



NUCLEAR ENERGY COMMISSION

2021 STUDY PANEL

Food safety and agriculture session MONGOLIA

**Executive Office
Nuclear Energy Commission,
the Government of Mongolia**

3-4 March, 2021

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Main policies in Climate change

- **National climate change program (2011)**
- **The Paris Climate Change Agreement (2016)**
- **Nationally defined contribution objectives for the implementation of the Paris Agreement (2019)**





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Main policies in Climate change



Nationally defined contribution objectives for the implementation of the Paris Agreement



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Nuclear technology in the monitoring of environment



Radiation control on
drinking water



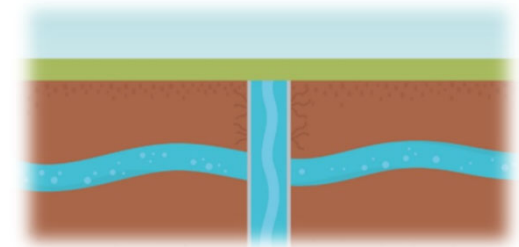
Air pollution, air
radiation level,
Radon monitoring



Soil monitoring



Radiation control on
waste ash of TPP



Underground water
studying



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Nuclear technology in Air pollution study

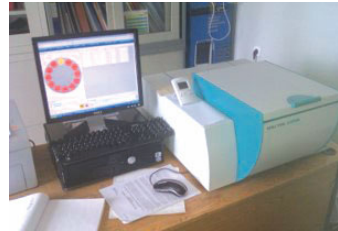


Residential area

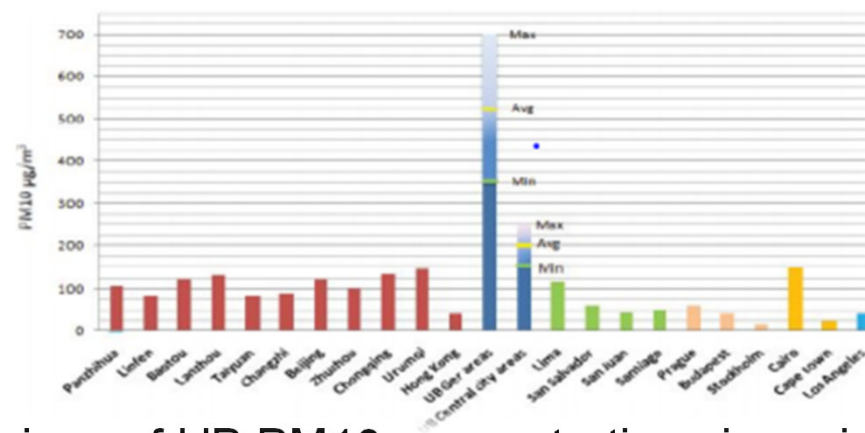
Most of the air polluting resources.



Winter season,
Ulaanbaatar



Equipments



Comparison of UB PM10 concentrations in various cities around the World (around 8-10).



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Nuclear technology in Air pollution study



Meeting in Ulaanbaatar, 2017, for clean air



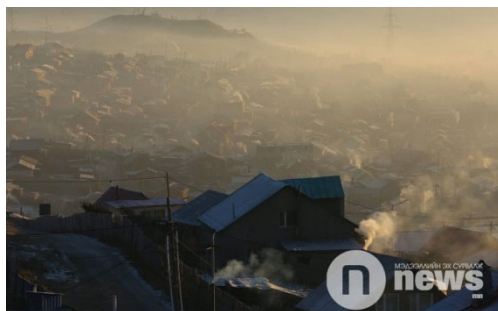
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Nuclear technology in Air pollution study



Starting use to biofuel, 2019.

But ...



