Government of Samoa

OUR ENVIRONMENT OUR HERITAGE

CLIMATE CHANGE MITIGATION THROUGH ENERGY EFFICIENCY AND RENEWABLE ENERGY

11 MAY 2008

National GHG Abatement Strategy (NGHGAS):

Climate change is an issue of major concern to the future economic, social and environmental wellbeing of all Samoans. Initially adaptation was seen as the main priority of national efforts on climate change leading to the Cabinet approval in 2005 of the National Adaptation Programme of Action and its current implementation. In recent years, however, and in spite of Samoa's contribution to global warming being very small, there is growing agreement that climate change mitigation is everyone's responsibility. It is also considered that the reduction of greenhouse gas (GHG) emissions through this National GHG Abatement Strategy 2008-2018 (NGHGAS) will enhance national sustainable development efforts and improve the efficiency of the local economy. The mitigation of and adaptation to climate change impacts are among the key strategic priority for Samoa as highlighted in the National Policy on Combating Climate Change.

Global:

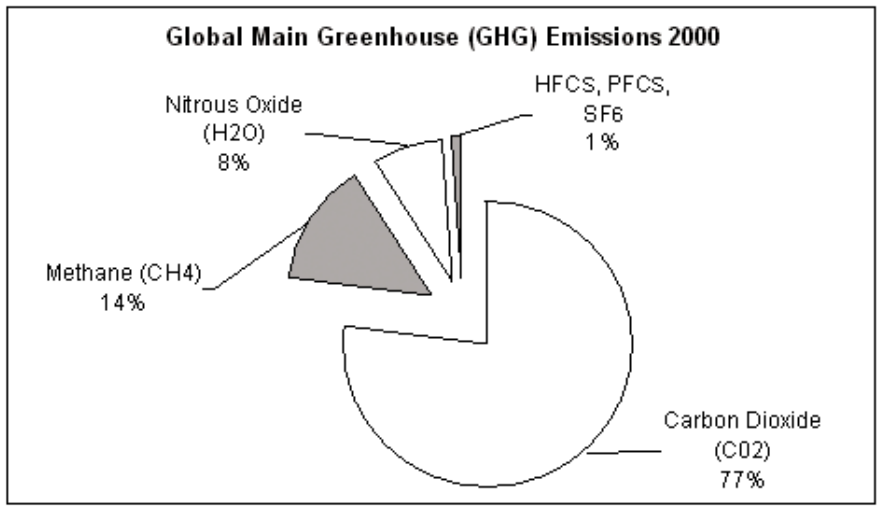
According to the Intergovernmental Panel on Climate Change (IPCC), average global temperatures increased by approximately 0.76oC since the mid-1800s. During the period 1961-2003 there was an average increase in global sea level of approximately 1.8mm per year. Rainfall patterns have also changed markedly over recent decades with more intense and long droughts observed in the tropics. Other climate extreme events such as heat-waves, cyclones and flooding have also become more common.

Significant scientific evidence indicates that an increase in the global average temperature of more than 2°C above pre-industrial levels poses severe risks to natural systems, human health and population well-being. Sustained warming of this magnitude could result in the extinction of many species and extensive melting of the Greenland and West Antarctic ice sheets, causing global sea level to rise between 12 and 40 feet. In light of this evidence a number of countries have indicated their commitment to a long-term goal of limiting warming to 2°C above pre-industrial levels. This will require immediate and sustained action to reduce heat-trapping emissions through increased energy efficiency, expanding the use of renewable energy and reducing deforestation and degradation. So to avoid a temperature increase of more than 2°C, according to the IPCC, worldwide global warming emissions should be reduced by at least 50 per cent below 1990 levels by 2050.

The IPCC projects global climate change to worsen over the coming decades with many of the observed trends described above expected to intensify. Samoa is seen to be particularly vulnerable to climate change impacts with strong threats predicted to the water, health, agriculture, fisheries, bio-diversity and infrastructure sectors.

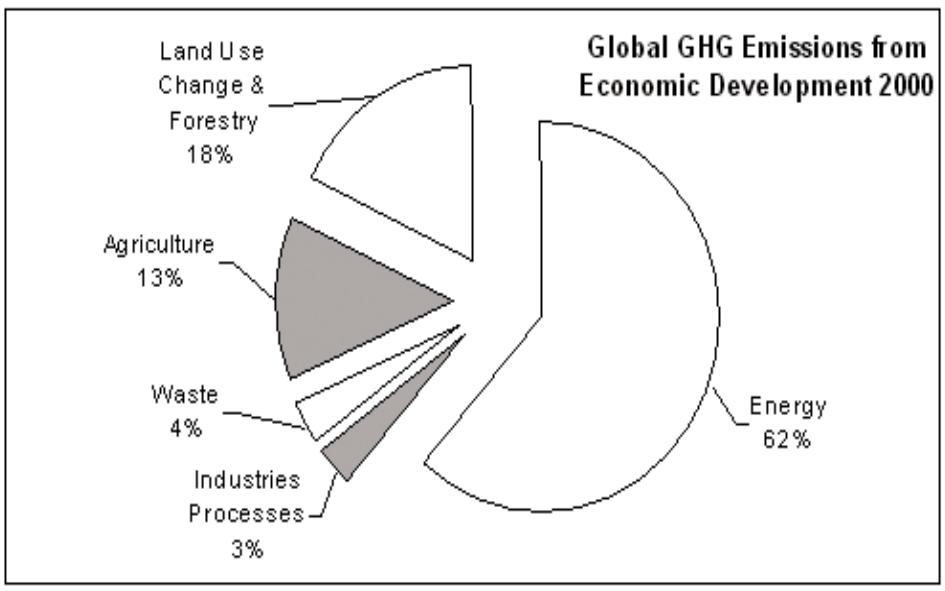
Global Greenhouse Gases Emissions 2000:

