

# Scientific information in national communications from Parties to the UNFCCC

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**UNFCCC secretariat**



UNITED NATIONS FRAMEWORK CONVENTION ON CLIMATE CHANGE

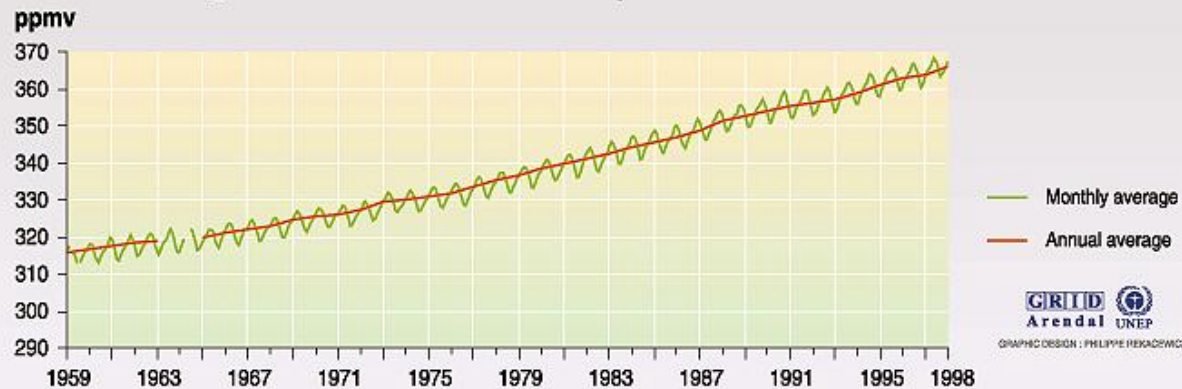
# Purpose of the presentation

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- To provide information on GHG emissions, projections, policies and measures based primarily on information submitted by Parties under the UNFCCC

# Why do we have a Convention?

CO<sub>2</sub> concentration in the atmosphere: Mauna Loa curve

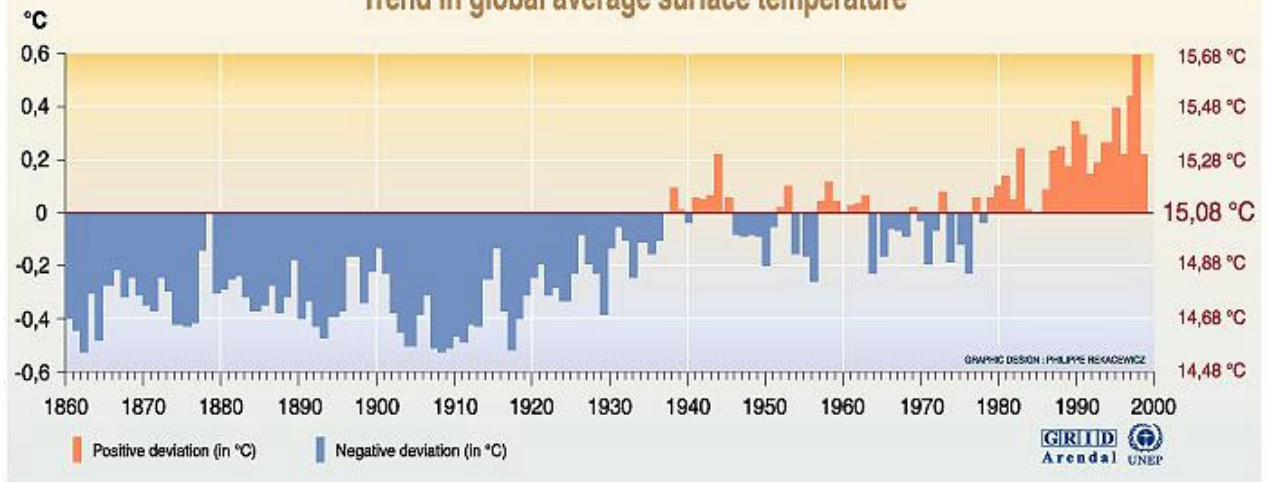


Source : Scripps institution of oceanography (SIO), University of California, 1998.

