudes and behaviour, it is recognised that news and factual media are part and parcel of processes of social learning. The fact

that the majority of people in the UK and countries like it are 'concerned' or 'very concerned' and support policy action begs questions about the regular calls from senior research, policy and political figures for greater 'climate communication'.

However, a basic awareness of causes and consequences, and fairly widely distributed concern is a necessary but not sufficient basis for the kinds of actions that can deliver the far reaching decarbonisation implied by the Paris Agreement. The story isn't over at the point when awareness of the basic processes of climate change is fairly widespread. In Paris the international community agreed to do things it doesn't know how to do in a very short space of time. The world's governments will need to do more than 'take their people with them'. Meeting the demanding challenges set in Paris in December 2015 will need skills, resources and critical debates. Television, as one of the most influential cultural forms of our time, will play a role in all this for good or ill.

WHAT WORKS? 'STORY FIRST'

It's always about the human angle. Anything that has climate change on the box, if that's the wrapping, that's the wrong way to start. You don't sell areas, you sell stories. I think the challenge for all of us is to find the stories that engage people in climate change. Will Anderson, Keo Films

On the spectrum of ideas that people want to stop and listen to and ideas that they don't, it's at the harder end. It doesn't mean it can't be done. It just means you've got to work a bit harder to make it attractive. John Hay, Channel 4

Media executives are sceptical about the capacity for climate change to draw an audience: it is widely viewed as 'ratings toxic'. The direct evidence for this is sparse, not least because shows that directly explore the topic are rare. The only substantial co-ordinated body of programming to date, namely the BBC's Climate Chaos season (that was spread across a 12 month period and different platforms) saw solid viewing figures for the flagship duo of Are We Changing Planet Earth and Can We Save Planet Earth, presented by David Attenborough (BBC One, 2006), and a surprise hit for citizen science modeling experiment Climate Meltdown, the second part of which was moved from BBC Four onto the more popular BBC Two. It is notable that the *Planet* pair of films were the last UK television commission on a popular channel to seek to summarise both the state of knowledge of climate science and the range of options for policy and societal actions. However, a number of commissioners and producers had clear recall of climate change or closely related shows produced in the intervening years that did badly with audiences and/or were viewed as unsuccessful in creative terms. But it was

pointed out by one commissioner that climate change falls into a wider category of 'preachy TV' that 'simply doesn't work'. Another stated that viewers don't want to be blamed for environmental harm.

Several TV executives we spoke to were also concerned to emphasise how difficult it is to get any idea commissioned. Although climate change carries a double burden of being perceived as both 'worthy' and in various ways 'difficult' it was noted that it is not a special case. As Channel 4's John Hay put it: 'there aren't rules specifically about climate change programming, there are just rules about programming'. Another commissioner, Siobhan Mulholland of Sky, commented on the small budgets and few slots available. She did not believe it was about ratings, but 'the issue is, is it going to be different, is it going to be new?' Commissioner priorities are tracked and hence matched by executives in production companies and units, and hence it is a brave producer that offers ideas that go against the perceived or announced priorities.

There was however, a sense amongst many of the executives that lessons have been learnt. Several wanted a nuanced conversation about whether to pursue climate change on TV or in TV. It was argued by several that headlining too much content as 'about' the topic would likely result in rapidly diminishing returns, whereas finding the right places to plant relevant storylines within existing strands or magazine programmes had been shown to work.

Natural history, travel, adventure and landscape shows all draw good audiences, and interview respondents noted that thoughtful editorial interventions can weave in appropriate reference to climate change. The BBC's *Countryfile* and 'Watch' brand (*Springwatch*, *Autumnwatch* etc), and Channel 4's *Grand Designs* and *Food Unwrapped* have been cited by several as examples of shows that have managed to splice well-weighted references to climate change adaptation or mitigation measures into relentlessly popular shows. It was argued that the production teams' well-trained ear for the audience's established expectations had resulted in treatments of the topic that align with rather than interrupt their enjoyment. However more than one industry insider suggested that the reputation for climate-relevant content in some of these shows was historic and episodic rather than sustained.

