

# Meeting the Research Challenges of a World in Transition

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## SCHLOSS LAXENBURG, AUSTRIA

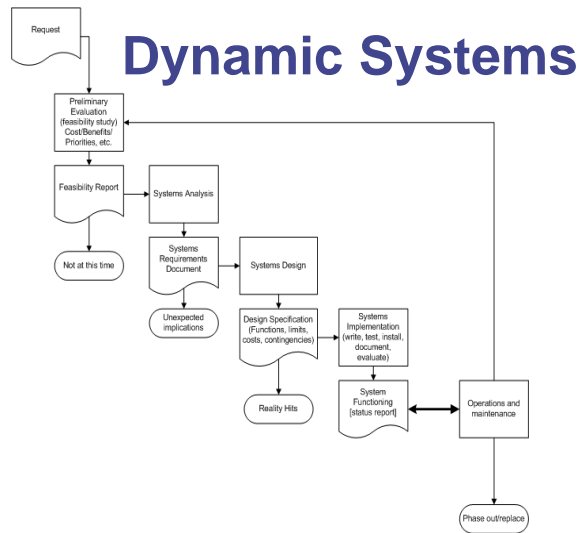


**Home of IIASA Since 1972**

# **“Science for Global Insight”**

- Energy and Technology
- Environment and Natural Resources
- Population and Society
- Special Projects

# Energy and Technology



## Energy



## New Technologies



# Environment and Natural Resources

## Atmospheric Pollution & Dev.



## Land Use & Agriculture



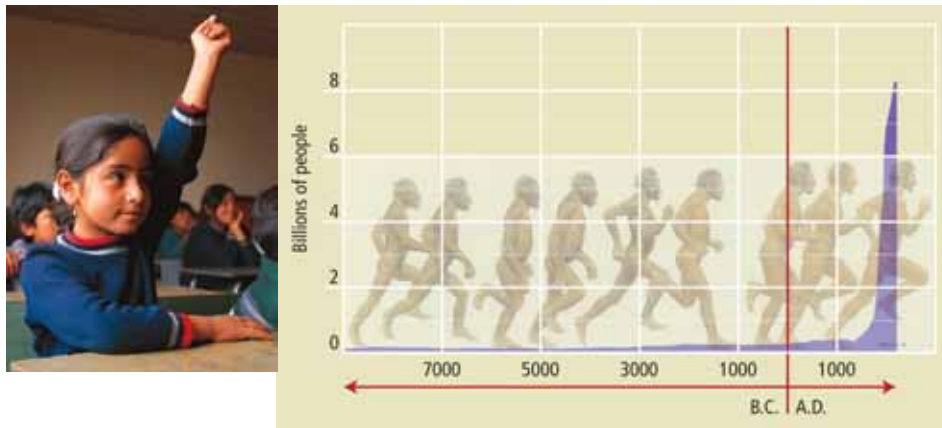
## Evolution and Ecology



## Forestry

# Population and Society

## World Population



## International Negotiation

## Risk and Vulnerability

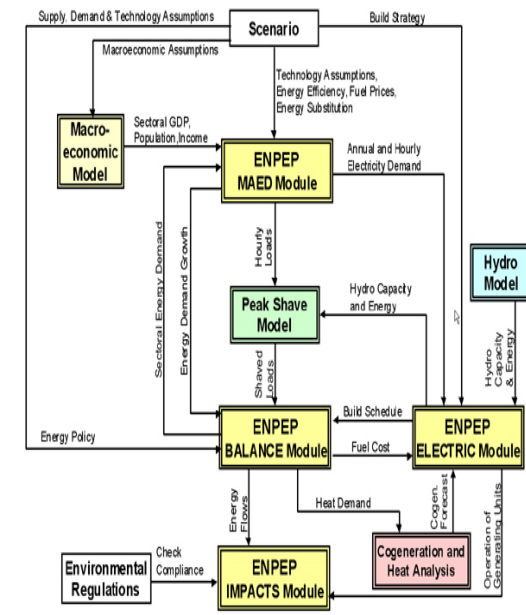
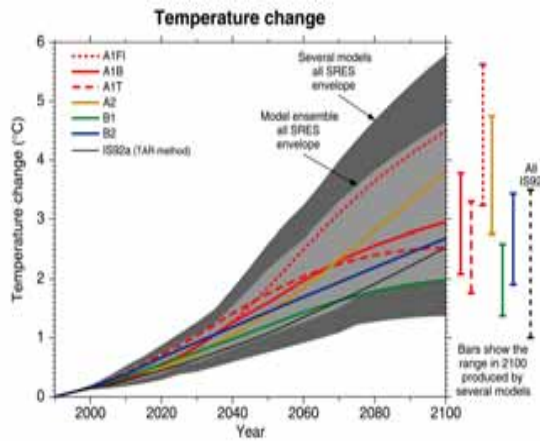


