

A stylized illustration of a landscape with grey mountains, two yellow trees with curly tops, a white sheep, and a yellow ground line.

Energy efficient stoves project in Kyrgyzstan

**Phase II: Pilot Project during the 2016/2017 Heating
Season.**

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Public Foundation CAMP Alatau
“South – South Knowledge
Exchange” April 19, 2017

Republic of Kyrgyzstan

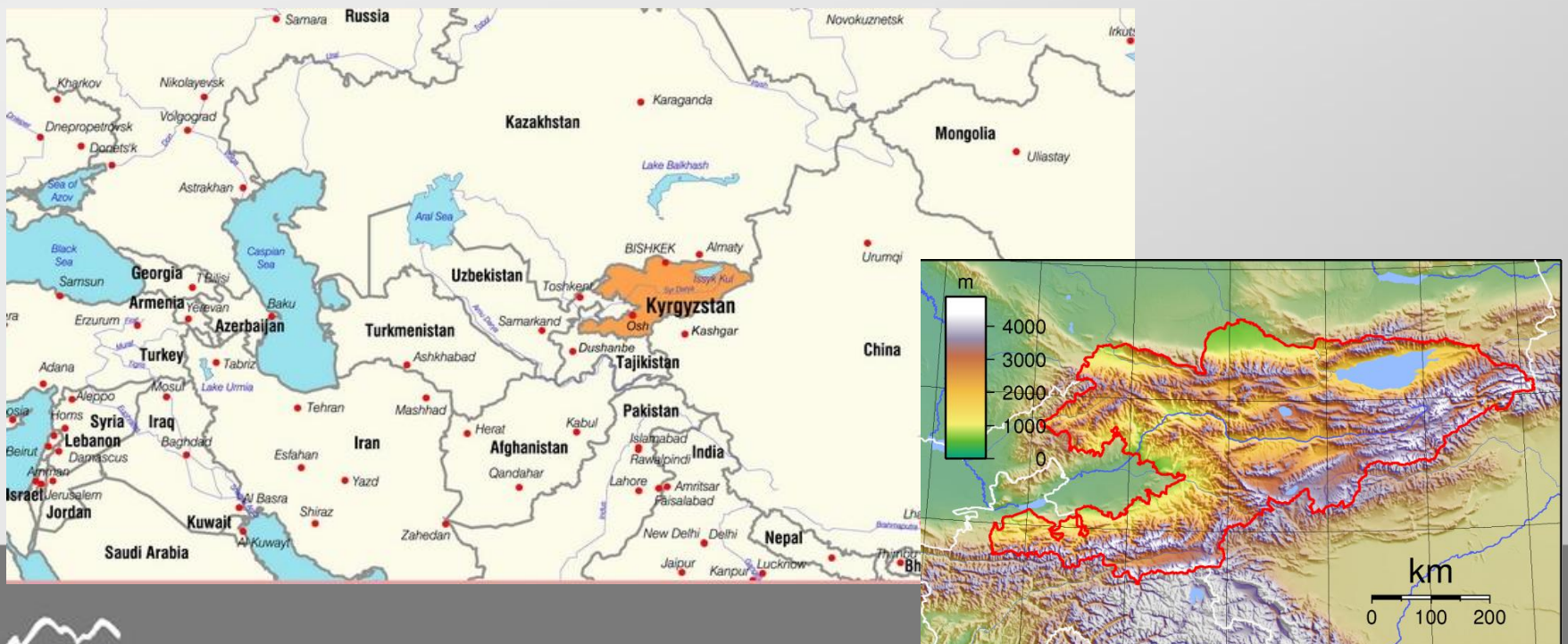
Population: 5,5 million people

Territory: 198 000 km²

Tien Shan mountain range covers about 95% of the territory.

Nearly half of the country rests at 3.000 m above sea level.

Climate: Dry and continental



Objectives of the Pilot Project

- Identifying and selecting efficient heating stoves
- Selecting households for stove installation and monitoring of results
- Support development of a stove testing protocol
- Monitoring results during heating season 2016/2017

Project partners

- Fresh Air project
- Local government authorities - Ayil Okmoty

Stoves selected for the Pilot

#	Model	Fuel	Type	Cooking	Efficiency	Fuel savings
1	KG2	Dung, wood, coal	Chimney, long chimney, heating wall	yes	70%	45%
2	KG4	Coal	Chimney, heating wall	yes	74%	50%
3	KG5	Coal	Central heating	no	75%	40%

