

DATA NEEDS FOR
MONITORING ENERGY USE
AND ITS IMPACT ON AIR
POLLUTION

By MUKAKALISA Françoise
RWANDA

PRESENTATION OUTLINE

- Introduction
- Environmental impact from using energy
- Oil and air pollution
- Coal and air pollution
- Biomass and air pollution
- Data needs for monitoring energy use and its impact on air pollution
- Recommendations

INTRODUCTION

- Energy is a central to our economy, lifestyles and health
- Energy production and consumption have serious negative impacts on local, regional and global environment
- Using energy more efficiently offers the best way to reduce these environmental problems

ENVIRONMENTAL IMPACT FROM USING ENERGY

- **Burning fossil fuel releases carbon dioxide, associated with global climate change**
- Mining coal and extracting oil can damage ecosystems and water supplies
- Nuclear power generates waste disposal problems and poses the risk of a catastrophic accident
- Hydroelectric power can damage ecosystems **along waterways**
- **Burning biomass and fossil fuels still emits some pollution particularly nitrogen oxides (Nox)**

Oil and air pollutions

- Oil is used mostly for transportation or home heating purpose
- A small percentage is used for electricity generation
- Burning oil produces higher greenhouse gas emission

Coal and air pollution

- carbon dioxide (CO₂)
- sulfur dioxide (SO₂)
- small airborne particles,
- nitrogen oxide (NO_x).
- carbon monoxide (CO

Coal and air pollution

- hydrocarbons, volatile organic compounds (VOC)
- mercur
- arsenic,
- lead, cadmium, other toxic heavy metals, and trace amounts of uranium

Biomass and air pollution

- The majority of household in developing countries burn biomass fuel in open fireplaces
- In most cases, combustion is incomplete and produces very high levels of indoor pollution
- Women's exposure is much higher than men's

Data needs for monitoring energy use and its impact on air pollution

- Improvement of air pollutant emissions data base by adopting comparable techniques and methods of measuring emissions inventories
- Continuous monitoring of air pollutant emissions
- Transfer between countries of available technologies and methods to reduce air pollution
- International cooperation on research and development to increase the effectiveness and to reduce the costs of controlling emissions, particularly for retrofitting existing installations.

Recommendations

- Local Authorities should give an important contribution to save energy and prevents its negative impacts on air quality
- Preparing Energy plans based on the analysis of local energy supply and demand trends, in relation to social and economic conditions
- Related greenhouse gas emissions are also considered

**THANK YOU FOR YOUR
ATTENTION**

JE VOUS REMERCIE