## Population and Climate Change

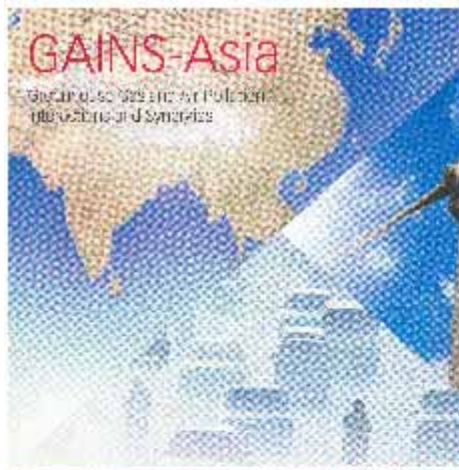
# Special Projects & Crosscutting Activities



Health & Global Change  
 Integrated Modeling  
 Greenhouse Gas Initiative  
 Methodology Forum  
 Water Activities

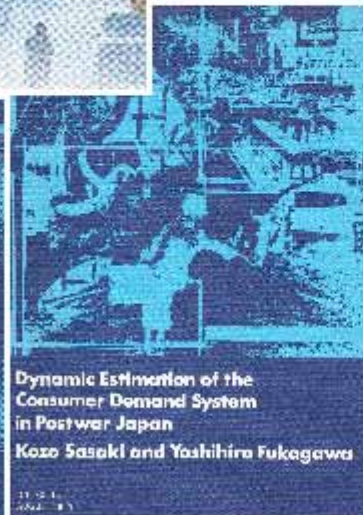


# Relevance of IIASA Research for Japan



IIASA's long-term and broadly-focused research on Japan covers such topics as:

- Modeling Air Pollution and Greenhouse Gas Reduction (GAINS – Asia)
- Health
- Population Aging
- Population Structure
- Regional Development
- Urban Development
- Transport
- Land-use Change
- Disaster Prevention
- Technology and Economy
- Consumer Demand





## Recent Collaborations with Japanese Partners

- CRIEPI - Integrated Climate Change Research
- ADORC - MICS-Asia
- TEPCO - Joint Energy Research
- Tokyo Research Labs- Economic Modeling of Mobility
- TOYOTA – Asia Air Quality

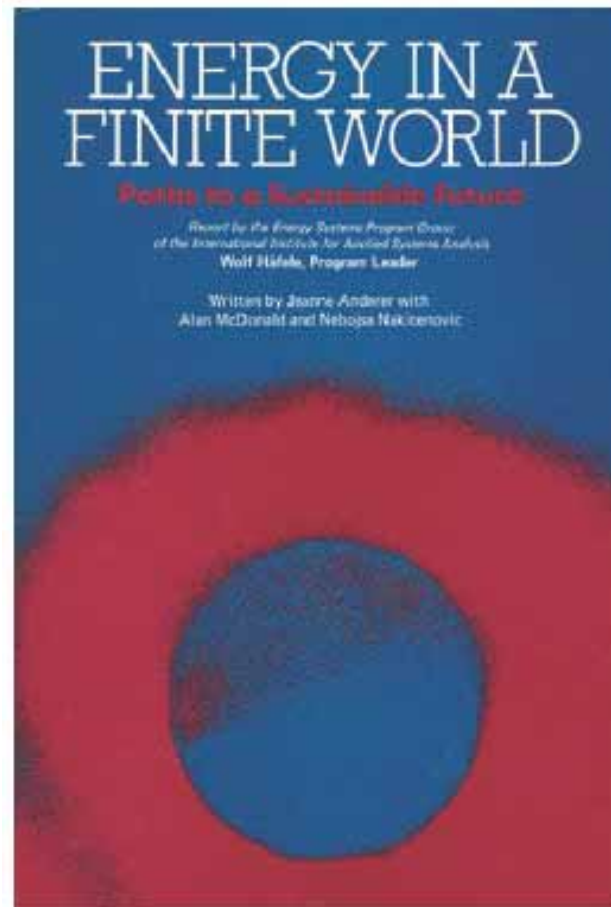
# Phases in IIASA's History

- 1972-1989
  - ❖ Cold War and East-West Research Focus
- 1990-2008
  - ❖ Transitions to Global Focus
- 2009 -
  - ❖ New Strategic Plan