Increased level of SO₂

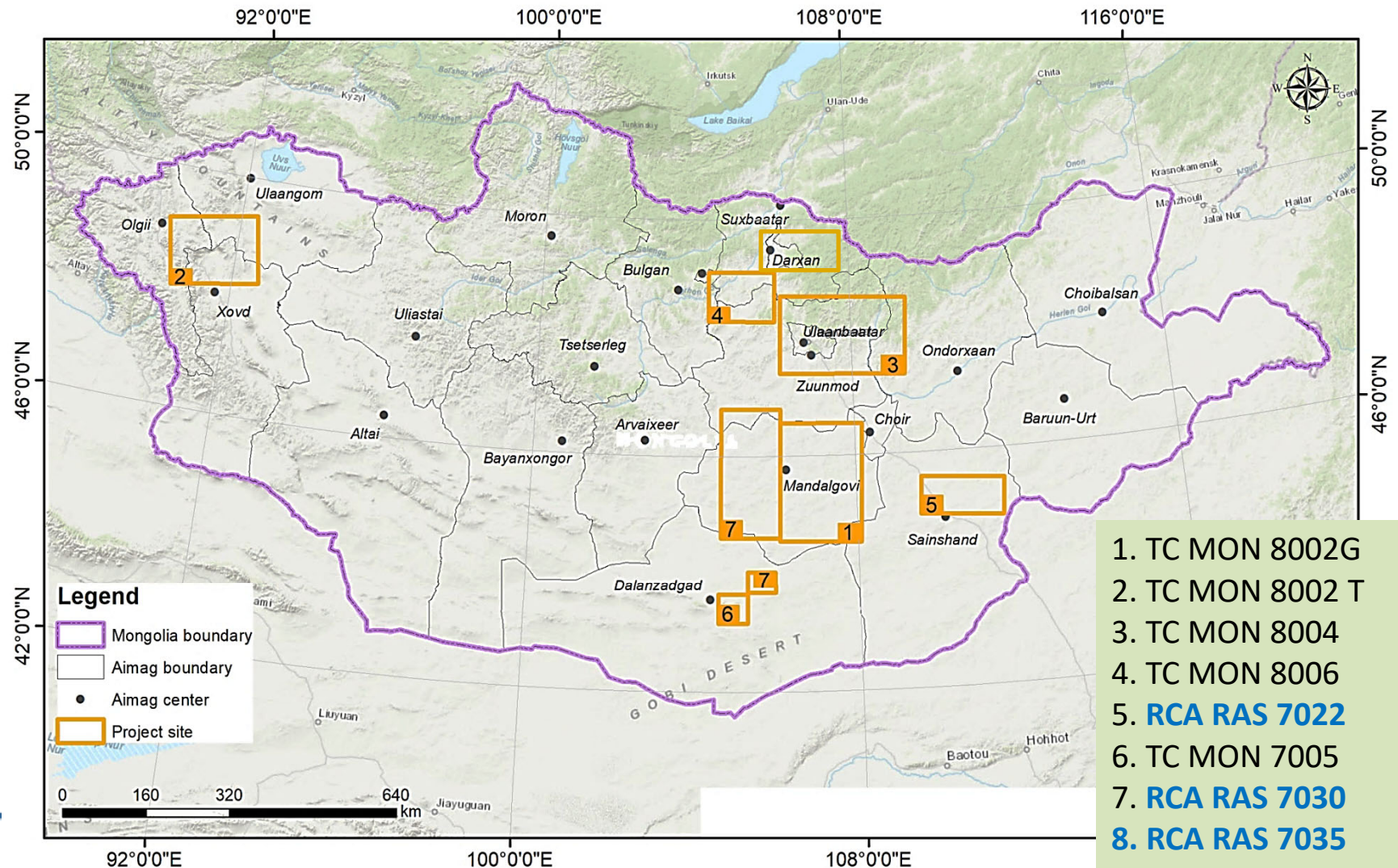
№	Бохирдуулах бодисын нэр	MNS 4585:2016	7 хоногийн дундаж агууламж		24 цагийн дунджийн хамгийн их агууламж	
		Хүлцэх агууламж	2020 он	2021 он	2020 он	2021 он
1	Хүхэрлэг хий (SO ₂)	50 мкг/м ³	82 мкг/м ³	219 мкг/м ³	232 мкг/м ³	627 мкг/м ³
2	Азотын давхар исэл (NO ₂)	50 мкг/м ³	71 мкг/м ³	77 мкг/м ³	175 мкг/м ³	138 мкг/м ³
3	PM10 Тоосонцор	100 мкг/м ³	147 мкг/м ³	154 мкг/м ³	305 мкг/м ³	488 мкг/м ³
4	PM2.5 Тоосонцор	50 мкг/м ³	113 мкг/м ³	122 мкг/м ³	238 мкг/м ³	334 мкг/м ³
5	Нүүрстөрөгчийн дутуу исэл (CO)	10000 мкг/м ³	3011 мкг/м ³	3696 мкг/м ³	15263 мкг/м ³	13672 мкг/м ³
6	Озон (O ₃)	100 мкг/м ³	9 мкг/м ³	15 мкг/м ³	39 мкг/м ³	48 мкг/м ³