KG2



KG4

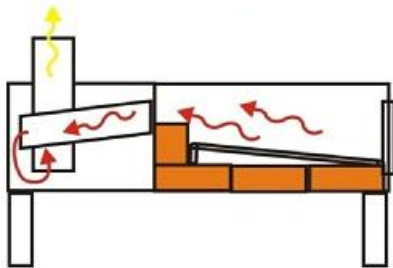


KG5

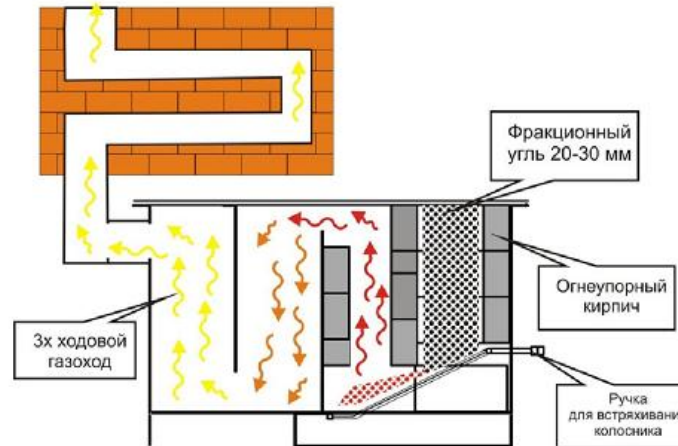


Three models passed selection for the pilot project

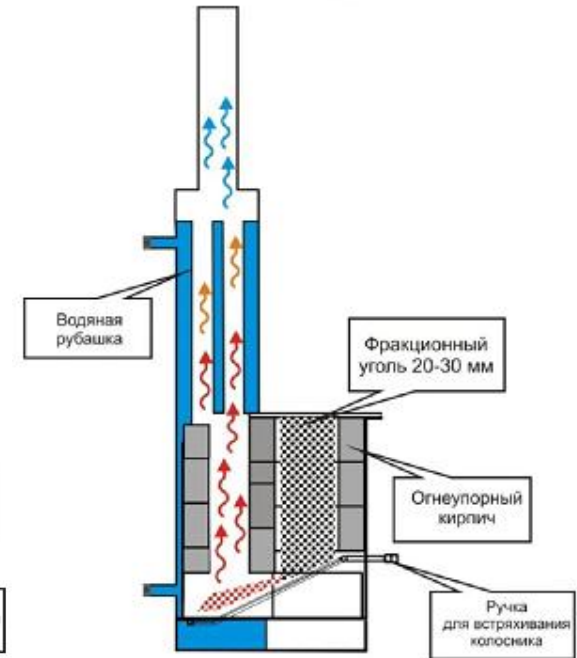
Selected energy efficient stove layout



Model KG2



Model KG4



Model KG5

Project area and households



Oblast	Households	Type of stove	Monitoring status
Jalal-Abad and Osh	20	19 coal stoves (KG4) 1 low pressure boiler (KG5);	Stove and health condition monitoring.
Naryn	10	10 biomass stoves (KG1 and KG2) 10 coal stoves (KG4)	Stove and health monitoring. Before and after stove installation.
Chui	10	9 low pressure boilers (KG5) 1 coal stove (KG4)	Stove and health condition monitoring.

Traditional and new stoves comparison



Traditional solid fuel stoves are smoky due to a not completed fuel burning. Providing conditions for full fuel combustion effects in no smoke.

Energy efficient stoves combine in the unique way:

- Continuous operation
- Homogenized fuel
- Homogeneous combustion



Traditional and new stoves look



Measurement of CO concentration before and after installation of the new stoves

Кабаева N231216



От: пятницы, 23 декабря 2016 года 16:44:21 - До: воскресенья, 25 декабря 2016 года 19:41:41