The figure below the World Resource Institute reported that in 2000, the total global greenhouse gas (GHG) emissions comprised of 77% Carbon Dioxide (CO2),14% Methane (CH4,)8% Nitrous Oxide (N2O) and 1% combined F-gases. So therefore Carbon Dioxide (CO2) is the largest GHG emission in the world and these gases continue increase from time to time.



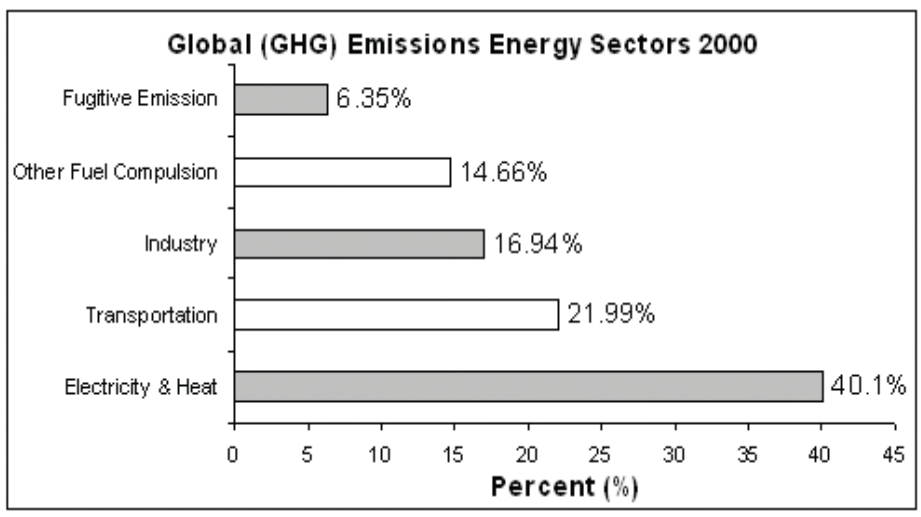
Global GHG Emissions from Economic Development 2000:

The figure below in terms of sectors, 62% of global GHG emissions came from the energy sector; 18% from land use change and forestry; 13% from agriculture; 4% from waste and 3% from industrial processes. Global GHG emissions are therefore largely attributed to the energy sector followed by land use and forests, agriculture, waste and industry.



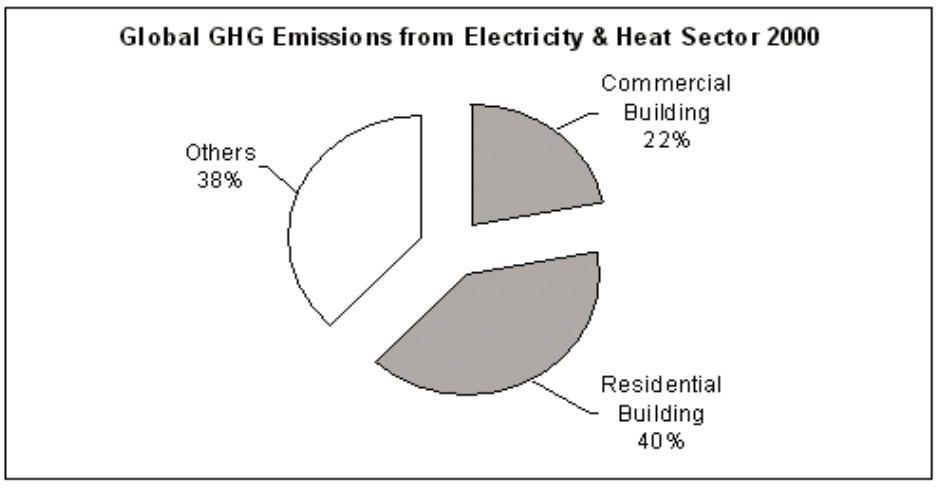
Global GHG Emissions from Energy Sector 2000:

In the energy sector 40% came from burning fossil fuel emissions for electricity and heat, 22% from transportation sector, 17% from industry, 15% from other combustion and 6% from fugitive emission, mainly oil/gas extraction, refining and processing. In the overall electricity and heat sector produced the largest GHG emission in the world.



Global GHG Emissions from Electricity & Heat Sector 2000:

For electricity and heat emissions about 40% came from residential buildings, 22% from commercial building and 38% from other sector power by electricity and heat. In the overall approximately 62% of the world GHG emission of electricity and heat produced by building sector.



For more information contact :
Mataia Uaine L Silailai
Assistant CEO - Renewable Energy Division
MNRE
CEO's Office, Level 3, Development Bank of Samoa Building.
Email: uaine.silailai@mnre.gov.ws