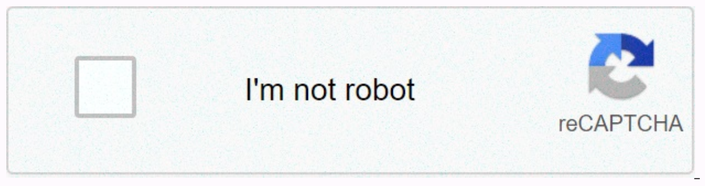

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Ipcc report october 2018 summary

The Intergovernmental Panel on Climate Change (IPCC) published a shocking report on global warming of 1.5°C. An equally accurate but more rousing title could have been the end of our time. It is shocking, not because those working in science are surprised by the messages (they are all based on existing and published science), but because the message is exceptional and alarming overall. The diversity and severity of the effects of climate change are like a story we may see in a Hollywood movie, but they are actually and confusingly clear-eyed predictions of where we are actually going, preventing massive economic mobilization and a rapid shift to cleaner technologies. To provide the first context, most people feel that the Earth has been going through ice age cycles. At the depths of the last ice age, Chicago was less than a mile on the ice. The difference in the average global surface temperature between the depths of the last ice age and today is about 4-7 degrees Celsius. Although the 'where are we going' forecast is complex, it is fair to say that the pace of our global economic system is hurting us towards global warming by 3-4 degrees – in other words, global change, which is not very different from the previous ice age and today. The new report focuses on what impacts we can expect from up to half of warming, at 1.5 degrees and 2 degrees, and the remarkable story is even at these lowest levels of climate change that we believe can be achieved – given that we have already warmed to around 1 degree – the effects are significant and quickly become severe when temperatures rise above 1.5 degrees. Other sources, such as this interactive graphic and report summary, detail some of the title numbers, and I don't list them all here. Considerable is the likelihood that an increase of 1.5-2 degrees would expose several hundred million people to dangerous climate-related risks by 2050 and are likely to destroy 99% of coral reefs. And the scale of the challenge in the short term of economic redibutives is staggering: the study estimates that global greenhouse gas emissions will have to drop by 45% from 2010 levels by 2030 to stay on a 1.5 degree path. Given the dramatic recent increase in emissions, it represents a decrease of around 60% from current levels in 12 years. How do risks increase with temperature and why 1.5? While the numbers in the headlines are deeply relevant, so is the fact that the report addresses a fundamental issue: How much risk does climate change pose to us when we choose global temperatures? In other words, when we continue to burden almost 50 billion tonnes a year and other climate-changing substances in the atmosphere? Can we get to the dump? The report dives into this issue in a structured manner in a certain way. Firstly, it examines the impacts of certain specific levels of climate change– assesses the impacts, particularly in comparison with warming of 1.5 and 2.0 degrees Celsius, the pre-industrial level, but also looks at a wider range of possible warming outcomes. It then brings together and synthesizes what we know from previously published scientific, peer-reviewed and otherwise audited literature on how these warming outcomes would affect ecosystems, sea level rise, human health, livelihoods, communities and more. An important and central aspect of this exercise was to better describe how each of these risks will change as temperatures rise, asking questions such as: How much more heavy rainfall would occur in a world of 1.5 degrees warming compared to today, and how much more serious would the situation be if warming reached or above 2 degrees Celsius? It's worth stopping to understand the seemingly strange concept of 1.5 degrees, which gives the report its title. Why 1.5? The origin is in the original International Agreement on Climate Change, the 1992 Framework Convention on Climate Change. This agreement (negotiated during the George H.W. Bush administration) recognised the importance of climate change and established a process to help the international community begin to address it. A key principle of the international climate approach formally included in the agreement was to avoid dangerous anthropogenic interference with the climate system. It was left to future scientific and policy debates to find out exactly what dangerous means. In any case, in the end, there was a consensus that it is necessary to understand how the risks of climate change increase as temperatures rise. As these discussions progressed, it also became clear that various risks - such as rising sea levels, risks to ecosystems, landfills and risks to human systems - may have slightly different sensitivities to global warming, which is why such concepts were separately undiculed and assessed. The resulting concept was graphically depicted in the now well-known figure of the IPCC's third evaluation report in 2001. While the character's vibrant yellow, orange and red colors were formally