Natural history programming was noted as providing a good number of cases of successful integration of appropriate references to climate change, but in terms of prominent themes these tended to be examples of the genre engaging with conservation rather than climate change issues. This confidence had in part been driven by the impact and success of conservation-driven feature documentaries such as *Blackfish* (2013) and *End of the Line* (2007).

'On the spectrum of ideas that people want to stop and listen to and ideas that they don't, it's at the harder end. It doesn't mean it can't be done.' John Hay, Channel 4

Biggest and Baddest (2013) for Animal Planet and Shackleton -Death or Glory (Discovery, 2013) were offered as examples of popular specialist factual programming that, when relevant, set climate change as the likely backdrop for changes in habitats, or animal behaviour and range. These popular shows reflect environmental issues 'but with a light touch' (Helen Hawken, Discovery). Arctic Live (BBC Two, 2016) deployed popular travelogue and natural history presenters for three one hour mid evening live programmes that explored life for the human and other animal communities of the Arctic. Climate change was a consistent theme throughout the films: not 'smuggled' in but rather a very prominent thread in the weave. The references to climate change were rooted in lived experiences in the featured locations as well as specific comments from both presenters and contributors. However academic specialists were frustrated by some details within the commentary, and felt that even very minor editorial tweaks would have made certain statements more robust or factually precise.

Turning to issues of everyday life, both commissioners and producers pointed to a current or recent body of 'living off grid' shows as ways of prompting audiences to consider questions about consumption. Channel 4's Eden (2016) and Channel 5's Ben Fogle's New Lives in the Wild (2015-) were cited as examples of successful television in terms of both audience figures and relevant underlying themes.

Although it was also clear that there was a good deal of selfawareness about the hazards of textual or visual clichés (e.g. flooding, storms and polar bears), one commissioner emphasised that a programme has to call out clearly to viewers from the TV listings. A title, photo and listings description, whether traveling via long established publications or social media networks, has to be impactful, simple and true to the story. This point extends into the content of the programme itself. One independent producer noted that TV is a reductive medium, and hence cautioned against attempts to take on the whole topic of climate change, and recommended finding a story within it as a focus. At the same time, their experience had proven the need to offer the big bold propositions that broadcasters always insist they are looking for.

Hugh's Fish Fight (Channel 4, 2013) and Hugh's War on Waste (BBC One, 2015-16) were raised as important cases by several respondents who were not involved in their production or commissioning. They were deemed to have exemplified careful judgments about both tone and scope in environmental change related programme making. These cases were also noted for the intuitive relationship between the broadcast and digital/social media offer. Although focusing on the environmental issue of over-fishing and habitat destruction rather than climate change

the Fish Fight show was considered a standout example of a fresh way into a familiar but similarly difficult issue that also achieved crossover into active public and policy engagement and wider social and news media. Notably, when Fearnley-Whittingstall and Keo moved to the BBC with War on Waste the series appeared on the most popular channel, BBC One. While it was noted that such campaign-style 'authored' programming would necessarily be fairly exceptional, and required close scrutiny in terms of the editorial policies of public service broadcasters, it had demonstrated some important points about tone, talent and multi-platform working.

Stunts and challenges were an important editorial and visual element of those programmes, and other similar cases were noted. The Human Power Station (BBC, 2009) was a special of the BBC One popular science show Bang Goes the Theory. The causes of high energy demand, and routes to reduction, were cleverly presented via challenge and surprise elements. Abstract notions were made tangible by the fact that as the house occupants went about their daily lives the dramatic fluctuations in energy demand they caused had to be met entirely by a hidden bank of cyclists attached to generators in the hangar next door. BBC Scotland's The Great Big Energy Saving Challenge covered similar ground with a more direct suburban 'domestic challenge' treatment (BBC Two Scotland, 2013).

