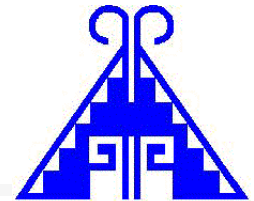




Kyrgyz Republic



**Kyrgyz State University of Contraction,
Transportation and Architecture**



**The idea of Climate Neutral Settlements:
a reason for population motivation and involvement
(in Kyrgyzstan)**



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**The idea of Climate Neutral Settlements:
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The Kyoto Protocol:

- **Was it effective?**
- **Why did a number of countries not get involved?**
- **Why not all countries have achieved the expected effects?**
- **Why are the global GHG emissions still intensively increasing?**



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Lessons learnt in Kyrgyzstan:

- 1. The Kyoto Protocol was ratified in 2003.**
- 2. As a developing country, Kyrgyzstan does not have quantitative responsibility on GHG emissions.**
- 3. In 1990-2004 the CO₂ emissions were reduced by 51.8% (from 11.0 M tones to 5.7 M tones), because of economic slowdown**



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Lessons learnt in Kyrgyzstan:

- 4. Intensive forests cutting and glaciers melting are observed.**
- 5. Energy policy does not follow the Kyoto Protocol:
For example, the government suggested to use for heating:**
 - natural gas – in 80th**
 - electricity – in the beginning of 90th**
 - coal – since 2008**
- 6. Weak dissemination of information on the climate change**



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Lessons learnt in Kyrgyzstan:

7. There is significant potential for reduction of houses CO₂ emissions with resident's efforts:

- **Buildings require 60% of national energy consumption**
- **Most of the buildings are residential**
- **Industrial buildings are not in use**

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The energy consumption in the village houses: the best, the average and the worst cases