titled Causes of Concern, they earned it the nickname Burning Embers diagram. It went through a number of improvements in the development of new science, but it was an important basis for discussion across the government and civil society to narrow the more dangerous definition. Based on the risks, uncertainties and potential impacts understood at the time, this debate increasingly shared the notion that all categories appeared to be more extreme and significantly worrying exceeding approximately 2 degrees Of warming. By the 2009 UN Climate Change Conference in Copenhagen officially approved keeping warming below 2 degrees. Although the consensus on 2 degrees crystallized, questions arose as to whether the 2 degree target could be too high. On the other hand, the published additional sciences strengthened confidence in the effects at a lower level of warming and showed that the effects could be broader and more severe than originally thought. In addition, discussions in the wider international community focused more directly (if not entirely) on equity and ethics and how they should relate to this key risk assessment. It's a fascinating and important story, but the end result was a sinking of the 1.5 degree target at the start of the 2015 Paris Agreement: The increase in global average temperatures is well below 2 degrees above pre-industrial levels and continues efforts to limit the temperature increase to 1.5 degrees above pre-industrial levels. As a direct result of the Paris Agreement, the IPCC's international scientific body was asked to assess and report on our understanding of the difference between 1.5 and 2 degrees and what it would take to get on a global path to bring warming below 1.5 degrees. This is where the new IPCC report comes in. The report assesses, both quantitatively and qualitatively, how much risks increase as temperatures rise. The short answer to these questions in the report is something like this: We are already at 1 degree warming and we see significant effects; 1.5 degrees will have more serious effects; 2 degrees is more; And we probably don't want to test what's happening above 2 degrees - although our current pace seems to take us to the traject line about 3 degrees or more of the world. The Reason for Concern chapter, which was up-to-date in the new report, has a broad feature of increasing risks to more than 1.5 degrees, both for five reasons in the top and new, even more secessional system assessments in the lower row. In addition to the graph, the report contains a wealth of grainy details, for example, assessing how much additional environment will be lost when moving from 1.5 degrees to 2 degrees, or how many ice-free summers there would be in the Arctic. Some of them are surprisingly steep half-degree rises – such as the estimate that the percentage of the world's population exposed to extreme heat at least once every five years rises from 14% to 37%, or an estimate that coral reefs would break down by only 70-90% below 1.5 degrees, but 99% in a two-degree world. These are sobering because 2 degrees in itself is still an elusive target and warming above 2 degrees would have even greater consequences. I will not go into detail about other impacts as they have been central to much of the report, so refers to these sources or the report itself. Cause for Concern chapter of the IPCC report Global warming 1.5 degrees C.. Note that the planet in 2018 is already in a grey shaded area that is about 1C warming above pre-industrial levels. Source: www.ipcc.ch/report/sr15/ paths to risk management: Can we stay below 1.5 degrees? While it is important to understand the risks associated with different warming levels, the equally urgent question is whether the planet will reach an emission path that stays at 2 degrees or, if possible, on a 1.5 degree path. There are a few key aspects to this challenge: the dramatic redibutting of global production and consumption towards a low or zero level of greenhouse gases by around 2030; the likely structure of untested decarcarcose techniques on a large scale towards the middle of the century; and extensive measures to adapt to climate change. The IPCC report illustrates a number of approaches that could reach 1.5 degrees with a limited crossing (i.e. more than 1.5 and then back down). Coal-fired power should fall by 60-80% from 2010 levels by 2030. Renewables would grow by around 100-500% and reach around half of global electricity generation by 2030 (again in 12 years' time) and by 70-90% by 2050. These and other features are separately separated for information purposes below. The general message is that mathematics can actually work, but the mechanism for realising such rapid and dramatic changes is just not part of the report, and that is, of course, the biggest issue of all. In other words, the report tells us that these paths are physically and technically possible, but we need to find out what social and political approaches we need to adopt in order to implement these pathways. Photo Showing routes to 1.5 degrees Celsius from the IPCC report global