

Climate Change

A. Environment

Here are some statements about the environment. Can you identify the authors?
What is your opinion?

Environmentalism is a religion that is based more on political ambitions than science. Communism has been replaced by the threat of an ambitious environmentalism.
Resources would be better spent investing in ending hunger and disease in developing countries than on climate change projects.
Our world faces a true planetary emergency
Freezing carbon emissions would harm Americans and lead to "no new industry, no new people and no new cars".

- **Václav Klaus**
- **Bjorn Lomborg**, Director of the Danish Environmental Assessment Institute, author of the book "The Skeptical Environmentalist"
- **Al Gore**, former US vice-president
- **C+Joe Barton**, the leading Republican on the House Energy and Commerce Committee

B. Questions to be discussed

1. What factors influence climate change?

Classify the listed items into three columns (white boxes) and then formulate the general headings (grey ones).

distribution of land and ocean
sun activity, its changes
human activities
volcanic activities
vegetation
GHG emissions

- 2. Is the current global warming just part of a normal cycle? Why?**

- 3. Can we trust new, sophisticated scientific technology, such as computer modelling that says our environment is in trouble?**

- 4. What are the direct observations of recent climate change?**

- 5. What are the arguments against climate change?**
 - Going into an ice age?
 - Climate change occurring?
 - Climate change good for us?
 - Climate change natural? Do nothing?
 - Clear climate change caused by humans?
 - The climate much hotter/colder in the past?
 - Climate change faster in the past?

- 6. Do you know what IPCC stands for?**

- 7. What are the projected impacts of climate change?**
 - very likely - human activities –cause - global warming
 - probable temperature rise - by the end of the century - 1.8C and 4C
 - possible temperature rise - by the end of the century – range - 1.1C and 6.4C
 - sea levels – likely – to rise - 28-43cm
 - Arctic summer sea ice - likely - disappear - second half of century
 - very likely - parts of the world - see an increase in the number of heat waves
 - climate change - likely - lead - increased intensity - tropical storms

C. Risks and benefits

Give examples of the following hazards. What are the risks associated with them.

natural hazards, e.g.

chemical hazards, e.g.

biological hazards, e.g.

social hazards, e.g.

personal hazards, e.g.

fires
tornadoes
viruses
earthquakes
volcanic eruptions
pollen
parasites
pollutants in air, water, soil and food

smoking
drinking
occupational safety
hurricanes
dieting
floods
transportation
bacteria

D. Copenhagen Climate Summit, December 2009

Was the summit a success?

What are the key points of the Copenhagen Accord?

Which countries backed the accord?

Why did the Copenhagen summit take place at all?

Why is a new global agreement needed?

Video: Friends of the Earth

<http://news.bbc.co.uk/2/hi/science/nature/8422473.stm>

BBC NEWS

Q&A: The Copenhagen climate summit

The Copenhagen climate conference COP15 resulted in a document called the Copenhagen Accord. It was hammered out by a small group of countries - including the world's two biggest greenhouse gas polluters, China and the US. The conference as a whole did not adopt the accord, but voted to "take note" of it.

Was the summit a success?

This depends on your point of view.

On the positive side, the Copenhagen Accord, for the first time, unites the US, China and other major developing countries in an effort to curb global greenhouse gas emissions. The Kyoto Protocol did not achieve this - it imposed no obligations on developing countries to restrain the growth of their emissions, and the US never acceded to it. The accord also says developed countries will aim to mobilise \$100bn per year by 2020, to address the needs of developing countries.

On the other hand, the summit did not result in a legally binding deal or any commitment to reach one in future. The accord calls on countries to state what they will do to curb greenhouse gas emissions, but these will not be legally binding commitments. Furthermore, there is no global target for emissions reductions by 2050 and the accord is vague as to how its goals - such as the \$100bn of funds annually for developing countries - will be achieved.

What are the key points of the Copenhagen Accord?

- A commitment "to reduce global emissions so as to hold the increase in global temperature below 2C" and to achieve "the peaking of global and national emissions as soon as possible"
- Developed countries must make commitments to reduce greenhouse gas emissions, and developing countries must report their plans to curb greenhouse gas emissions to the UN by 31 January 2010
- New and additional resources "approaching \$30bn" will be channelled to poorer nations over the period 2010-12, with an annual sum of \$100bn envisaged by 2020

- A Copenhagen Green Climate Fund will be established under the UN convention on climate change, to direct some of this money to climate-related projects in developing countries
- Projects to reduce greenhouse gas emissions in developing countries will be subject to international monitoring if they are internationally funded
- Programmes to provide developing countries with financial incentives to preserve forests -
- will be established immediately
- Implementation of the accord will be reviewed in 2015 and an assessment will be made of whether the goal of keeping global temperature rise within 2C needs to be strengthened to 1.5C

Which countries backed the accord?