**GHG  
concentrations  
are rising**

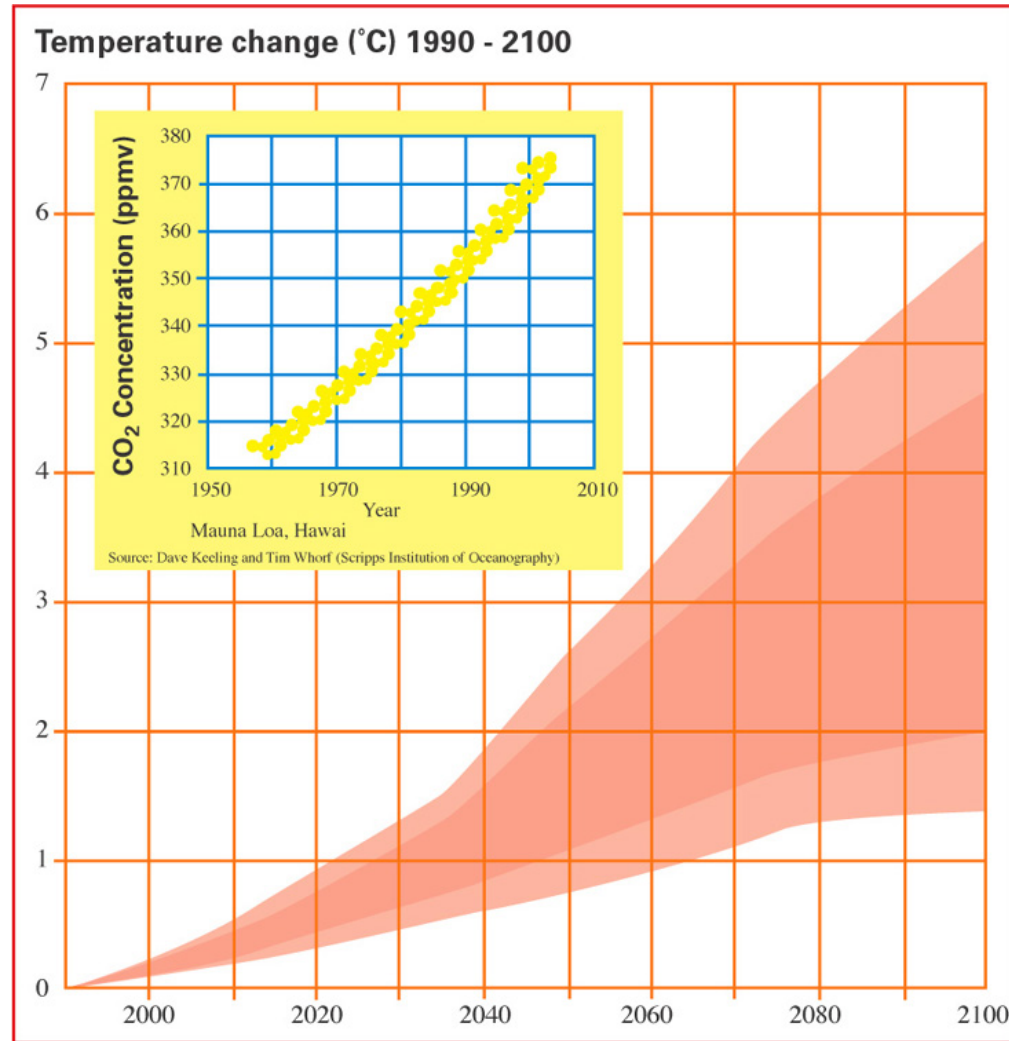
**Global  
temperatures  
are increasing**

Trend in global average surface temperature



Source: School of environmental sciences, climatic research unit, university of East Anglia, Norwich, United Kingdom, 1999.

# Why do we have a Convention?



Source: IPCC

**The IPCC estimates that global temperatures will increase between 1.4 and 5.8°C over the period 1990 to 2100**

# Developing countries are most vulnerable to climate change

<b>Adapting to Climate Change</b>		
Developing country region	Vulnerable sectors	Need to adapt
<b>Africa</b>	● Agriculture	Very high
	● Water resources	
<b>Asia</b>	● Agriculture	High
	● Terrestrial ecosystems	
<b>Latin America</b>	● Agriculture	High
	● Water resources	
<b>Small island developing States</b>	● Water resources	Very high
	● Coastal zone (sea level rise)	

# What are Parties required to do under the Convention?

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- Aim to reduce GHG emissions to 1990 levels (Annex I)
- Cooperate in the development and transfer of technology, promoting sustainable management of forests, preparing for adaptation, improving scientific knowledge and the observation system
- Report via national communications (every 3-4 years) and national GHG inventories (every year for Annex I Parties)