Сравнение потребления энергии домами

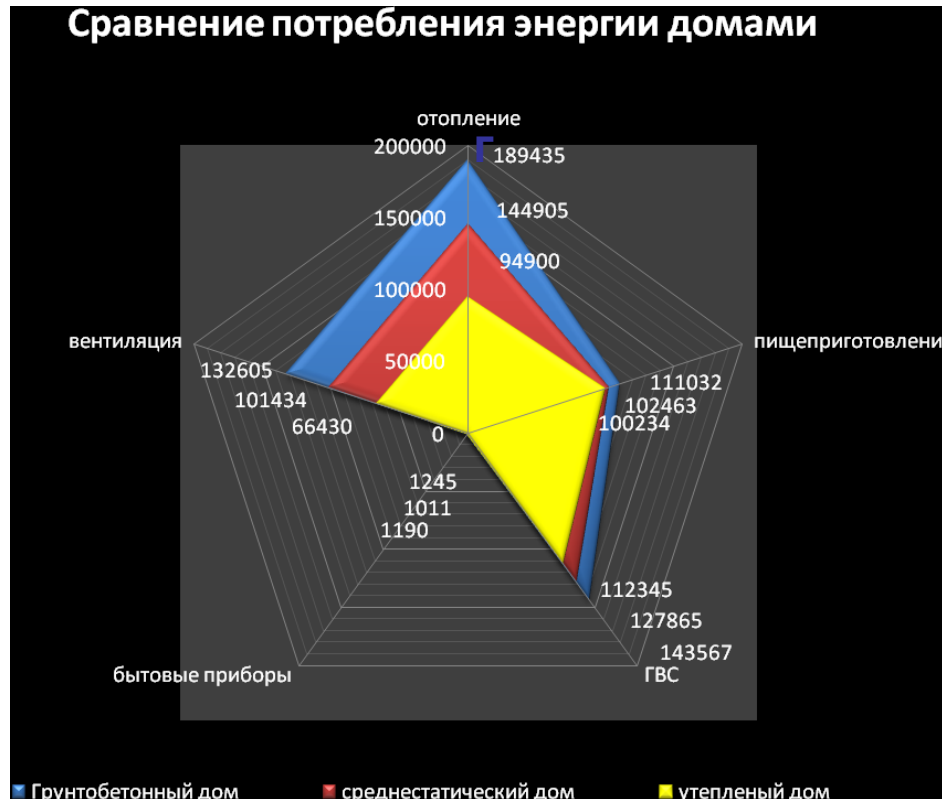
Heating

Ventilation

Cooking

Household devices

Hot water supply



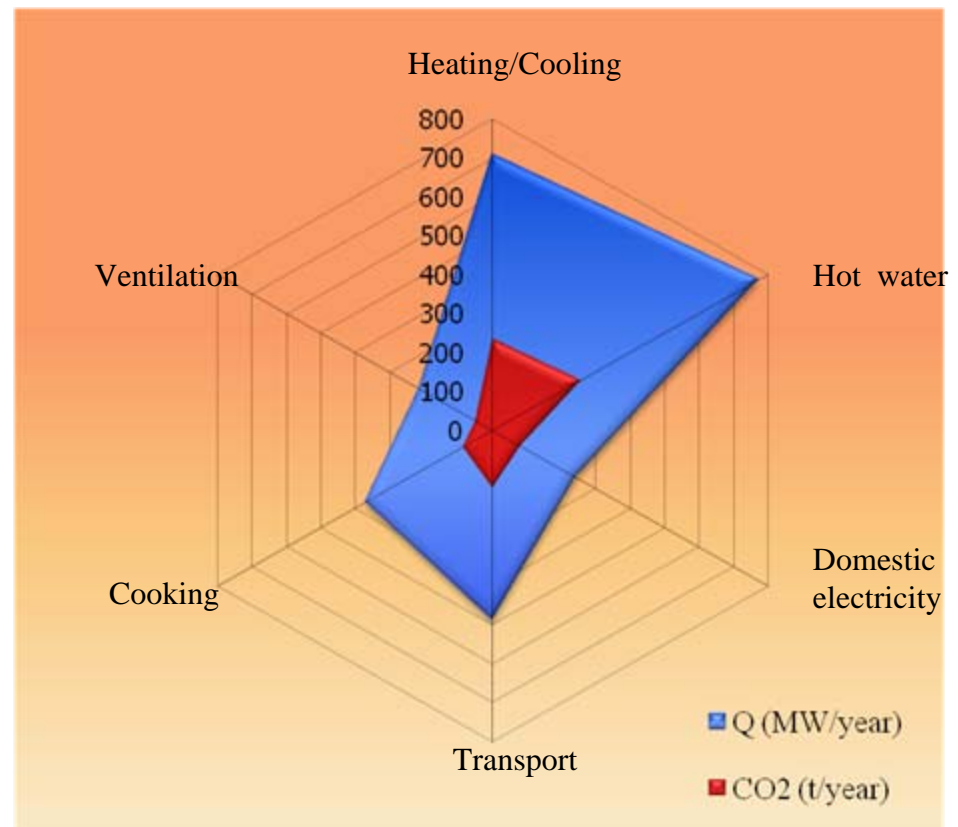
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The structure of the energy consumption and CO2 emissions of the apartment building, Bishkek city



Year of construction - 1990
Volume of the building – 27000 m³



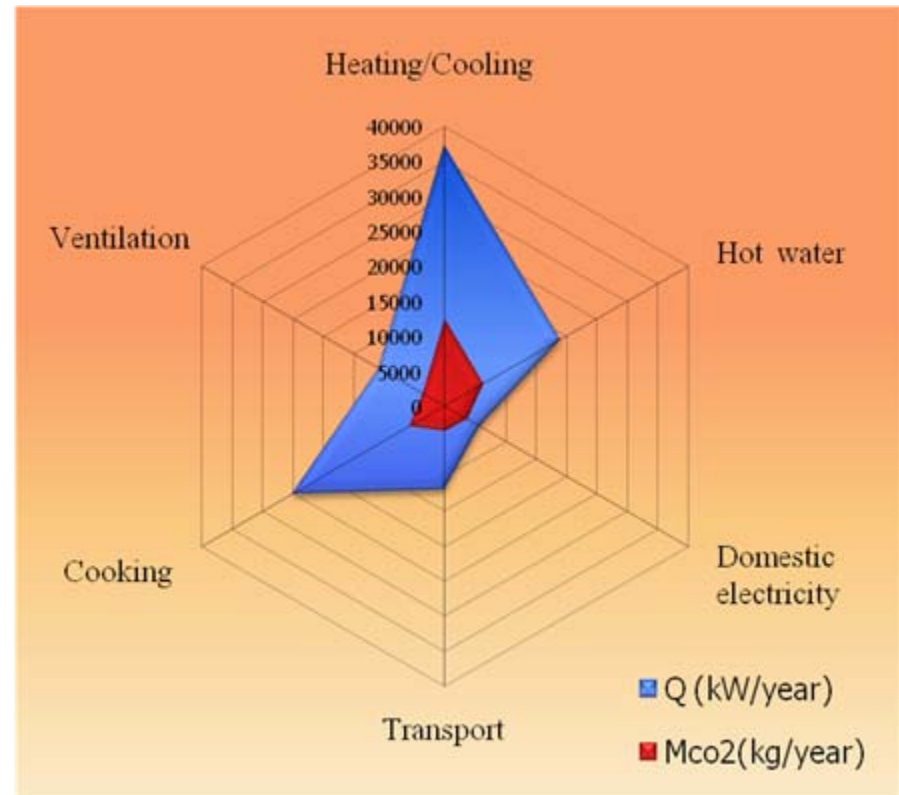
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The structure of the energy consumption and CO₂ emissions of the private house, Bishkek city