The essential points of the deal were brokered by US President Barack Obama with representatives of China, India, Brazil and South Africa. Mr Obama also consulted with the leaders of France, Germany and the UK. Most countries at the conference gave it their support, but some countries were resolutely opposed, including Venezuela, Bolivia, Ecuador and Cuba.

Why did the Copenhagen summit take place at all?

The majority of the world's governments believe that climate change poses a threat to human society and to the natural world.

Successive scientific reports, notably those from the IPCC have come to ever firmer conclusions about humankind's influence on the modern-day climate, and about the impacts of rising temperatures.

In 2007, at the UN climate talks held in Bali governments agreed to start work on a new global agreement.

The Copenhagen talks marked the end of that two-year period.

Why is a new global agreement needed?

The Copenhagen talks sat within the framework of the UN Framework Convention on Climate Change (UNFCCC), established at the Rio de Janeiro Earth Summit in 1992.

In 1997, the UNFCCC spawned the Kyoto Protocol.

But neither of these agreements can curb the growth in greenhouse gas emissions sufficiently to avoid the climate impacts projected by the IPCC.

In particular, the Kyoto Protocol's targets for reducing emissions apply only to a small set of countries and expire in 2012.

Negotiations therefore began on new treaty that was bigger, bolder, wider-ranging and more sophisticated than the Kyoto agreement, and the plan was that these would conclude in Copenhagen.

Why is climate change happening - and is it the same as global warming?

The Earth's climate has always changed naturally over time.

For example, variability in our planet's orbit alters its distance from the Sun, which has given rise to major Ice Ages and intervening warmer periods.

According to the last IPCC report, it is more than 90% probable that humankind is largely responsible for modern-day climate change.

The principal cause is burning fossil fuels - coal, oil and gas.

This produces carbon dioxide (CO₂), which - added to the CO₂ present naturally in the Earth's atmosphere - acts as a kind of blanket, trapping more of the Sun's energy and warming the Earth's surface.

Deforestation and processes that release other greenhouse gases such as methane also contribute.

Although the initial impact is a rise in average temperatures around the world - "global warming" - this also produces changes in rainfall patterns, rising sea levels, changes to the difference in temperatures between night and day, and so on.

This more complex set of disturbances has acquired the label "climate change" - sometimes more accurately called "anthropogenic (human-made) climate change".

Will the Copenhagen deal solve climate change?

The global average temperature has already risen by about 0.7C since pre-industrial times.

In some parts of the world this is already having impacts - and a Copenhagen deal could not stop those impacts, although it could provide funding to help deal with some of the consequences.

Greenhouse gases such as CO₂ stay in the atmosphere for decades; and concentrations are already high enough that further warming is almost inevitable.

Many analyses suggest an average rise of 1.5C since pre-industrial times is guaranteed.

Tough action to reduce emissions might keep the temperature rise under 2C; but given uncertainties in how the atmosphere and oceans respond to rising concentrations of greenhouse gases, it might not.

This is why developing countries put such an emphasis on adaptation, which they argue is necessary already.

IPCC figures suggest that to have a reasonable chance of avoiding 2C, global emissions would need to peak and start to decline within about 15-20 years.

Currently, the cuts pledged by industrialised nations are not enough to halt the overall global rise in emissions. Furthermore, countries that went in to the Copenhagen conference prepared to offer bigger cuts in emissions if other countries took tough action, appear to be sticking with pledges to cut emissions at the lower end of their range.

Story from BBC NEWS:

<http://news.bbc.co.uk/go/pr/fr/-/2/hi/science/nature/8278973.stm>

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Source: <http://news.bbc.co.uk/go/pr/fr/-/2/hi/science/nature/8278973.stm>

Video: Friends of the Earth <http://news.bbc.co.uk/2/hi/science/nature/8422473.stm>

World People's Conference on Climate Change and the Rights of Mother Earth

April 22nd, Cochabamba, Bolivia

Bolivia hosted a major climate change summit this week, but it was hard to tell that from the headlines of Latin America's major media.

The four-day event, the People's World Conference on Climate Change and the Rights of Mother Earth, hosted by Bolivian President Evo Morales, was a first for the region, and attracted more than 12,000 delegates from over 100 countries.

