

EXPLORING THE KYOTO PROTOCOL

Teacher-led Activity

This activity is an inquiry into the Kyoto Protocol. Students will find out what the Protocol is, what its aims are, and what New Zealand's target is for reducing greenhouse gas emissions.

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INTENDED LEARNING OUTCOMES

Students can:

- describe and explain the reasons for the Kyoto Protocol
- identify New Zealand's greenhouse gas emissions target
- describe the trends in New Zealand's greenhouse gas emissions
- identify the major contributors to greenhouse gas emissions in New Zealand.

BACKGROUND NOTES FOR TEACHERS

Teacher background should include some understanding of:

- greenhouse gases
- the climate change issue.

WHAT YOU NEED

- The [Kyoto Protocol and New Zealand Worksheet](#).
- Print and laminate the five [statement cards](#).

FOCUS

- What is the Kyoto Protocol?
- What have you been reading and learning about climate change in the news?
- What are greenhouse gases?
- Where do most of New Zealand's gas emissions come from?

MANAGING THE ACTIVITY

Hand out a copy of the worksheet "The Kyoto Protocol and New Zealand" for each student. Divide the class into five groups. Place the statement cards in different locations around the classroom. Each group selects a statement card. Give each group five minutes to discuss

the statement and answer the relevant questions in "The Kyoto Protocol and New Zealand Worksheet". Then the groups move to the next statement card so that each group circulates around the room going to each card in turn. Using information from the cards, the students fill in the worksheet.

REFLECTION

- Do you think it is an important, national priority for New Zealand to meet the greenhouse gas emission target?
- What can be done to reduce greenhouse gas emissions in New Zealand?
- Do you care about reducing greenhouse gas emissions?
- Why is global warming a "cross-border" problem?

EXTENSION

Prepare a short speech for the United Nations to American officials, arguing for or against ratifying the Kyoto Protocol.

SUPPORTING RESOURCES

- New Zealand Climate Change website <http://www.mfe.govt.nz/issues/climate/international/kyoto-protocol.html>
- The United Nations Framework Convention on Climate Change <http://unfccc.int/2860.php>
- Study Guide (accompanies the movie "An Inconvenient Truth") <http://www.aninconvenienttruth.com.au/truth/guide.htm>