## 1972 – 1989



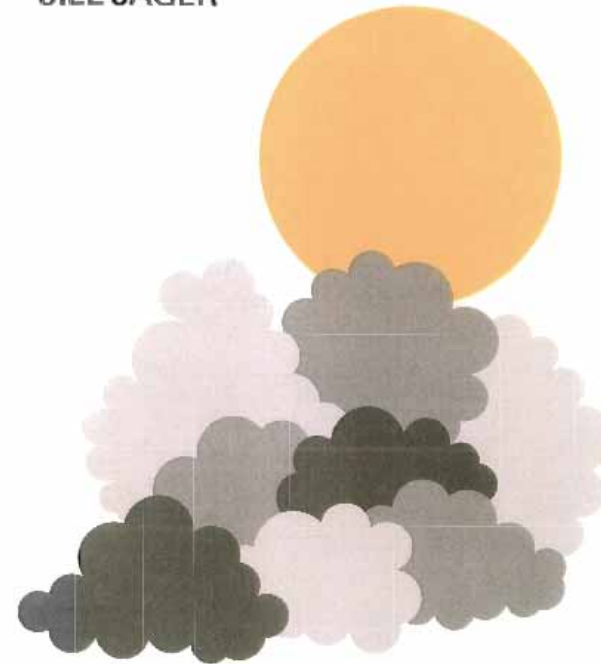
## IIASA's Early Research



### *Climate and Energy Systems*

A review of their interactions

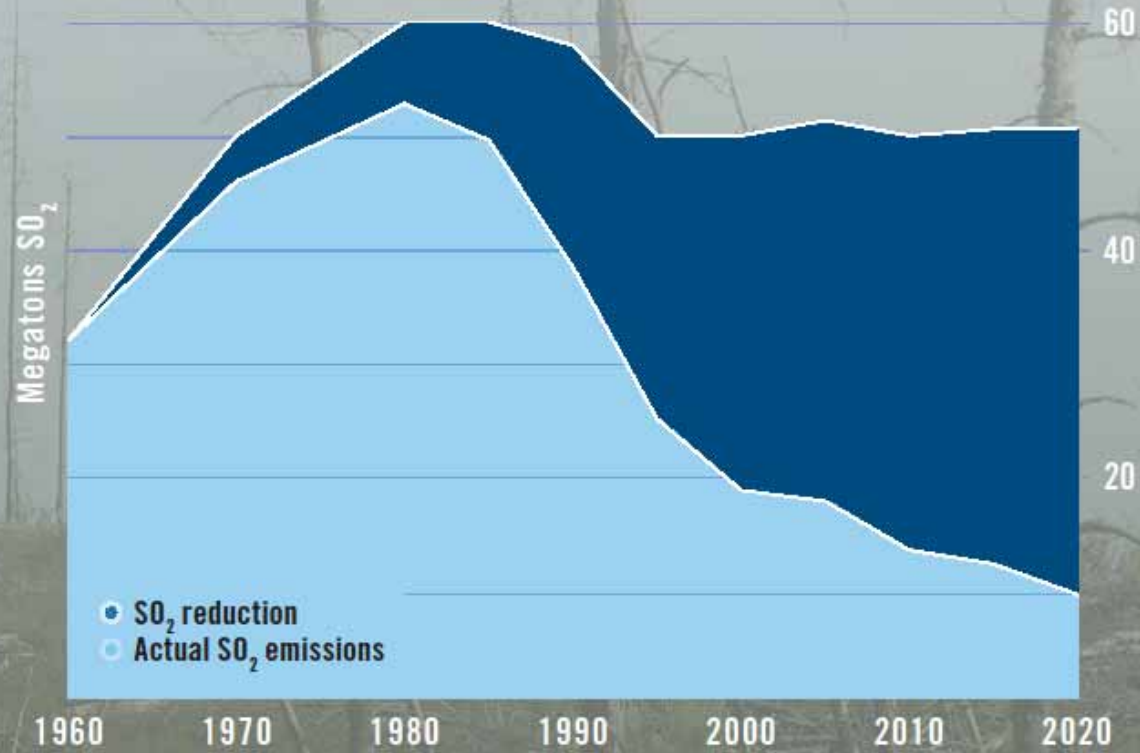
JILL JÄGER