# What is included in national communications and GHG inventories of Annex I Parties?

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## National communications

- Policies and measures
- Emission trends and projections
- Research and systematic observations
- Technology transfer and funding
- Impacts and adaptation
- Education, training and public awareness

## GHG inventories

- All gases
- All sectors
- Activity level data
- Emission factor data
- Methodologies used



# How is information reviewed?

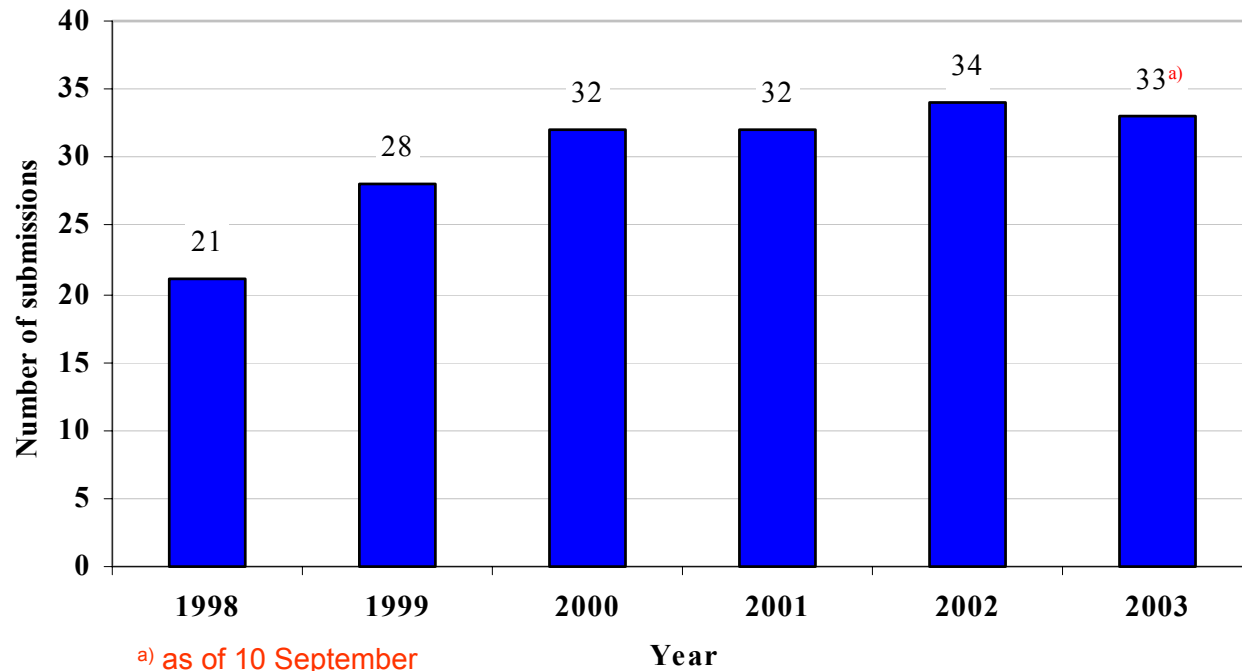
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- All Annex I national communications are reviewed by a team of experts that visit the country
- Annex I GHG inventories are peer reviewed through visits, centralized reviews and desk reviews every year
- Some non-Annex I Parties have indicated that they would like the Consultative Group of Experts to provide technical feedback to help them improve their national communications



