



UNU Geothermal Training Programme

United Nations University Geothermal Training Programme

Technology Transfer to Developing Countries

Ingvar B. Fridleifsson

Director

www.unugtp.is



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Bessastadir Seminar for Nobel Laureate Al Gore

7 April 2008 Ingvar B. Fridleifsson



United Nations University Geothermal Training Programme

- .. has operated in Iceland since 1979
- .. aims at assisting developing countries with significant geothermal potential to build up or strengthen groups of specialists that cover most aspects of geothermal exploration and development
- .. offers annually six month specialised courses for professionals in geothermal work and MSc programme
- .. candidates selected by personal interviews in their home country by UNU-GTP representatives



UNU Geothermal Training Programme

**Class
of
2007**



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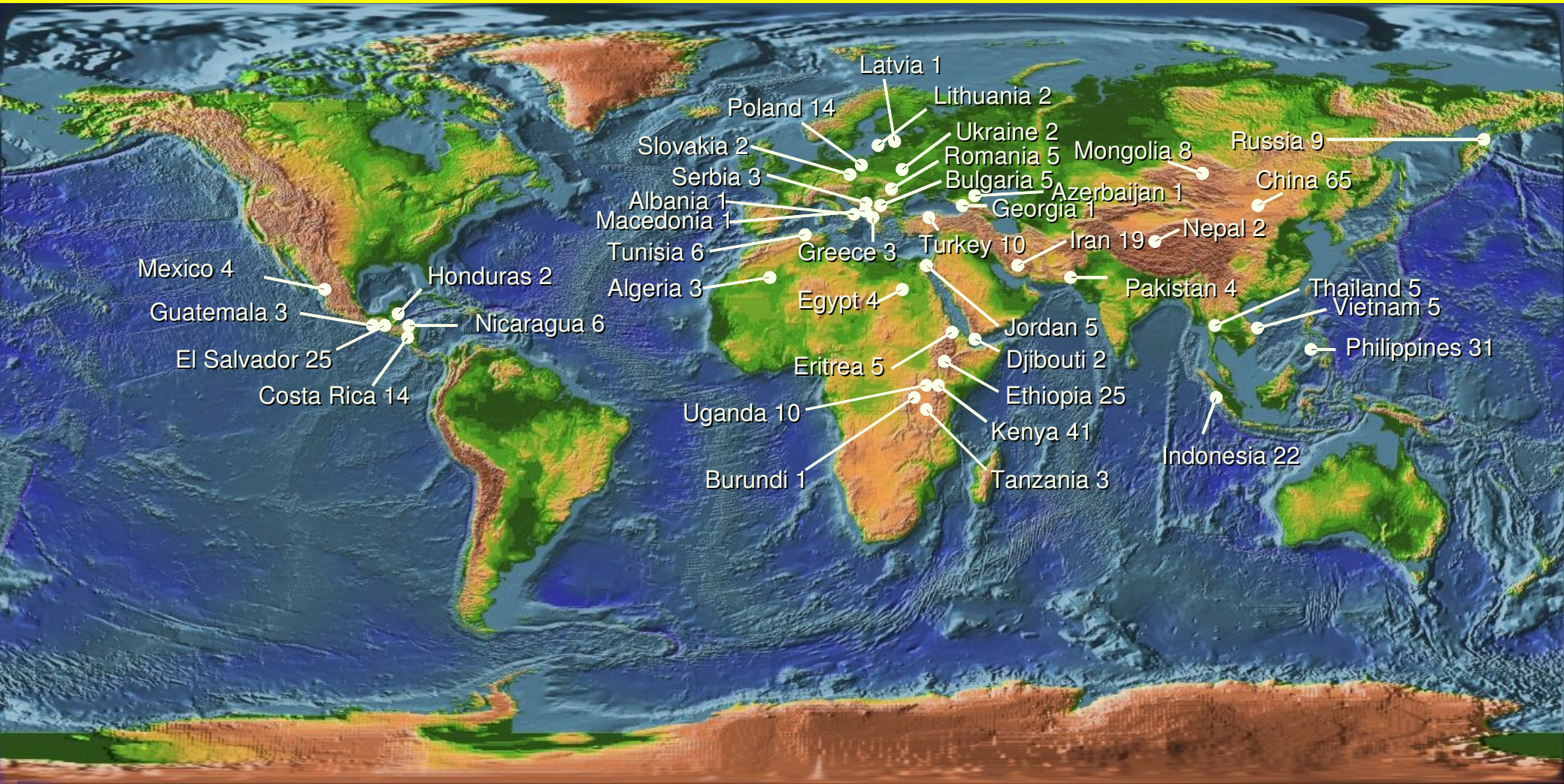
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UNU Geothermal Training Programme