Morales proposed the grassroots gathering following the Copenhagen climate change summit last December, arguing that the views of developing countries and Latin America's poor were largely ignored at that summit.

For the thousands of people from indigenous and social movements, the Cochabamba summit was a rare and important opportunity to voice their concerns in a global forum about the impact of climate change and to share their knowledge about how to tackle global warming.

<http://www.alertnet.org/db/blogs/46655/2010/03/23-222716-1.htm>

grassroots – (nej)nižší úroveň, členská základna

E. Environmental responsibilities

Define the environmental responsibilities and conflicting values of citizens who come from different countries and cultures. Here are some thought-starters for discussion.

- In many countries people rely on wood for their cooking needs as well as for warmth. This consumes valuable timber and produces harmful GHG emissions. This is bad, but uncooked food can lead to disease, and people die when there's not enough heat. Which is worse? What is the answer? (GHG=greenhouse gas)
- Is there a difference between the environmental damages from GHG emissions in a developed country versus the GHG damages in undeveloped countries? Explain the difference.
- Which is more excusable: deforestation for agricultural/forestry production in a developed country or deforestation for/by farmers in a developing country that uses the land and trees for survival?
- Are businesses from less developed countries that cut down forests for export or businesses from developed countries that demand the timber more environmentally responsible? What about governments that engage in this sort of exchange?
- As developing countries continue to progress, vehicles, residences, and industries that rely on fossil fuels for heat and power contribute more and more GHGs. Should they slow down their rate of progress? Should they be asked to reduce emissions of GHGs?
- Several industrialized countries have instituted a carbon tax. Some people have suggested that these countries should institute carbon credits. What are carbon taxes and carbon credits? Do you think they should be employed by developed countries?
- There are healthcare, medical well-being, and social costs associated with burning fossil fuels. Some would argue that these are external costs and that the industrialized world, particularly the United States, does not pay for them. What are external costs and who pays for them?
- Several models of fuel-efficient automobiles are available to the average consumer in the developed world. Why are there so few on the road?
- What is permafrost? What effect can the melting of the permafrost have on your country?
- What impact would rising sea levels have on your country? What about shoreline housing?
- What are coral reefs? How and why are they changing? What will it do to sea creatures?
- What is the Larsen-B ice shelf? Is this question relevant to your country?
- How do the rates of destruction of forests and the rates of drought compare with previous history?

F. Cinquain (sustainable development)

Line 1:	one word (subject or noun)
Line 2:	two words (adjectives) that describe line 1
Line 3:	three words (action verbs) that relate to line 1
Line 4:	four words (feelings or a complete sentence) that relates to line 1
Line 5:	one word (synonym of line 1 or a word that sums it up)

peace treaty, peace accord
 treaty of alliance (spojenecká smlouva)
 treaty on global warming
 bilateral trade agreement
 the Munich agreement

Maastricht treaty
 gentleman's agreement
 contract for work
 at a negotiable price
 by mutual agreement

take note of – vzít v úvahu

curb – omezit GHG emissions

accede to – přistoupit na
 to address st – zabývat se čím

impose a ban, a fine, a tax, an embargo, a moratorium, obligations (závazky) – uvalit, uložit, zavést
 obligation to do st, obligation to sb (závazek)

restrain the growth – zamezit růstu

He didn't accede to our demands- Nepřistoupil na naše požadavky.

legally binding commitments – právně závazné závazky, povinnosti

hit the target – zasáhnout cíl

to peak – dosáhnout vrcholu, kulminovat

envisage – předvídat

Implementation of the accord will be reviewed – uskutečnění dohody bude prouzkoumáno

give sb a fair deal – jednat s někým slušně

make a deal with sb. –

make a big deal of st. – zbytečně něco zveličovat

Don't forget our deal – Nezapomeň na naši dohodu.

It's a deal

broker – vyjednat

within the framework

spawn – dát vzniknout čemu (kniž), klást vajíčka, jikry, třít se (ryby)

the climate impacts projected by- očekávané, předpovídané

apply only to a small set of countries and expire in 2012

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 Sources:

<http://www.ipcc.ch/>

<http://www.chmi.cz/>

<http://www.beyondzeroemissions.org/arguments-against-climatechange>

<http://www.climate.org/topics/>

<http://teams.lacoe.edu/documentation/classrooms/amy/algebra/5-6/activities/poetry/cinquain.html>

Climate Change, opportunity through action, Brno, March 27, 2008