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Nuclear technology in Geo-ecology

Implemented projects





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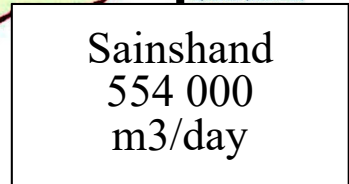
Nuclear technology in Geo-ecology



Established isotope laboratory in Institute of Geo-ecology



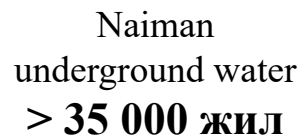
Used isotope technology



(Sources: IGG, MAS)



Olgoi gobi underground
water
26 000 жил



Bor khuuvriin gobi
underground water
35 000 жил

Gunii khooloi
Underground water
45 000 жил

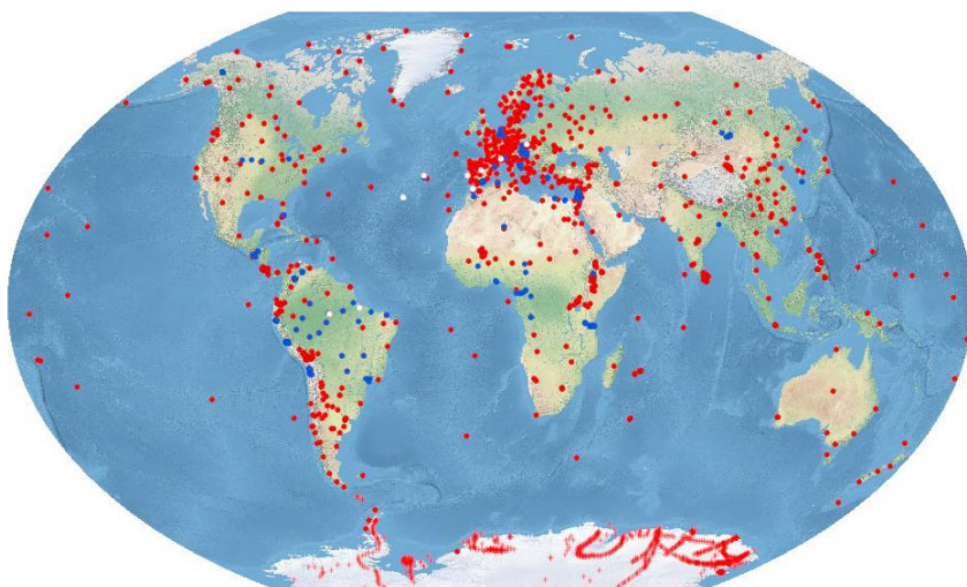
(Sources: Sanjdorj 1996; Janchivdorj & Udvaltssetseg; Veronica et al., 2012; RAS 7030, 2019)



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Nuclear technology in Geo-ecology

Rainfall monitoring - GNIP



December, 2020, Started establishing GNIP chain for Ulaanbaatar, Gobi-Altai, Dornod.



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Food safety (inspection)