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THE KYOTO PROTOCOL AND NEW ZEALAND WORKSHEET

1. What is the Kyoto Protocol and what is its main aim?

2. Where is Kyoto?

3. When did the Kyoto Protocol come into force?

4. How many countries needed to ratify the Kyoto Protocol before it could come into force?

5. What does 'ratify' mean?

6. When did New Zealand ratify the Kyoto Protocol?

7. What other international agreements is New Zealand involved in to address climate change?

8. Which notable country has not ratified the Kyoto Protocol?

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THE KYOTO PROTOCOL AND NEW ZEALAND WORKSHEET

9. What reasons have they given not to ratify?

10. What is New Zealand's greenhouse gas emission target?

11. Which two countries have the highest percentage of greenhouse gas emissions?

12. Describe the overall trend in New Zealand's greenhouse gas emissions since 1990.

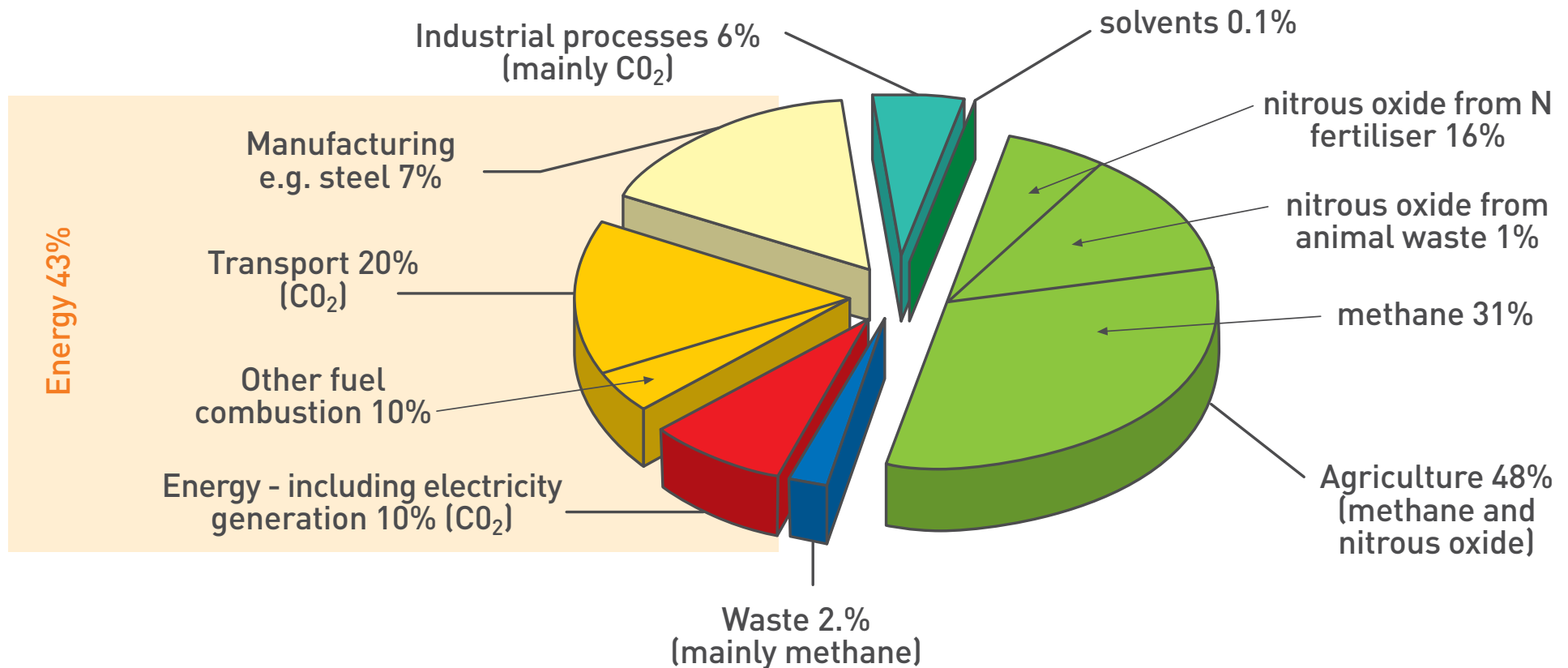
13. Which sector emits the most greenhouse gas in New Zealand? Why do you think this is?

14. How much do we need to reduce our emissions by to be back to the 1990 level?

EXPLORING THE KYOTO PROTOCOL

WHERE DO NZ GREENHOUSE GAS EMISSIONS COME FROM?

NZ GHG emissions in 2007 - by sector (% of Mt CO₂-e)



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WHAT IS THE KYOTO PROTOCOL?

Named after the Japanese city where it was concluded in 1997, the Kyoto Protocol is an international agreement to address global warming and delay climate change - it aims to reduce the total greenhouse gas emissions of developed countries (and countries with economies in transition) to 5 percent below the level they were in 1990.

Led by the United Nations, the Protocol sets targets for the greenhouse gas emissions of developed countries for the period 2008 to 2012 (the first commitment period). Different countries have different targets they have to achieve. New Zealand's target is to reduce its greenhouse gas emissions to the level they were in 1990, or take responsibility for excess emissions.

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WHO HAS RATIFIED THE KYOTO PROTOCOL?

The Kyoto Protocol had to be signed and ratified by 55 countries (including those responsible for at least 55 percent of the developed world's 1990 carbon dioxide emissions) before it could enter into force. This was achieved after Russia ratified in late 2004, with the Protocol entering into force on 16 February 2005. New Zealand ratified on 19 December 2002. Only countries that ratify the Protocol are bound by it.

As of November 2009 186 countries and one regional economic organisation (the EU) have ratified the Protocol, representing 63.9% of the 1990 emissions from Annex 1 countries (Annex 1 countries are industrialised nations). The United States have not ratified the Kyoto Protocol.

Signing is optional, indicating intention to ratify.

Ratification is the key step for a country to formally accept an international treaty. Under the Kyoto Protocol it means that an Annex 1 party has agreed to cap emissions in accordance with the Protocol.

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THE WORLD'S BIGGEST EMITTERS IN 2007

COUNTRIES (ANNEX I* IN BOLD)	MTCO ₂ EQUIVALENT
United States of America	7209¹
China	4057
European Union (25)	4051
Russian Federation	2192
Japan	1374
India	1214
Germany	956
Canada	747
Brazil	663
United Kingdom	640
Italy	562
Mexico	553
Australia	541
France	535
South Africa	379
Indonesia	334
New Zealand	75

* Annex 1: Parties include the industrialised countries that were members of the Organisation for Economic Co-operation and Development in 1992, plus countries with economies in transition (the EIT Parties), including the Russian Federation, the Baltic States, and several Central and Eastern European States.