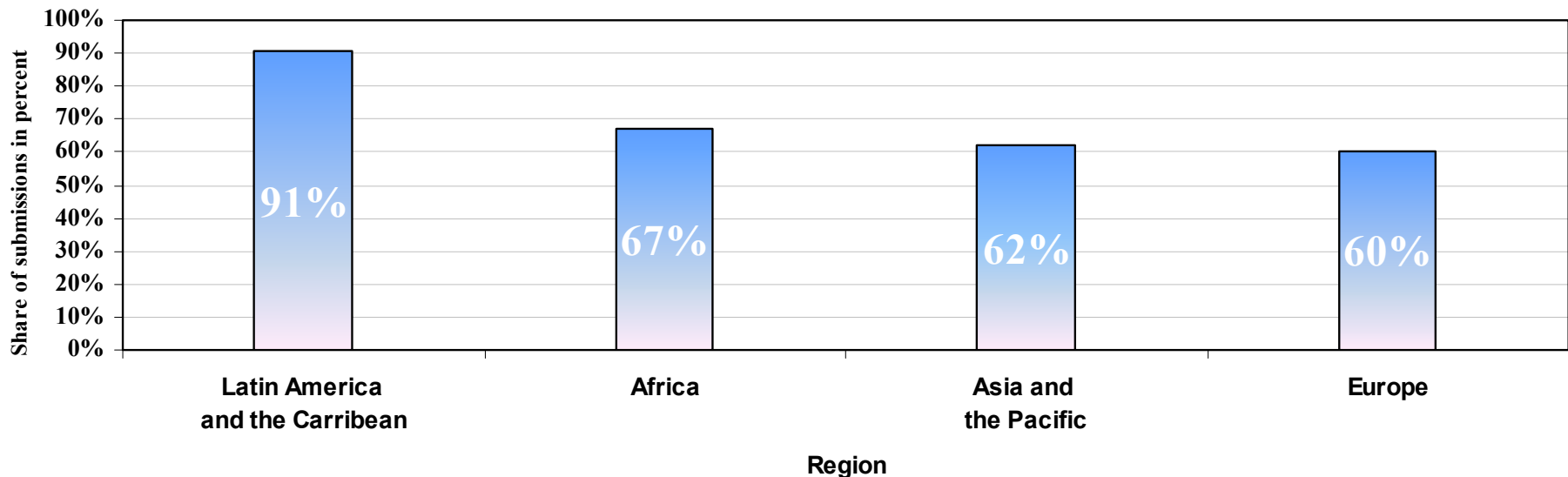
# The level of reporting and quality of the data has improved among Annex I Parties