Traditional stove

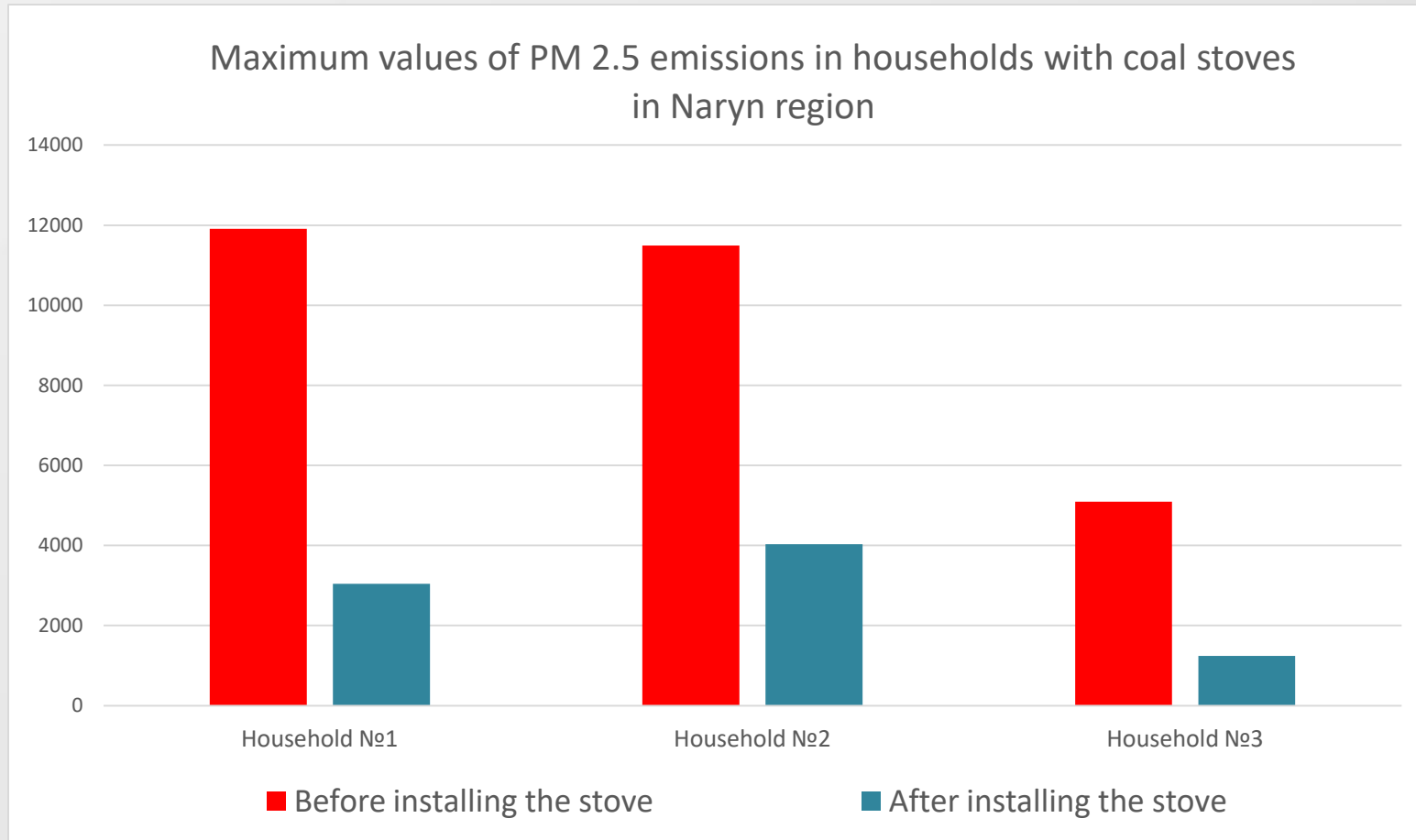
Каб Нур 72 18



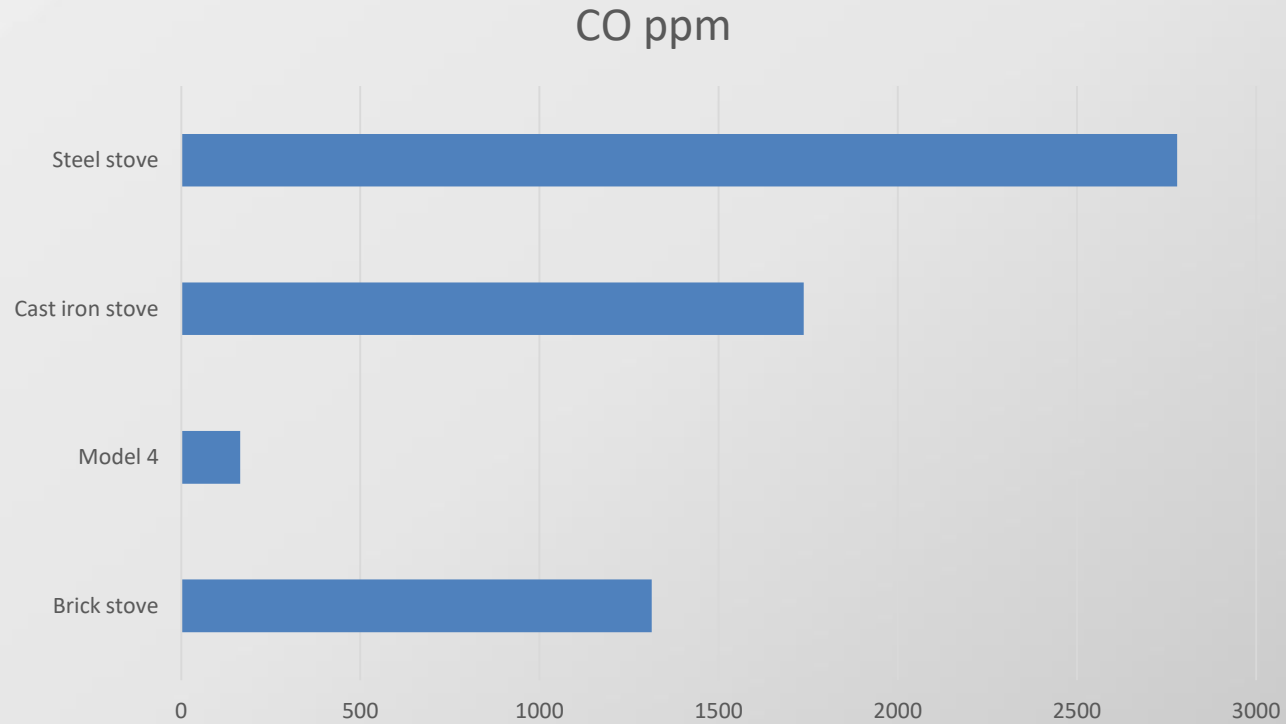
От: субботы, 18 февраля 2017 года 11:11:05 - До: понедельника, 20 февраля 2017 года 11:26:05