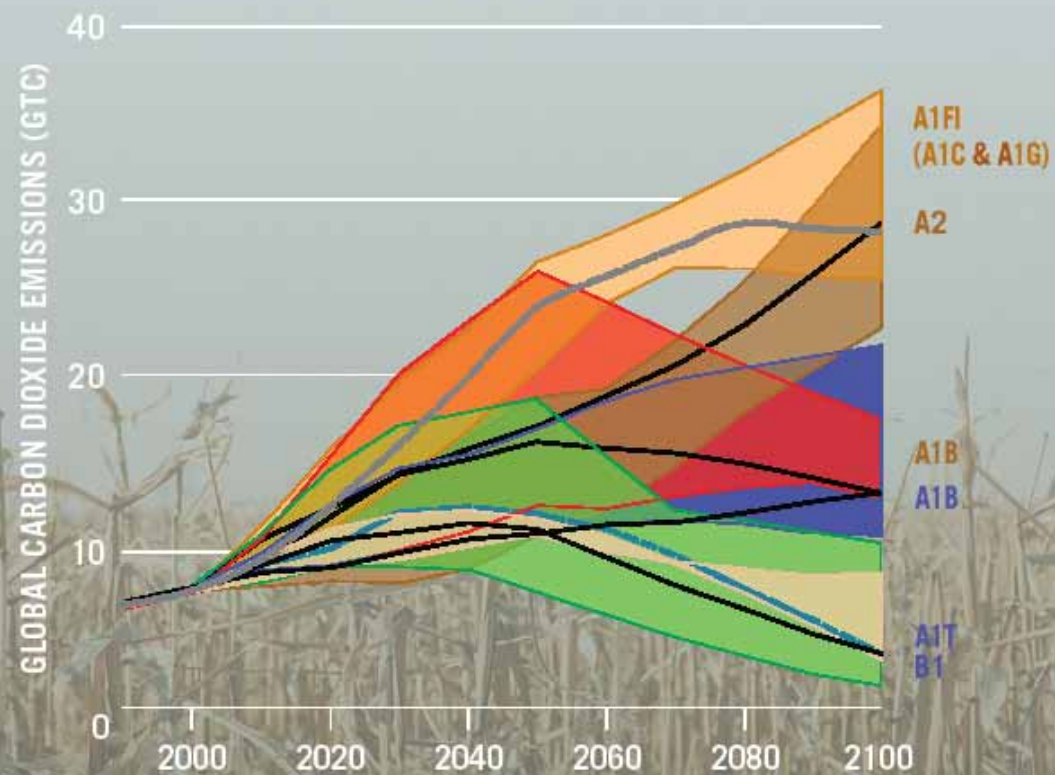
## 1990 – 2008



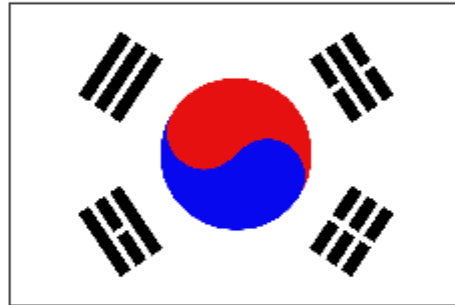
# CLEAN AIR IN EUROPE



# TACKLING CLIMATE CHANGE



## NEW MEMBERS





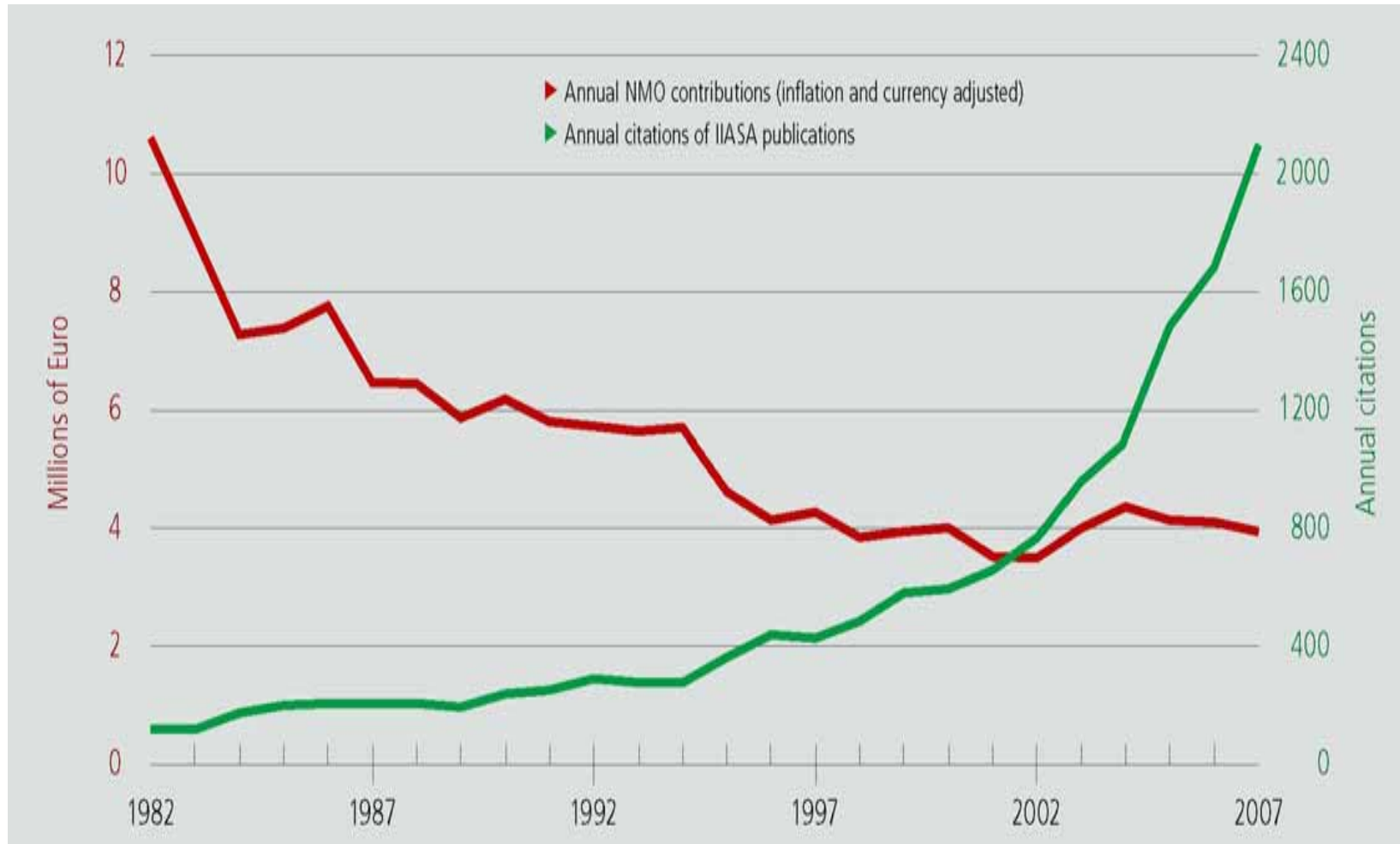