Number of submissions of GHG inventories from Annex I Parties by year

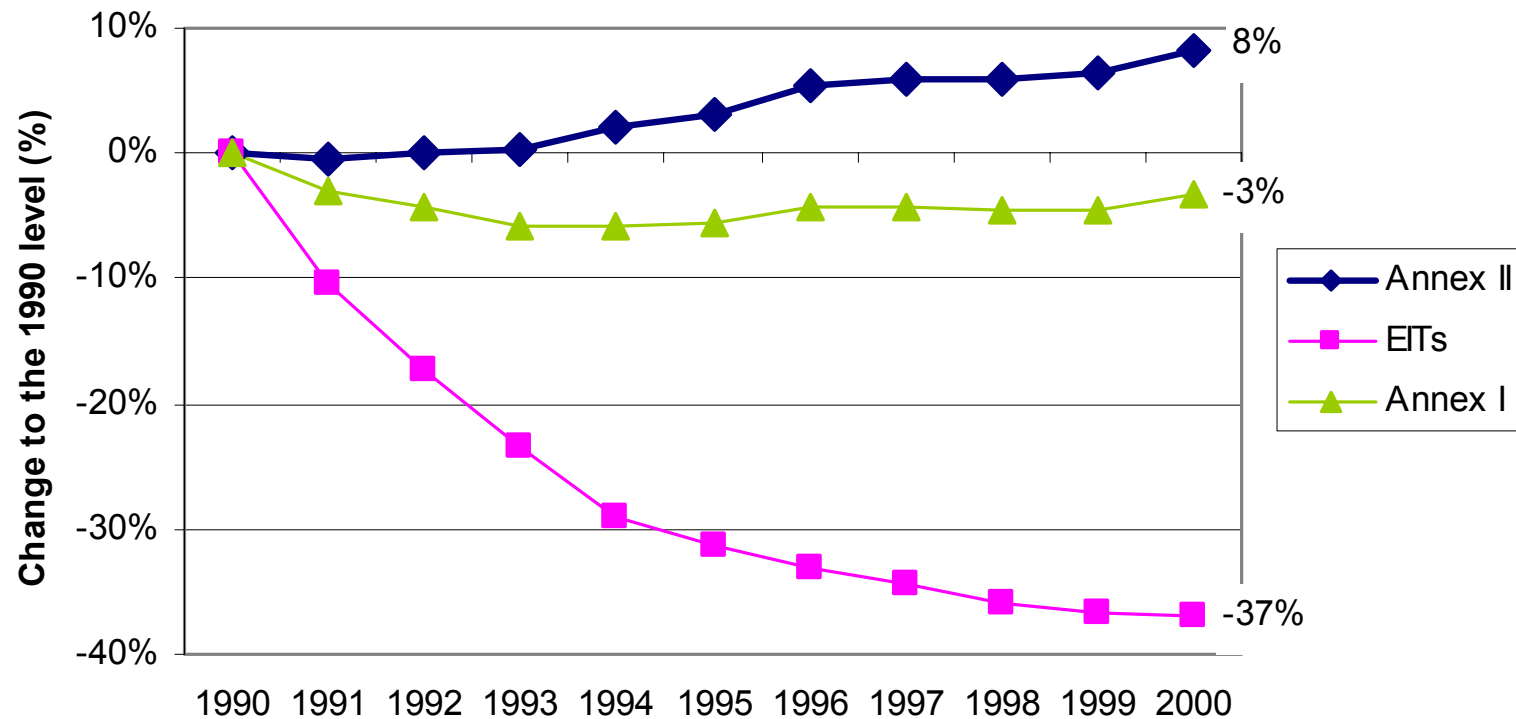


# 105 out of 148 non-Annex I Parties have submitted their initial national communication

**Share of non-Annex Parties by world region that have submitted their initial national communication**



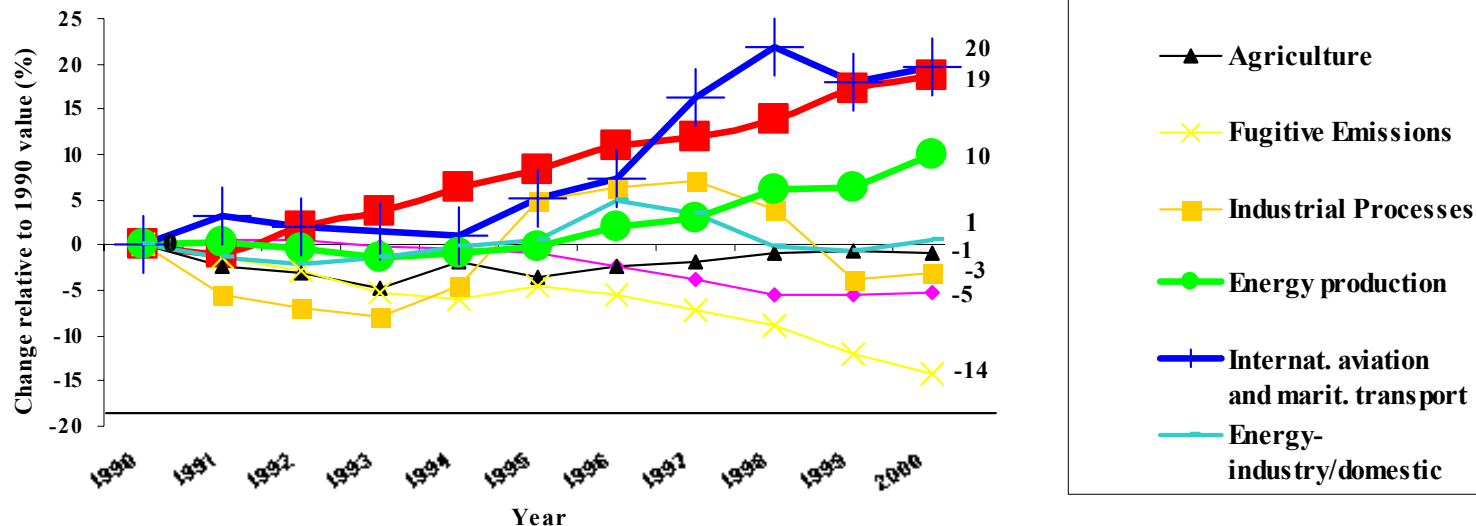
# GHG emissions from all Annex I Parties are lower in 2000 than in 1990



