

Check against delivery

## Saint Malo Summit

### Speech by Mr Jean JOUZEL, Vice-Chairman of the IPCC, the Intergovernmental Panel on Climate Change

Wednesday 29 October, morning

First of all, I would like to thank the organisers of this meeting for inviting me to speak. If we are to deal with the double challenge of ensuring a drastic reduction in our greenhouse gas emissions while adapting to global warming then it is vital for us to get our regions moving.

I am an academic and I will use this view of the scientific world to look at the issue of global warming, supported in the main by the IPCC's own diagnosis. We will see that much more is needed, but after all the Kyoto protocol is based on the IPCC's diagnosis. This is what I will be trying to tell you, or tell you again.

I'll begin by defining the IPCC. All governments on the planet signed the Climate Convention which stipulated that we must stabilise greenhouse gases. They entrusted this expertise 20 years ago to the IPCC, which produced four reports, in 1990, 1995, 2001 and 2007. They have just begun work on the next report, which will be published in 2013 - 2014 and will deal with the socio-economic aspects of global warming. The IPCC has a 30-person bureau, chaired once again by Rajendra Pauchauri from India.

An IPCC report is quite a complicated thing. There is a complete report, a technical report for each group and reports' summaries. There are also documents which we call "Summaries for Policymakers" in English.

It is important to understand that these summaries are approved line by line by government representatives. They really do adopt these summaries in the strictest sense of the word as it is these same representatives who take them to the Climate Convention and turn them into something extremely dynamic.

We can be sure about one thing: we are changing the composition of the atmosphere massively and at a staggering rate; we are the source of the 35% increase in CO<sub>2</sub>, the more than doubling of methane and the 15 to 20% increase in nitrogen oxide. So, the statement approved in Paris last year, "*climate change is unequivocal*" is very important. This is a first observation, with accelerated global warming over the last 50 years. As a global average, this corresponds to over 1/10<sup>th</sup> of a degree over the last few decades and nearly 2/10<sup>ths</sup> of a degree during the 1990s. An increase in temperature of around one degree may



appear relatively minimal. But there are many other indicators: the state of the ice in the Arctic Sea, rising sea levels, and so on.

We were asked another question: *what is the link between the increase in greenhouse gases and global warming?* This is a perfectly legitimate question since it puts the scientific community on the spot in terms of its ability to differentiate between natural changes in climate which have always existed and which will always exist and those changes that may be related to actions by mankind. Our answer has been very clear: we think that there is a 90% chance that most global warming over the last few decades is actually related to human activities.

If we do nothing then we must prepare ourselves for a very different world. There will be an average 3 degree increase in temperature. This is based on a theory that greenhouse gases will increase moderately. In our regions, temperatures may rise by 4 to 5°, with sharp increases in the Arctic region. This is based on a 50-60 year time frame, and the generations which will be affected are already with us. Our children who are under 15 years of age today will see the concrete effects of this. We can no longer talk about future generations. These generations are already here.

I would also like to stress that our climate for the next 20 years is already set in stone. Our emissions will have no effect on this climate as it is broadly dependent on the greenhouse gases released into the atmosphere over the last 50 years. Having said that, the more emissions we release today, the greater will be the rise in temperature in the second half of the 21st century and we must not lose sight of this. We are actually determining the climate our grandchildren will have.

The consequences of global warming will be massive. We will see a reduction in rainfall combined with an increase in evaporation, making the issue of water resources an acute one. This will concern areas as diverse as Southern Africa, the American Midwest, part of South America and of course the Mediterranean perimeter.

Certain regions will have to deal with the emergency of species extinction. The loss of animal and plant diversity will become a serious issue.

Other regions will see the problems caused by cyclones, the loss of coral reefs and others will be forced to cope with rising sea levels. This will be the case for the Nile and Niger deltas. These changes will bring massive threats to the local economies of Bangladesh, Vietnam, China, Indonesia and other countries.

Vulnerability itself is unfair, as our colleague from the Sahara and Sahel Observatory has already emphasised. It is actually harder to deal with vulnerability within a country when there are other development problems related to poverty in general. The fight against global warming must act as a lever for the development of all countries on the planet.