Two older shows Blood, Sweat and T-Shirts and Blood, Sweat and Takeaways (BBC Three, 2008; 2009) were recalled as having directly addressed consumption issues but with a blend of fun and invention. These shows had connected primarily youth audiences directly to the things they consume with a blend of travelogue and investigation. Key to their success was that they weren't sold as programmes about international trade, environmental impacts or labour conditions, although such tough issues were central. This serves as a reminder of the importance of relevant but attractive packaging for a programme. Hannah Brownhill of Boundless drew comparison with how The Undateables (Channel 4, 2012) had been successful in a way that a programme called Dating and Disability would not have been: 'this is a programme about dating and we all relate to that awful nervousness.'

Talent was frequently cited as a key route to decent audiences for climate-related programming, although one commissioner emphasised the need for the talent to be understood as actively participating in the topic by audiences. Broadcaster instincts about talent align with researcher insights into the pitfalls and potential of the association of celebrity and climate change. The relationship of trust that audiences build with particular talent is the core of this. There was acknowledgment that a presenter with 'passion' could help a programme attract and keep an audience, but that it 'has to be genuine' (Siobhan Mulholland, Sky). One example is Simon Reeve's travelogue/current affairs hybrids for

BBC Two. They frequently cover climate change directly in a way that is clearly not getting in the way of re-commissions and strong audience figures. He is just one example cited where viewers will follow the talent, and his engaging and non-judgmental presence will keep them as he pulls on a climate change thread within the context he is exploring.

Several examples of shows with high profile talent that relate to but don't directly address climate-related themes of mitigation, impacts or adaptation recurred in the interviews. These included Kevin McCloud's waste and repurposing shows including *Kevin's Super-Sized Salvage* (Channel 4, 2014) and James May's *The Reassembler* (BBC Four, 2016). While of varying tone and topic all of these programmes invite reflection on the quality of the stuff we use everyday; where it comes from; how it is looked after and where it goes at the end of its life. For audiences these are entertaining shows about the stuff we live with. For the climate change policy specialist, these can serve as the beginnings of conversations about what they might term 'material demand reduction': a vital but relatively neglected element in emissions reduction strategies. They are implicitly programmes about quality of life, but audiences meet them as an invitation to ponder rather than to receive a lecture.

An episode of *Ross Kemp: Extreme World* (Sky 1) engages with a very different strand of the climate change story in which he explores the political effects of climate change in Mongolia. Audiences are drawn into an understanding of how climate change impacts can increase political instability. One executive suggested that the episode saw Kemp deliver the strongest pieces to camera of his career. All of these examples were felt to be an intuitive combination of lead-talent, topic and treatment. Similarly programming associated with Sky's Rainforest Rescue campaign, such as *Richard Hammond's Jungle Quest* (Sky 1, 2015) was seen as an inviting watch that might easily have been delivered as worthy and unwatchable 'issue TV', although this was one example where the choice of talent could be considered dissonant by audiences.

Extreme weather spectacles were noted as a route to putting some climate change relevant content in front of audiences that would not go looking for it (e.g. Channel 4's *World's Wildest Weather*). The device of presenting future weather forecasts (*Climate Change: Britain Under Threat*, BBC One, 2007) has demonstrated the potential of hybrid TV forms that can deploy familiar faces and formats in ways that invite audiences to think into climate changed futures. However, it was also noted that both commissioners and audiences may lose their appetite for a body of programming around a particular theme such as extreme weather if it is over-supplied and considered too 'samey'.

There were only sparse examples offered of comedy and drama responses to the theme, although some respondents suggested it was important to look sideways at some commissions to see how they do address relevant ideas in fresh ways. The drama *Utopia* (Channel 4, 2013-14) addressed questions of population and consumption in striking but indirect ways, achieving the demanding goal of becoming a talked about show about the state of things. Some references to climate change were noted in comedy content, particularly current affairs related shows, but they tended to be dependent on the interests and engagement of the talent.