# NOBEL PRIZE WINNERS



## THE NEXT GENERATION OF SCIENTISTS



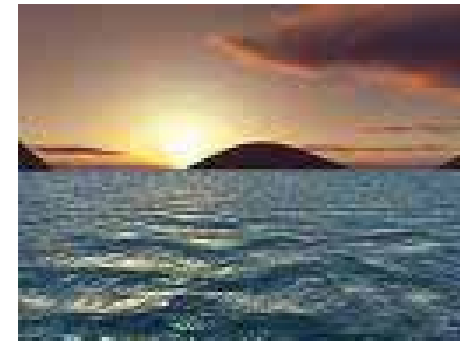
# INPUT VERSUS OUTPUT



# Planning for the Future: What Kind of World?



**Global Change**



**Global Transition**

**Global Transformation**

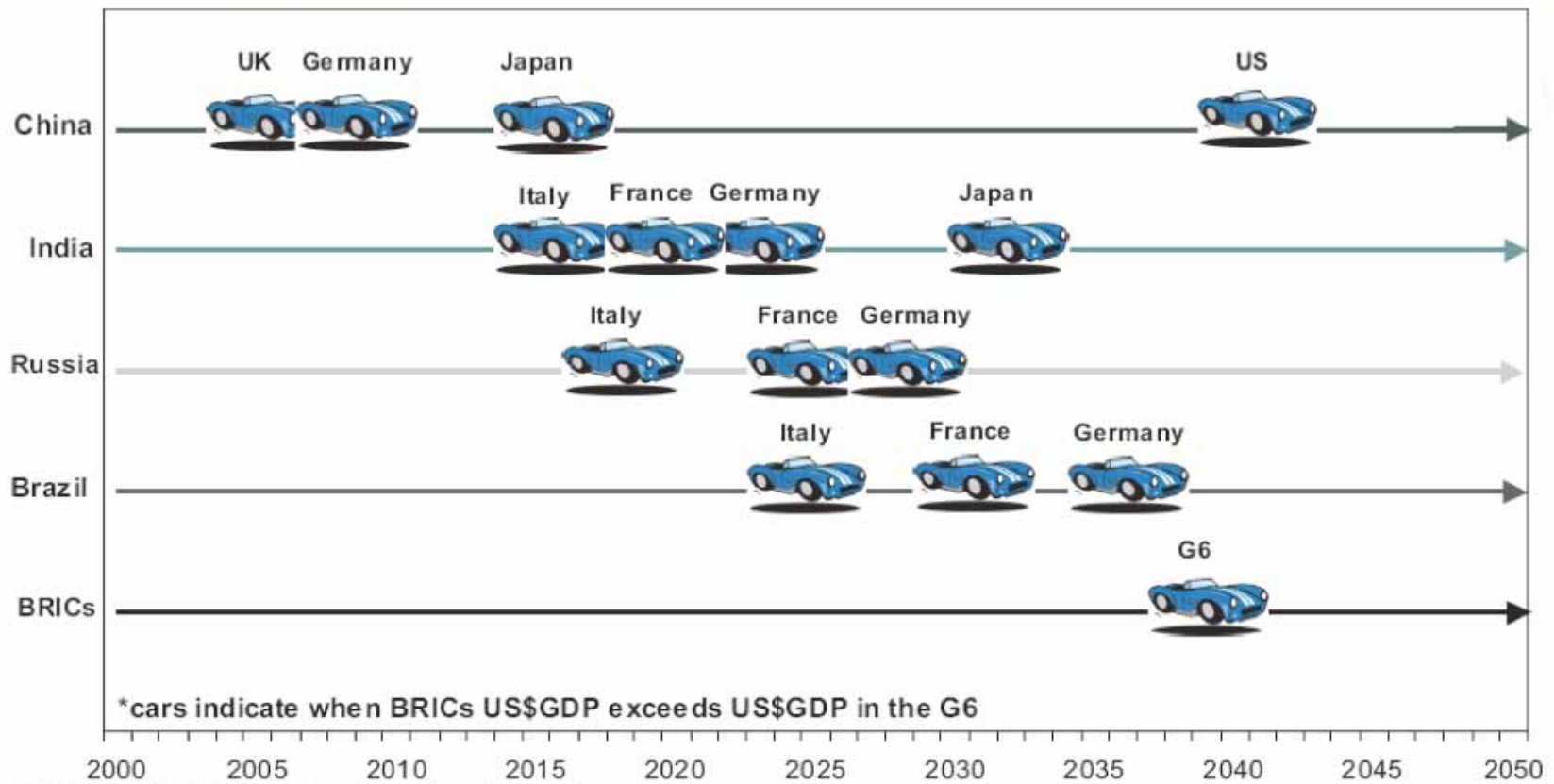


# GLOBALIZATION

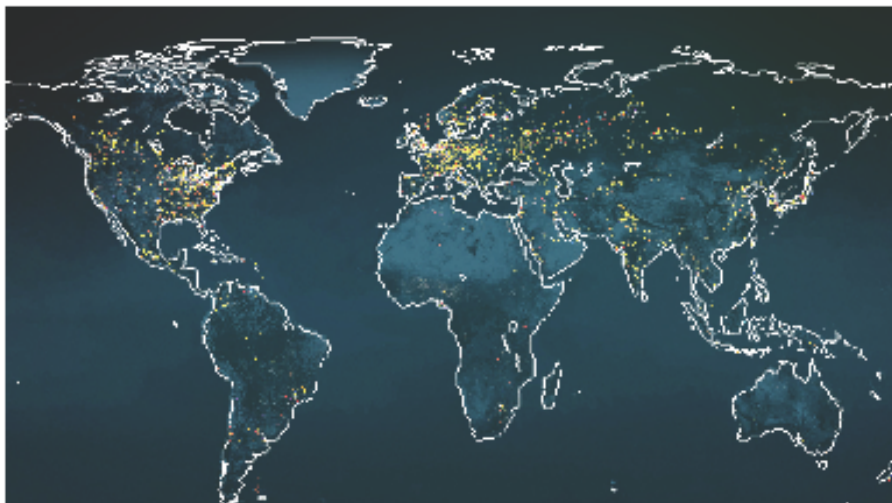


# GLOBALISATION RACE

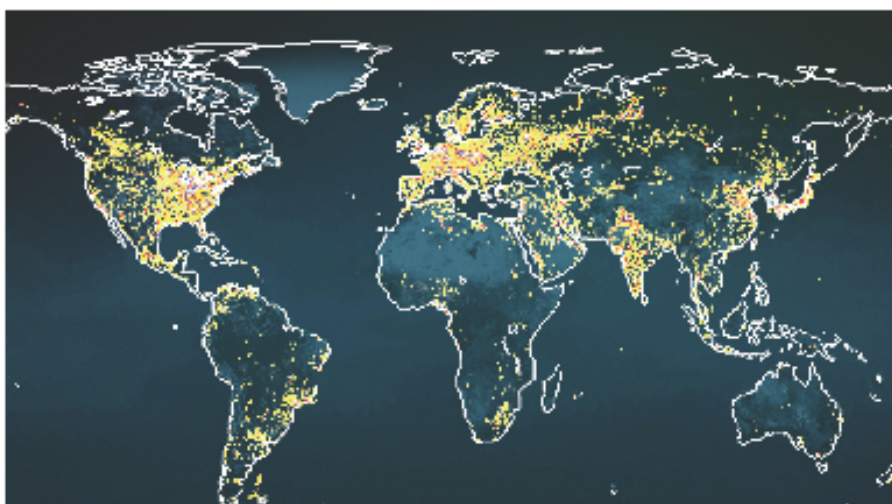
When BRICs would overtake G6 economies in \$US GDP