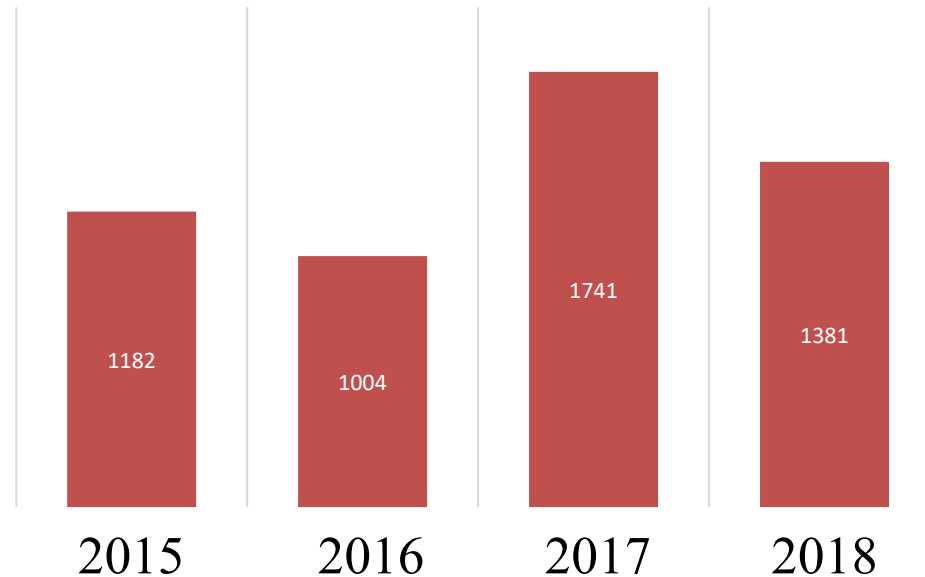


Radiation control laboratory of NRL

- Radiation control for all types of imported food products.



Gamma spectrometer



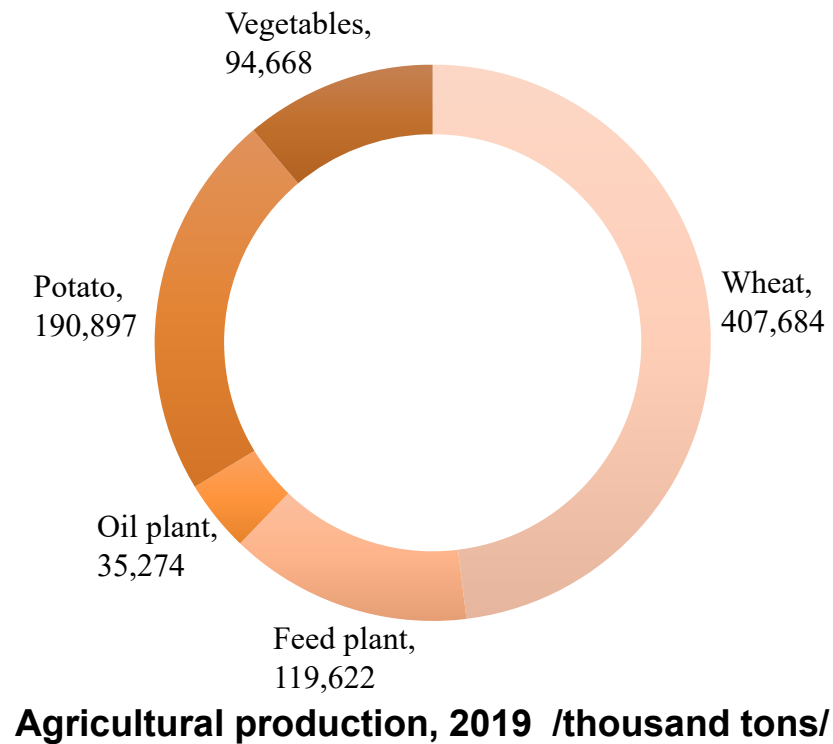
Total number of food sample

Between 2016-2018, Cs-137 isotope founded from 67 sample and 1 sample was higher than our national standart.



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Agricultural sector



**Increasing effective irrigation system
(Project with China)**



Improving agricultural equipments

Source: Ministry of food, agriculture and light industry

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Collaboration with IAEA - Livestock sector Veterinary vaccinations



Vaccination production line for FMDs
at BIOCOMBINAT

- Establishment of the vaccination production line for FMDs at BIOCOMBINAT state-owned factory with the capacity of 100 thousand dose vaccines for baby livestock/day in emergency;
- Strengthened laboratory capacities to develop a diagnosing tool and increased the detection efficiency of cross-border infectious and zoonotic diseases;



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THANK YOU FOR YOUR ATTENTION



EXECUTIVE OFFICE OF THE NUCLEAR ENERGY COMMISSION

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