New KG4 Stove

Indoor pollution comparision

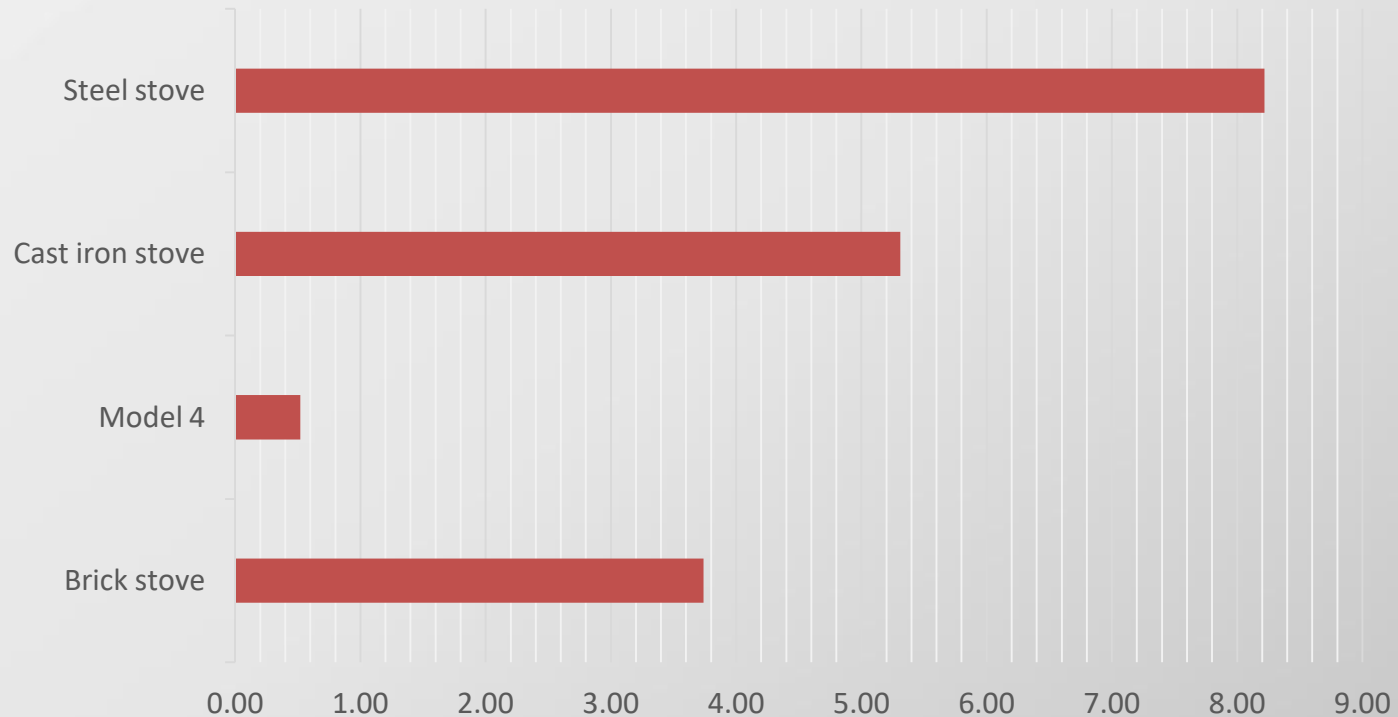


Carbon monoxide (CO) outdoor emissions



Combustion efficiency

CO/CO₂



CO/CO₂ - : the system efficiency, expressed as the ratio of the energy delivered into the living space divided by the energy available from the fuel, and the combustion efficiency expressed as a completeness of the combustion of carbon.

Thank you for your attention

in case of further questions please contact us

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