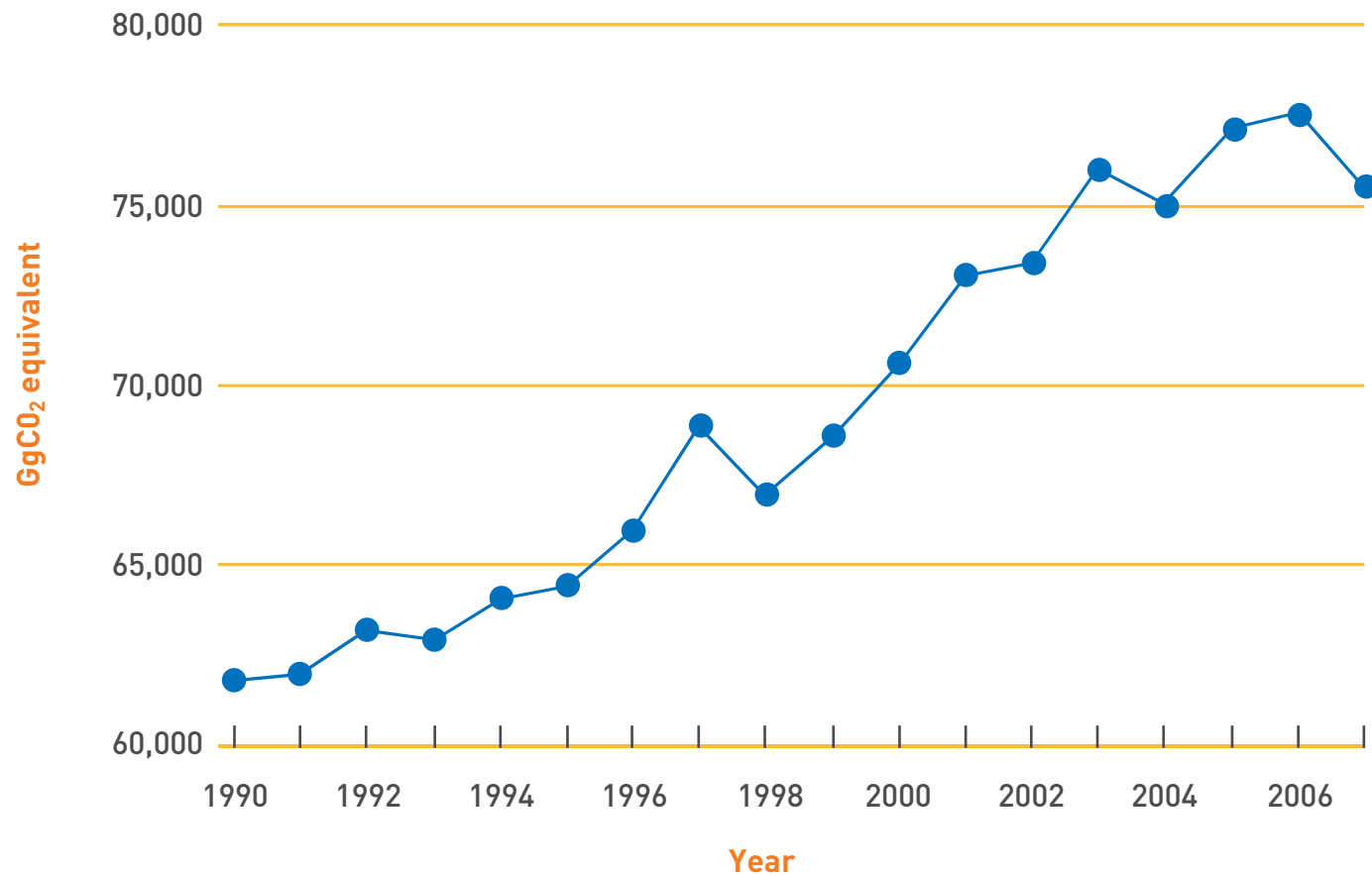
¹<http://www.eia.doe.gov/oiaf/1605/ggrpt/carbon.html>

<http://unfccc.int/di/DetailedByParty.do>

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OVERALL TREND IN NZ'S GREENHOUSE GAS EMISSIONS

New Zealand's total greenhouse gas emissions 1990-2007



Ministry for the Environment. <http://www.mfe.govt.nz/publications/climate/greenhouse-gas-inventory-overview-2009/index.html>