## EIT GHG emissions have declined dramatically

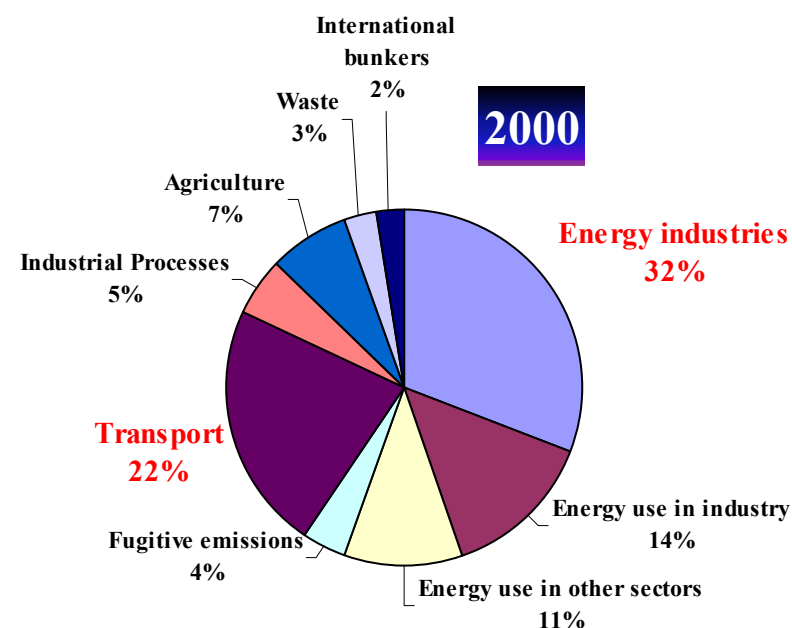
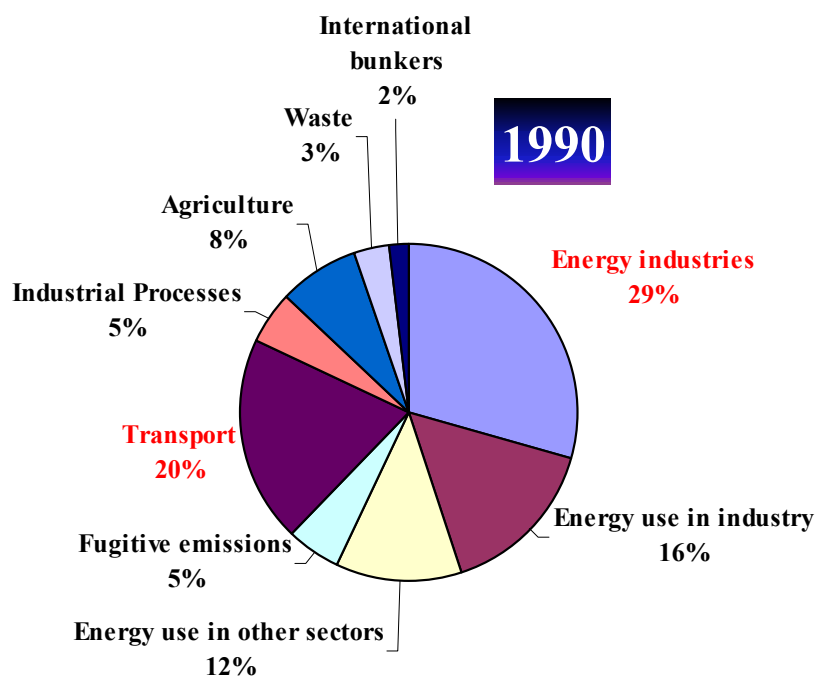
# Emissions from energy production and transportation are the fastest growing sectors

Trends by sector in Annex I Parties GHG emissions 1990-2000



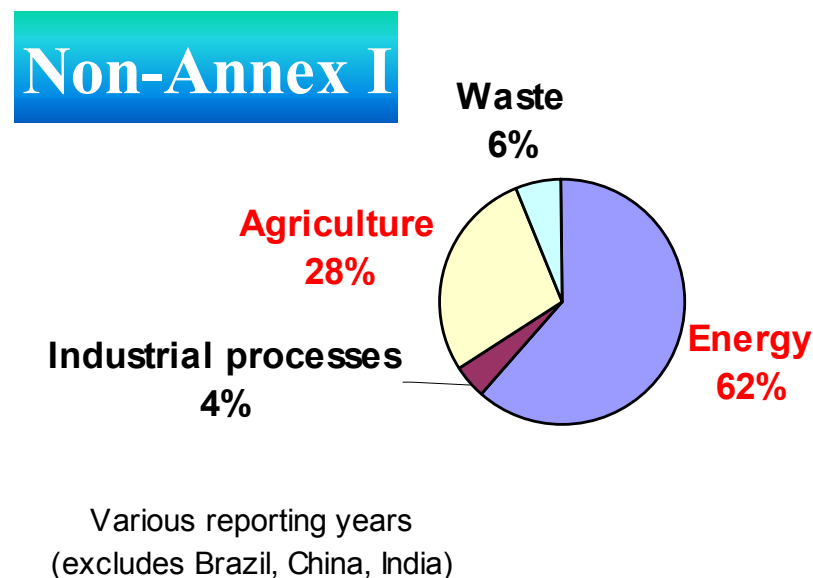
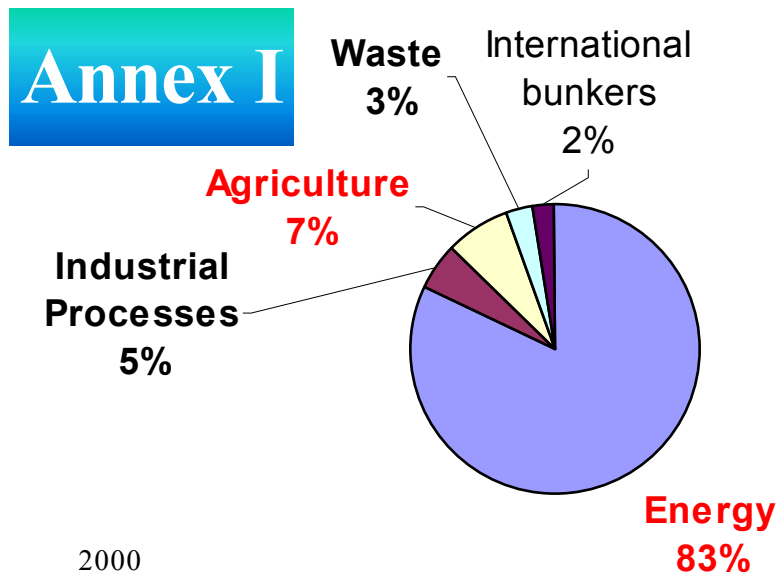
# The share of GHG emissions has shifted among a few sectors over the last decade