warming to 1.5 degrees C.. There are four different illustrative scenarios, but which share common features of a rapid technological shift towards zero or low emissions. Source: www.ipcc.ch/report/sr15/ so the answer can we do it is technically yes. But if we're going to do it, how can we do that? The problem is clearly enormous. Such major and complex problems certainly require thinking about change, integration and major movements. However, progress is also needed to solve this problem in countless smaller and manageable factors. The scale and speed of the technological transition is exceptional, but credible. For example, individual technologies have gone through rapid transitions before. The first iPhone was unveiled just 11 years ago – the app didn't exist in early 2007. Cars rose from less than 1% in the United States in 1900 to almost 100% for 30 years Although some technologies are not suitable for rapid replacement, the general principle is that: change can be implemented in many applications. In addition, the IPCC report states that while the scale and duration of mobilization is unprecedented, the speed of mobilization is not, and reminds us of the US efforts to mobilise during The Second World War. The societal challenge (or political) challenge – how we change behaviour together and make dramatically different choices – is the scariest. There are certainly many reasons to be pessimistic about our collective ability to drive broad and significant change, for example if we frame the problem around concepts such as convincing voters (or politicians) to invest in the now-to-be paying bribe. And leadership at national level in some key countries – the United States, Australia and perhaps soon Brazil – is pushing against climate action. However, a few alternative frameworks can be useful: economic growth. Many studies have pointed out the economic growth benefits of such a shift. Clean energy provides jobs and, in many cases, more jobs than dirtier technologies. Clean air and the green environment are healthier for people. A recent New Climate Economy report estimated that extensive, full investment in a clean economy would result in net benefits of $26 trillion by 2030. Innovation. Technology is a real part of the solution to climate change, and we have developed a global innovation infrastructure that is effective by all objectives. Many of our best and brightest are inspired to work on new energy and climate-friendly technologies and institutional approaches. Rebuilding this technological innovation machine, educating students globally in relevant fields, providing the right structure for early-stage funding and bringing these technologies to market are a key part of the solution. We're on the trail. This road is not new and we have already started a transition. The deployment of renewable energy has shown remarkable progress, exceeding expectations and surprising analysts. Since 2012, more than half of the new increases in electric power have been renewable. The cost of solar energy has fallen by more than 70% since 2010 and the combined cost of renewable energy is falling so rapidly that they are expected to be competitive or cheaper than fossil fuels by 2020. So progress is already being made in clean energy and in many other areas of climate stabilisation – we just need to go faster and do more, which requires choices and policies. All men. The only strategy that works is a strategy that fully engages all levels of activity, including personal actions, but also policy and decision-making other communities and groups: cities, cities, provinces, states, countries; workplaces; companies and investors; universities; I believe in communities and more. In each of these ways, they can deal with the problem. One recent example of this is here in the United States, where more than 3 500 cities, states, businesses and other cities have committed themselves to doing their part to achieve the objectives of the Paris Agreement. A recent study I helped lead showed that this coalition, which represents more than 50% of the US population, almost 60% of US GDP and is equivalent to the world's third largest economy , could reduce US emissions by around 24% by 2025 compared to 2005 levels. Although such a commitment is not enough, it can help to build the foundations for the accelerated targets that the report calls for. It also stresses that elections and political choices will play an important role in the United States and globally in the coming years. The IPCC report sums up what we already knew about the risks of climate change and throws the challenge into sharp relief. The scale and speed of change require not only new technologies, but also innovations in new models so that we can organize ourselves and our investment responses. However, a real and deep-rooted commitment to this issue could lead to a genuinely better quality of life around the world, and the results of people's well-being, economic growth and health would be dramatically better. This possibility now exists, and the report calls on us to seize it. It.