WHAT DOESN'T WORK? 'PREACHY'

Without prompting, the word 'preachy' was used by several to summarise the primary creative risk generated by the topic. However, despite current commissioner craft and editorial concerns about headlining the topic, there was also wide acknowledgement that television had to share the state of scientific knowledge with audiences, and outline the kinds of debates and decisions that flow from it. Nevertheless it was recognised that the decision environments for commercial and public service broadcasters were very different. The former were under no obligation to inform audiences about particular issues, but were also freer to campaign. Public service broadcasters were seen to have more responsibility to put the state of knowledge in front of their diverse audiences, and at the same time there was a clear expectation that they should explore issues with objectivity and impartiality in factual content.

WHAT NEXT? WHAT COMMISSIONERS WANT

The body of interviews and reviewing of relevant content indicate a number of lessons learnt or emerging opportunities that can support sustained and extended coverage of climate change on television. An experienced media insider stated that commissioners used words like counterintuitive, surprising, fresh and entertaining when describing the qualities they look for as they sieve the many propositions that flow in for each available slot. However one commissioner implored producers not to 'self-edit' and asked for big issues and interesting ideas. Another emphasised that 'it's not all about ratings. It can't be. As a public service broadcaster it is our responsibility to educate the audience, to not shy away from difficult or hard-hitting subjects. We all need to work harder to find the vehicle that will make climate change accessible' (Craig Hunter, BBC).

At the same time independent production companies tend to think of commissioners as being risk averse, and believe they want returnable series with big characters: 'It's very much to do with the broadcasters' briefings and what they require. There's no point in us just developing these things in isolation. We have to be inventive within the briefs we're given' (Selina Mehta, zinc media).

'Champions are massively important. Without them it's almost impossible.'

Richard Bowron. Executive Producer

In the face of this fairly narrow and highly competitive creative space there was a spectrum of responses to the question as to whether to develop programming that took climate change 'head on' or to weave it into familiar strands and settings. This very diversity of approaches is a good thing in itself: it suggests that broadcasters, with their range of channels and audiences, can support a goal long promoted by social science research, and that is to acknowledge and reflect the range of audiences, and hence range of values, tastes and presumptions, with which people meet the subject of climate change.

CHAMPIONS

There was a consensus amongst broadcasters that they are not and should not be explicit champions of climate change as an 'issue', or to 'lead' viewers to a particular conclusion. However, a number of producers argued that champions are needed in the form of senior executives making a clear invitation for ideas to be offered in this area. 'Champions are massively important. Without them it's almost impossible' suggested executive producer Richard Bowron. Broadcasters acknowledged this argument: 'champions would be really useful as that would mean the issue is reinforced and there would be a coherent strategy' (Jamie Balment, BBC).

WORK HARDER TO PLACE CLIMATE CHANGE IN TV NOT ON TV

While there were a number of positive examples of the embedding of relevant threads within existing shows respondents suggested there were opportunities to push this principle further. They referenced The Apprentice, Top Gear, food and home improvement shows and natural history and travelogues as places in the schedules where good creative judgment can deliver appropriate references and raise pertinent issues. These didn't just relate to mitigation: experience of climate change within people's lives invites an approach that starts from a located human story. One executive stated that climate change was already an element of significant stories, but that it needed to be given profile within them: 'if you're making something about bush fires in California or Australia, which is exciting stuff, you should be pointing out - and it's so elephant in the room that people don't – that these things are much, much worse than they were because of climate change' (Sam Bagnall, BBC). It was acknowledged that climate change had become a mainstream element of much quality news coverage of business, finance and politics, however a close media-watcher noted this mainstreaming of climate change is far rarer in non-news factual broadcasting.

INNOVATION

Innovation in storytelling and form offers one route to embedding sophisticated climate change related content in the schedules. In international and disability-related content there are powerful recent examples of creative approaches that have served diverse audiences with 'difficult' stories. The Chronicles of Nadiya, Exodus, The Refugee Camp (all BBC, 2016) and The Undateables and The Tribe (Channel 4, 2015) are instances of experiment and innovation in making 'other people's lives' more familiar to wider audiences. These examples prompt the question: where are the parallel innovations around climate change?