# ENERGY



NIGHT LIGHTS IN 2000



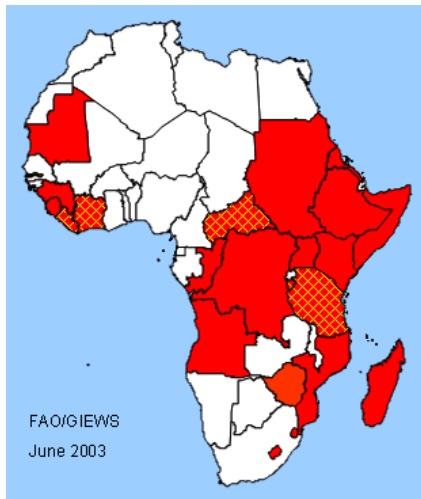
NIGHT LIGHTS IN 2070

# CLIMATE CHANGE

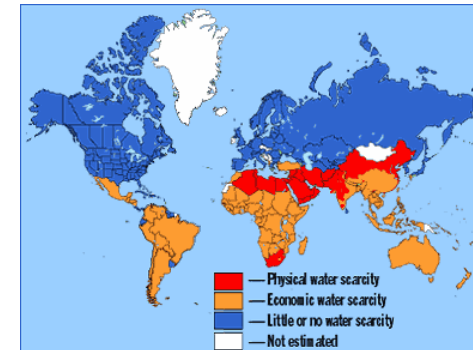




# Food Shortages



# Water Shortages

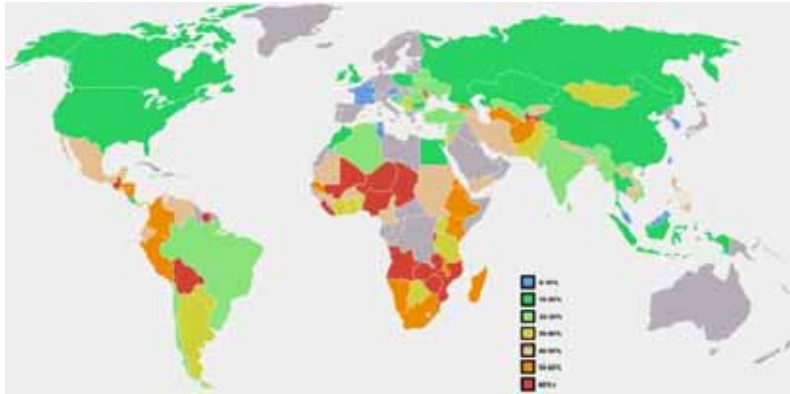


**1 in 3 people in the world already are facing water shortages**

**Global water supply steadily declining**

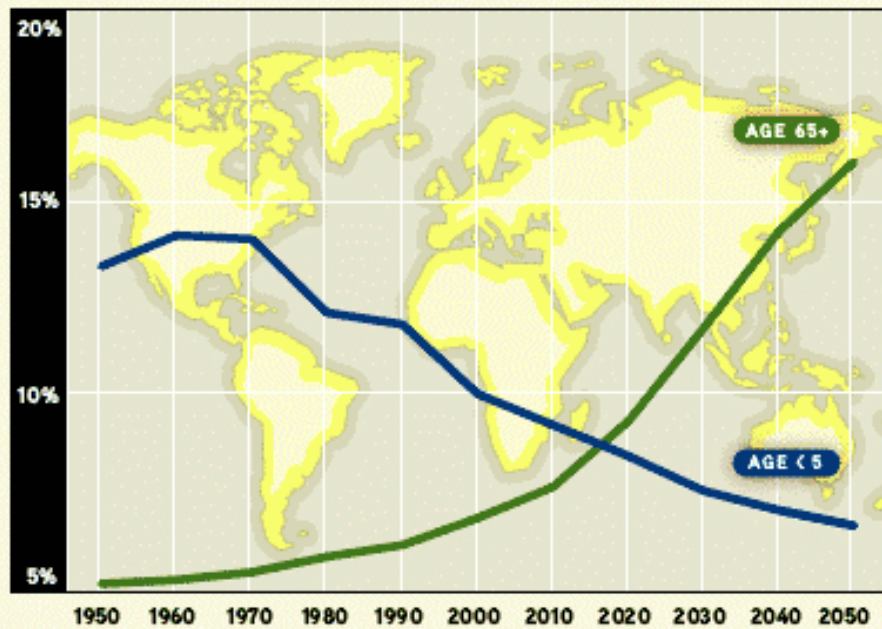
**Climate change can increase this problem**

# Poverty



# Aging Population

YOUNG CHILDREN AND OLDER PEOPLE AS A PERCENTAGE OF GLOBAL POPULATION



Source: United Nations Department of Economic and Social Affairs, Population Division. *World Population Prospects. The 2004 Revision*. New York: United Nations, 2005.