In this respect, the figures speak for themselves when we look at vulnerability in terms of water. Water resource management problems will be even more stark. In South East Asia for example, one billion inhabitants depend on what happens in the Himalayas for their water supply. First of all, as glaciers at high altitude melt water resources increase, with the risk nevertheless of glacier lakes hurtling through the valleys. But within 20, 30 or 40 years there will be less snowfall, fewer glaciers at high altitude and the serious risk that the major rivers in South East Asia such as the Indus, the Brahmaputra and others will have practically no water supply in summer.

The heat waves that will have an impact on agricultural output will also generate public health, malnutrition and other problems. They will also be accompanied by everything we see with extreme temperatures: massive storms, fires and other effects. All of this is well-known, but it is worth reminding ourselves of it.

I would like to look at the Kyoto Protocol here because fundamentally it is simply common sense. We cannot continue to increase greenhouse gases; we cannot continue to increase this heat in the lower levels of the atmosphere and hope that nothing will happen. We need compensation mechanisms, but unfortunately these are nowhere to be seen. On the contrary, what we do have are increase mechanisms.

For example, when the ocean's temperature increases this means that there is no more water vapour in the atmosphere. But water vapour is the leading greenhouse gas and this increases global warming. The greenhouse effect must be stabilised. The climate convention was able to see this as from 1992. All the countries have signed this climate convention, which quite simply states that the greenhouse effect must be stabilised. We must stop increasing the temperature in the lower levels of the atmosphere by applying perfectly reasonable rules to our agricultural production and by using the concept of sustainable development. Stabilising the greenhouse effect must be part of a development dynamic. This is very important.

Kyoto is just the first step, as the title of the speech says.

I think that we should comment on this graph which comes from the IPCC's 4<sup>th</sup> report. The first point is the idea that warming is unavoidable with its associated consequences: increase in sea level and other extreme, destructuring climactic events. If we look at the stabilisation objective which is enshrined in the climate convention, the European objective of a 2 degree limit is an extremely ambitious one and one which should be applauded. It means cutting our emissions by a factor of three by 2050. The G8 is discussing an increase in temperature limited to 2.5 degrees, which means a 50% cut by 2050. This would enable us at best to limit warming to 2.5 degrees.

We can see that it would be best to set ourselves the objective of a division by a factor of 3 rather than a factor of 2. But we must see that in both cases the next 10 years will be vital. We will not manage to divide either by 2 or by 3 by 2050 if global emissions have not started to fall by 2015, or 2020 at the latest. This is why the next 10 years are vital for fighting global warming. We cannot hope to achieve our objective in 2050 if we have not started stabilising emissions within the next ten years, followed by a planet-wide reduction.

There is one European objective which follows the 3 times 20 principle. This is being discussed at European level and I hope, if possible, to see a 30% reduction by 2020, with the other 20% covered by energy efficiency and also the production of renewable energy. I also hope this climate energy package will be an ambitious one and will be implemented this year.

I share Nicolas Hulot's view that there is no way we can restart the economic machine without fully integrating ecological and environmental aspects into development. Ignoring these two aspects would be a monumental error.

It is true that France's objective is an ambitious one, but it is only an objective. Division by a factor of 4 by 2050 is enshrined in law as an objective. Few people in France know this. Personally I was one of the people who were heavily involved in the Grenelle de l'environnement on these climate energy related aspects. I co-chaired the group with Nicolas Stern and I think that all the proposals from the Grenelle de l'environnement are very rich, highly consensual and were drafted by different colleges on transport, energy, town planning and housing aspects. We can be pleased that Grenelle 1 has been launched but it is clearly the second part of the second Grenelle law that must be the important and ambitious one. I hope that it will be quite quick in forthcoming and will show real ambition.

Of course we understand that the political agenda is a short-term one. However, our politicians must have both a long-term and a medium-term view of our development. I would like to remind the regions in particular that this question of limiting greenhouse gases must be accompanied by an adaptation which is absolutely necessary. We must start both moving. The need to adapt must not mask the absolute urgency in acting to limit greenhouse gases.

This is why the Kyoto Protocol is just a first step. We need an ambitious Post-Kyoto in Copenhagen.

Thank you very much