While broadcasters were very clear that they didn't want to be finger wagging at audiences several respondents suggested that some carbon intensive behaviours might increasingly come to be viewed in the same way as other personal choices or practices where norms have shifted. It was noted that attitudes to ethnicity and gender, or smoking, have driven changes in editorial and representational choices. These changes have been supported by some deft editorial moves by television producers, and are now second nature in TV production. Some respondents pondered on whether the same may come to pass in future programming around carbon-intensive practices. BAFTA are currently developing practical advice for producers around these questions.

CONNECTING TV TO CLIMATE RESEARCH, POLICY, POLITICS, **BUSINESS AND CULTURE**

One commissioner noted how ideas for themes to be addressed often emerged from news media. However these inter-relations between print and broadcast media may have a self-reinforcing effect in terms of viewing climate and other global environmental issues as a 'hard sell'. There is a long established literature that demonstrates how print news media struggle with global themes that are distributed in terms of causes and effects, and run through with complexities and uncertainties. Deep-seated norms in news media culture and practice seek conflict, event and personality as the heart of most coverage. This has also often led to 'false balance' in the presentation of climate change, with ill judged casting and equal weighting sometimes given to outlier climate contrarian views. These patterns of news coverage have sometimes been echoed in non-news television, or controversies about them have contributed to decisions to leave climate change on the 'too difficult' pile. Hence media executives suggested that they needed to be consistently brought back to the topic in order that they are reminded to 'keep trying' with innovative ideas. There was recognition that producers and commissioners need to invest time in the company of specialists, in order to keep up with this broad and fast-moving field.

BEYOND TELEVISION

Has the moment passed for attempts at comprehensive summaries of climate research and action? The new funding, production and consumption environment was thought to have clipped the wings of UK domestic broadcasters. However there have also been major investments in climate change documentaries that in the past might have been driven particularly by public service broadcasters. Netflix funded the climate impacts and solutions series *Years of Living Dangerously* (Season 1, 2014), and National Geographic supported Leonardo Di Caprio's passion project *Before the Flood* (2016) and offered it free-to-view online at launch. Such large scale projects and the new routes to audiences suggest that broadcasters have unprecedented opportunities for collaboration on co-productions that can bring high levels of craft skill, investment in production and institutional profile to projects that seek to continue to tell the story in the round to mass audiences.

Such high profile blockbusters can be designed in an integrated way with a wider digital and social media offer. TV commands big audiences but online and social media markets continue to build, and serve different forms of media consumption and participation. There was a sense that there has been insufficient experimentation at the interface between television and interactive digital platforms around climate change. The sustained success of the BBC Earth portal, or more generally of download and subscription video on demand (SVOD) points to new opportunities to build informed and engaged audiences. Indeed Steve Burns of SVOD channel Curiosity Stream suggested online interactive, with a call to action is now 'the strongest venue for getting the message out'.

COMMIT TO EXPERIMENTS, LEARNING AND SHARING

The world's governments have committed to tough targets and regular reviews around actions that will change societies and economies. Why would broadcasters not set targets for themselves? It was widely agreed that target setting around 'quotas' of content would be a mistake.

It seems far more apt for television to set itself a creative challenge. One simple measure would be for all major broadcasters to commit to commissioning innovative new climate related content, and reflecting on what they learn. The allocation of budgets committed to experiments will generate novel proposals. By drawing producers' attention, and making space for new work, television will be mirroring the far-reaching efforts going on in sectors as diverse as fashion, farming and finance. This explicitly mirrors the Paris process where the governments in the UN system have committed to doing something difficult that humanity currently doesn't know how to do. It would also see the media sector starting to parallel well-established processes that are being pursued by corporate and local government networks for learning and transformation. But more will be achieved if they also commit to sharing progress and learning. This would benefit from a research programme that connects insights into media consumption and production with climate research and policy in a structured way. Such work would investigate the role of people's experience of television, and interactions between TV and other media, in terms of how they think about, talk about and act on climate change. It would accelerate learning about

the kinds of techniques and tones that help to present challenges and dilemmas, and support debates about, greenhouse gas intensive trends of modern life including animal protein rich diets and extensive flying.