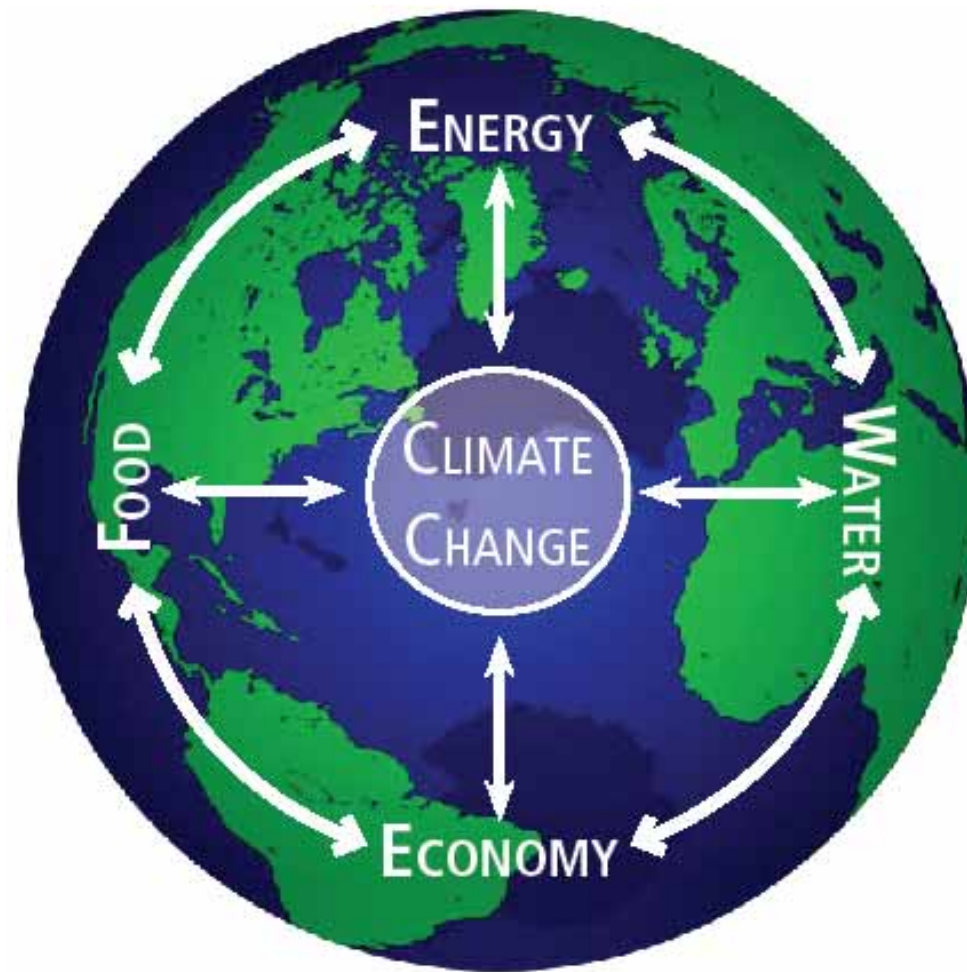
# Extreme Events



# Planning for the Future: What Kind of IIASA?

- Focus on a Few Major Global Themes
- Increasing Policy Relevance
- Nimble and Adaptive Research Agenda
- Capacity Building and Education

# Focusing the Research Agenda



# Increasing Policy Relevance

- Linking global research to national (NMO) policy agendas
  - ❖ Translating decision making needs into researchable questions
  - ❖ Translating research results into policy relevant assessments



# Nimble and Adaptive Research Agenda

## ➤ Synthesis Group

- ❖ Building on Traditional Disciplines
- ❖ Crosscutting, Problem Focused Research

## ➤ Innovation Group

- ❖ Staying Ahead of the Game
- ❖ Exploratory Research

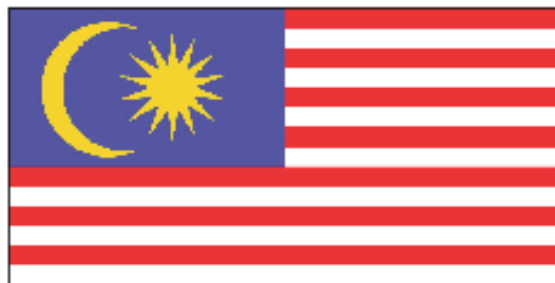
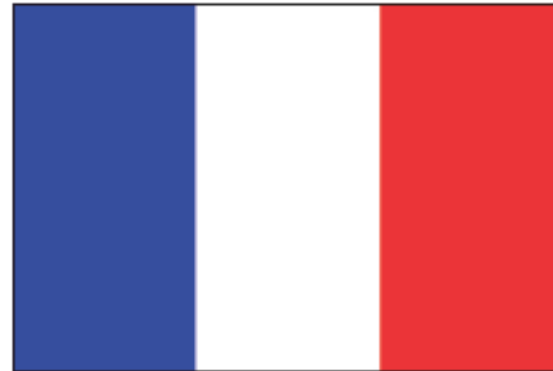
## ➤ Policy Group

- ❖ Building Bridges to NMO's Policy Makers
- ❖ Analytical Support for Policy and Negotiations

# INCREASING OUTREACH & CAPACITY BUILDING



## Increasing Membership



# **In 2020.....**

**.....policy makers all over the world will first turn to IIASA for help, when faced with a global problems.**

**Thank You**

**More information  
about IIASA at:  
[www.iiasa.ac.at](http://www.iiasa.ac.at)**