## Shares of aggregated GHG emissions from Annex I Parties by subsector



# The shares of GHG emissions by sector differ between developing and developed countries

Shares of aggregated GHG emissions by sector



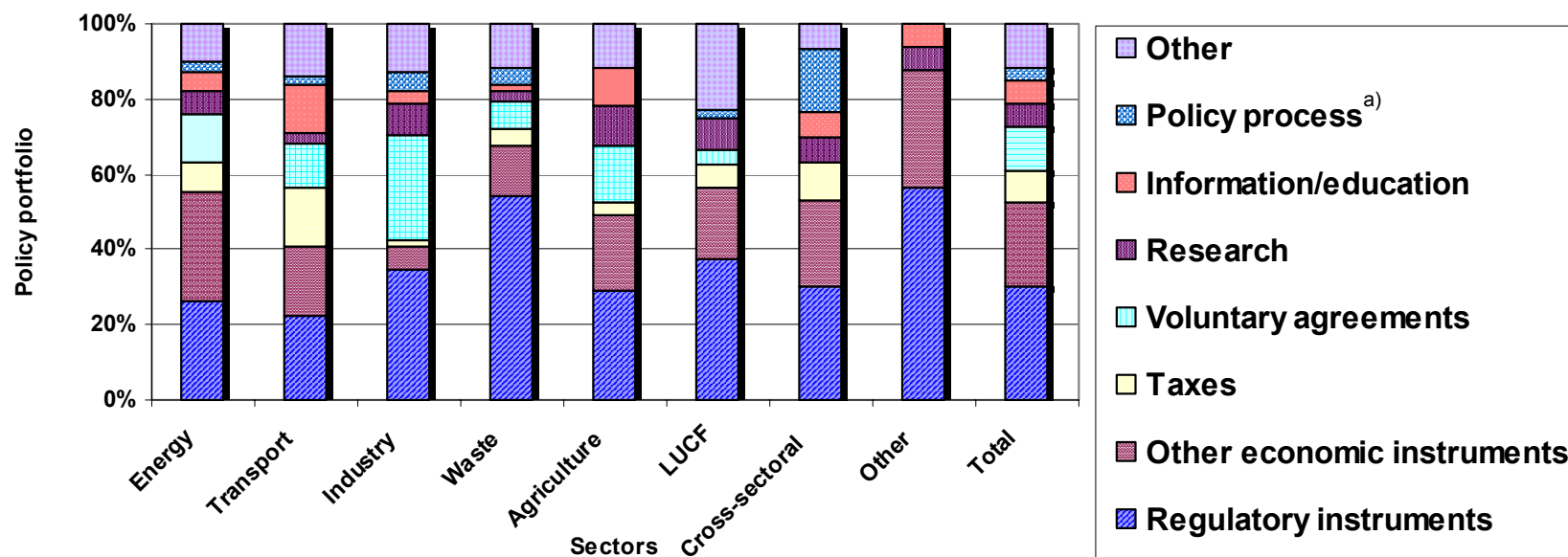
# Countries are using a wide portfolio of measures to reduce emissions