STAY CLOSE TO EXPERTISE

Climate change is a dynamic topic. While public debates about 'is it or isn't it happening?' and 'is it human caused' are to all intents and purposes over in UK media this remains an ambitious and unfolding body of knowledge. Demanding issues for research remain, whether about the role of the oceans or clouds in climate processes or the modeling of future household energy demand. Difficult and controversial political, technological and economic questions will need close scrutiny, and will often require wide participation. Decisions will be improved by broad debate that is liberated from any sense of fixed and pre-formed thinking. To play an effective part broadcasters need to keep up with developments by sustaining contact with a healthy mix of research and policy specialists and relevant sectors. To this end IBT and its partners intend to sustain their programmes of workshops and seminars, and special events held at film festivals. These activities will serve as a source of story and project ideas. They will deepen knowledge of the issues within the media. Such sustained contact also helps the climate change research and policy community to understand the constraints and opportunities within broadcast media.

Greater mixing between media and expertise will help producers to make appropriate judgments about who to put on screen in relation to a particular topic, or who to call on to go through questions during production.

A related proposal is that any projects with a substantial climate change element should engage academic specialist advice on broad themes and minor script details. This is already practised in some cases, and climate researchers could sense which outputs had enjoyed that benefit. Many researchers are glad to see their work directly supporting better public understanding and debate. There will be occasions when more than one advisor will be necessary. Such advice could also generate online supplementary content for programming that would, for example, add depth of meaning and corroborating hypertext links to the published research that underpins statements within programmes. Providing an annotated and hyperlinked script (e.g. to academic papers that inform a statement) would be a simple trust building measure. They would also serve to support higher quality online and social media debate beyond the programming where it relates to contentious or unresolved issues. Such a move would help to build both awareness of and trust in research and policy processes, and encourage them to be understood as imperfect and incomplete, but rooted in professionally-informed concern, good practice and good-will.

'It's not all about ratings. It can't be. As a public service broadcaster it is our responsibility to educate the audience, to not shy away from difficult or hard-hitting subjects.'

Craig Hunter, BBC

CONCLUSION

Climate change is a topic that is 'too big, too everywhere', and yet it has driven a set of hugely ambitious globally agreed objectives that are only likely to be met with very broad public support. Television remains one of the most influential of media. Yet it is under intense competitive and financial pressure, and is experiencing rapid change.

However our interviews with a range of broadcast commissioners and producers went way beyond restating that 'it's difficult'. They surfaced a body of existing work that references climate-relevant themes and that splice them in with careful judgment. The diversity of channels and genres referenced show that content can and does reach substantial and varied audiences. The glass is half full. Nevertheless, even the briefest review of the tasks implied by the Paris Agreement, and by the latest findings from the climate change research community, make clear that there is a bigger story to tell, that it is very dynamic and that society faces some difficult tasks ahead.

But maybe the pursuit of 'the big story' is the wrong way to respond to this mix of ambitious interdisciplinary science, messy politics and novel ethics. The Paris Agreement implies changing the way many people travel, keep themselves comfortable, and how they produce and consume goods. Action on climate change also means preparing the places we live (the buildings, the cities, the countryside) to cope with extreme and unpredictable weather and more.

Instead of being understood in the singular as 'the biggest challenge' it could be very liberating to frame the topic quite differently. It can be approached as the most interesting and dynamic set of interconnected questions humans have asked themselves in more than a century. It should be recognised as one of the greatest spurs to innovation in sixty years. It is also creating momentum for a major renewal of infrastructure and the improvement of dwellings around the world. Adapting to climate change also means that we will be helping to make societies 'ready for anything', including a range of unpredictable hazards that humanity has always faced.

By looking at climate change in these ways television could, with some relief, give up the search for 'the' way to tell the big climate story, and instead reveal the thousands of different stories that this difficult new knowledge prompts. Some will be about debate, conflict and division. But others will be about ingenuity, or about affection for places, people and things. Many will be about a determination to make things better or safer. These thousands of different stories will meet thousands of different audiences who can then better equip themselves and their societies to respond.