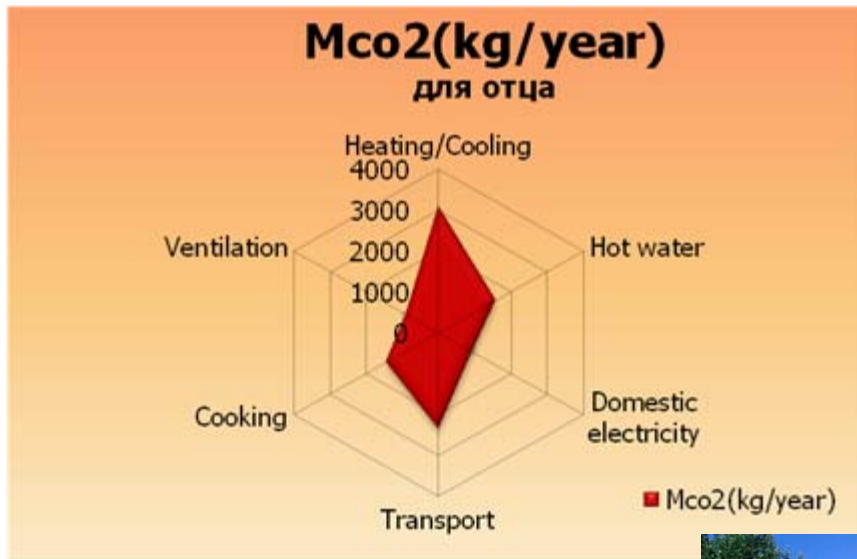
Year of construction - 2003
Volume of the building - 314 m³
For 4 people



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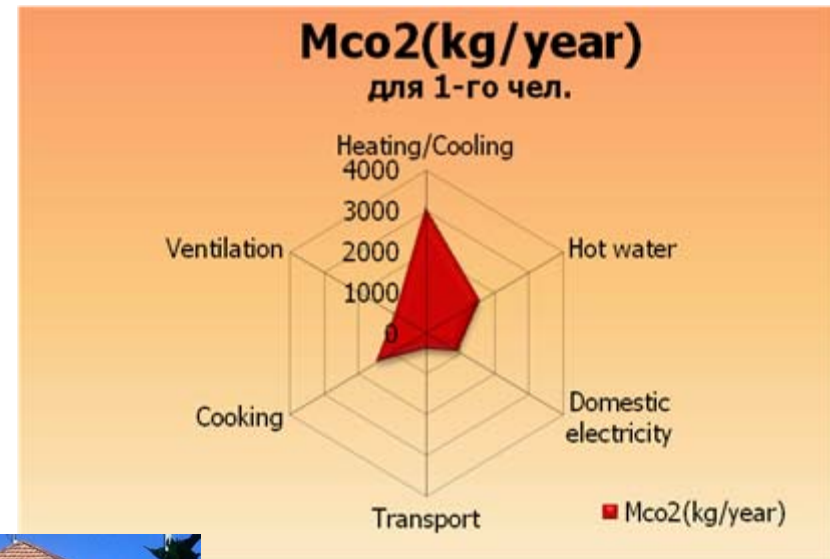


The private house in Bishkek city: CO₂ emissions corresponding to each family member



Owner of the
house and the car

(Father)



Other family
member

(Daughter)



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**Every person can and should be
involved in the solving of global climate
change problem at the level of:**

- **Region**
- **Country**
- **Settlement**
- **House**



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GHG Emission Reduction Action in Housing of Kyrgyzstan:

- **Improving of a heat protection envelop of the buldings;**
- **Improving of the heat production, utilization and usage;**
- **Utilization and usage of the renewable energies;**
- **Dissemination of knowledge and training (education);**
- **Development of the laws, rigths and norms;**



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Reduction of GHG emissions – houses and people:

- 1. Motivation and involvement of people because of:**
 - understanding of personal contribution importance
 - moral and ethic responsibility
 - CO₂ emissions certification of the houses

- 2. The family can and should:**
 - get financing
 - increase energy efficiency
 - use clean energy (sun, wind, ground etc.)
 - reduce emissions from transport etc.
 - increase amount of grown flora

- 3. Every person should know amount of own GHG emissions
(own cyclogram of emissions)**



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**Post Kyoto period: needed principals of reduction
and sequestration of GHG:**

- 1. These actions are global responsibility of:**
 - every person
 - every family, firm etc.
 - every country
- 2. Helping in financing and technology transfer to:**
 - poor and developing countries
 - organizations, firms etc.
 - individual families (according to house characteristics)
- 3. All countries should spend 1.6% of GDP annually (developed countries 2% since 2015) for preventing global warming catastrophe (at 2°C increasing of temperature).**



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**Post Kyoto period: needed principals of reduction
and sequestration of GHG:**

4. All business organizations should have:

- quotas and rights for selling (on higher prices);
- direct taxes (for 1 tone emission 10-20 USD in 2010 further 60-100 USD);
- GHG emissions certificate (given annually by civil society)

5. Every person and house should have right for fiscal and privileged status on GHG emissions:

- climate active;
- climate overactive (“climate neutral” level);
- climate super active.



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Suggestion for a new national level project:

**«Actions on Reduction of GHG Emissions in Housing
of Kyrgyzstan:
Strategy, Monitoring, Education and
Measures Implementation»**

(2009-2015)



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Thank you!