	Australia	France	Germany	Hungary	Japan	Poland	Russia	Spain	United Kingdom	USA
Combined heat and power		X	X						X	X
Renewable energy sources	X	X	X	X	X			X	X	X
Fuel switch (mainly to natural gas)		X	X		X			X	X	
Energy efficiency improvements	X	X	X		X	X	X		X	X
Vehicle and fuel taxes		X	X						X	
Integrated transport policy frameworks	X									
Pollution prevention in industry	X	X	X		X				X	X
Landfill site gas recovery	X	X	X	X		X		X	X	X
Fertilizer and manure management	X	X	X		X	X		X	X	X
Afforestation and reforestation	X	X	X		X	X		X	X	



# They are also using a range of policy instruments to reduce emissions

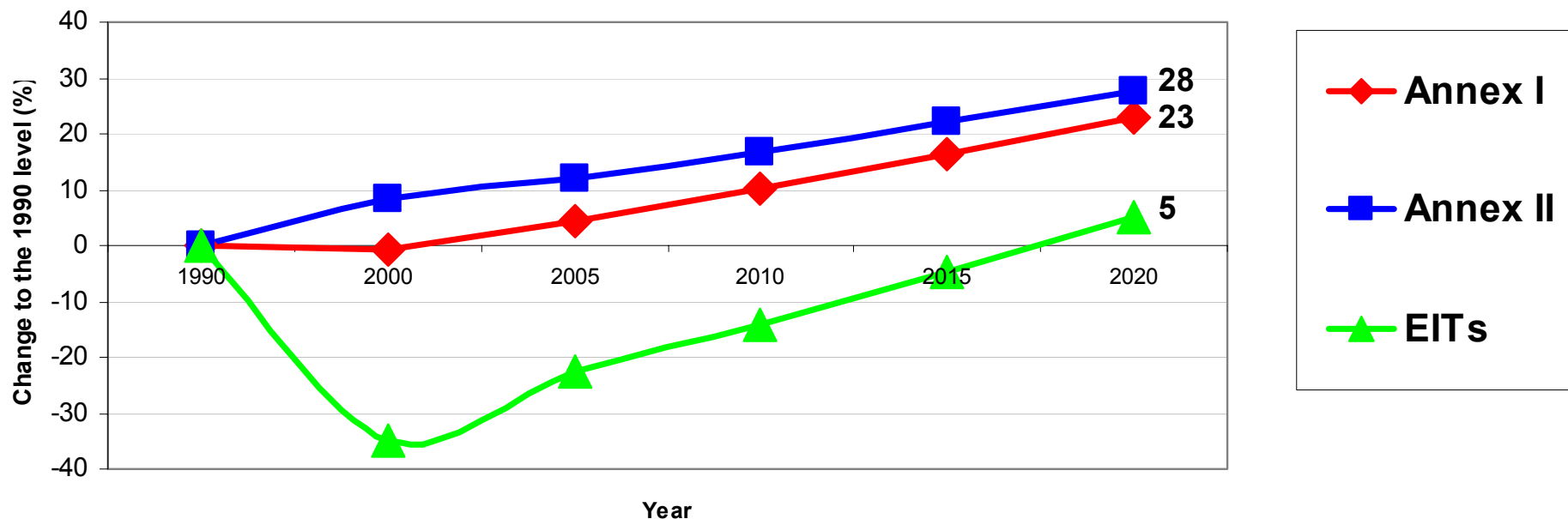
**Composition of portfolio of policy instruments  
by sector reported by Annex I Parties**



<sup>a)</sup> The category “policy processes” is used for policies that involved the preparation of national climate change programmes and strategies, with involvement in many cases of key stakeholders.

# Emissions in Annex I Parties are likely to increase by about 23 percent by 2020

Projections of GHG emissions from Annex I Parties  
(with measures)



Even with additional measures the emissions of Annex I Parties may increase by 19 % by 2020

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Therefore flexible market mechanisms, (emissions trading, CDM and joint implementation) will be needed to fill the gap.

# Conclusions

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- Reporting of GHG inventories and other information in national communications by Parties is improving
- Emissions of Annex I Countries are slightly lower in 2001 than in 1990
- Many Parties are implementing a variety of policies and measures to reduce emissions
- Developing countries are particularly vulnerable to climate change and adaptation is a top priority for them
- GHG emissions are likely to grow significantly in the coming decades unless additional policies and flexible market mechanisms are used to reverse this negative trend