Fellows of the UNU Geothermal Training Programme in Iceland 1979-2007





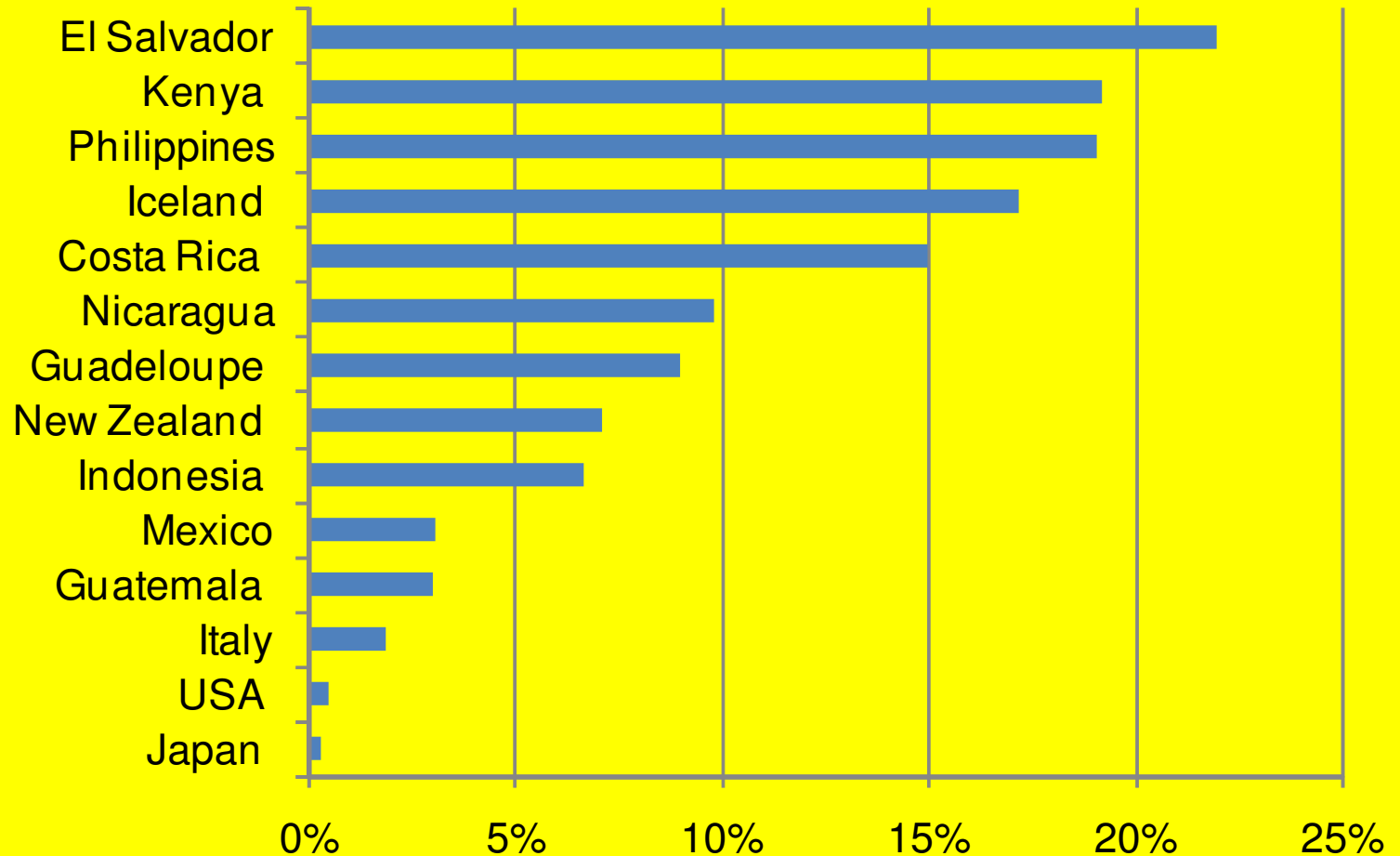
Top five countries and specializations

	China	Kenya	Philippines	El Salvador	Ethiopia
Geological Exploration		1		1	
Borehole Geology	3	4	4	1	3
Geophysical Exploration	1	9	5	3	4
Borehole Geophysics	2		4	2	1
Reservoir Engineering	22	6	9	4	5
Chemistry of Fluids	13	7	6	4	3
Environmental Studies	9	7		3	1
Geothermal Utilization	13	3	3	4	6
Drilling Technology	2	4		3	2
Total	65	41	31	25	25



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Top fourteen countries with the highest % share of geothermal in their national electricity production



Geothermal utilization in China





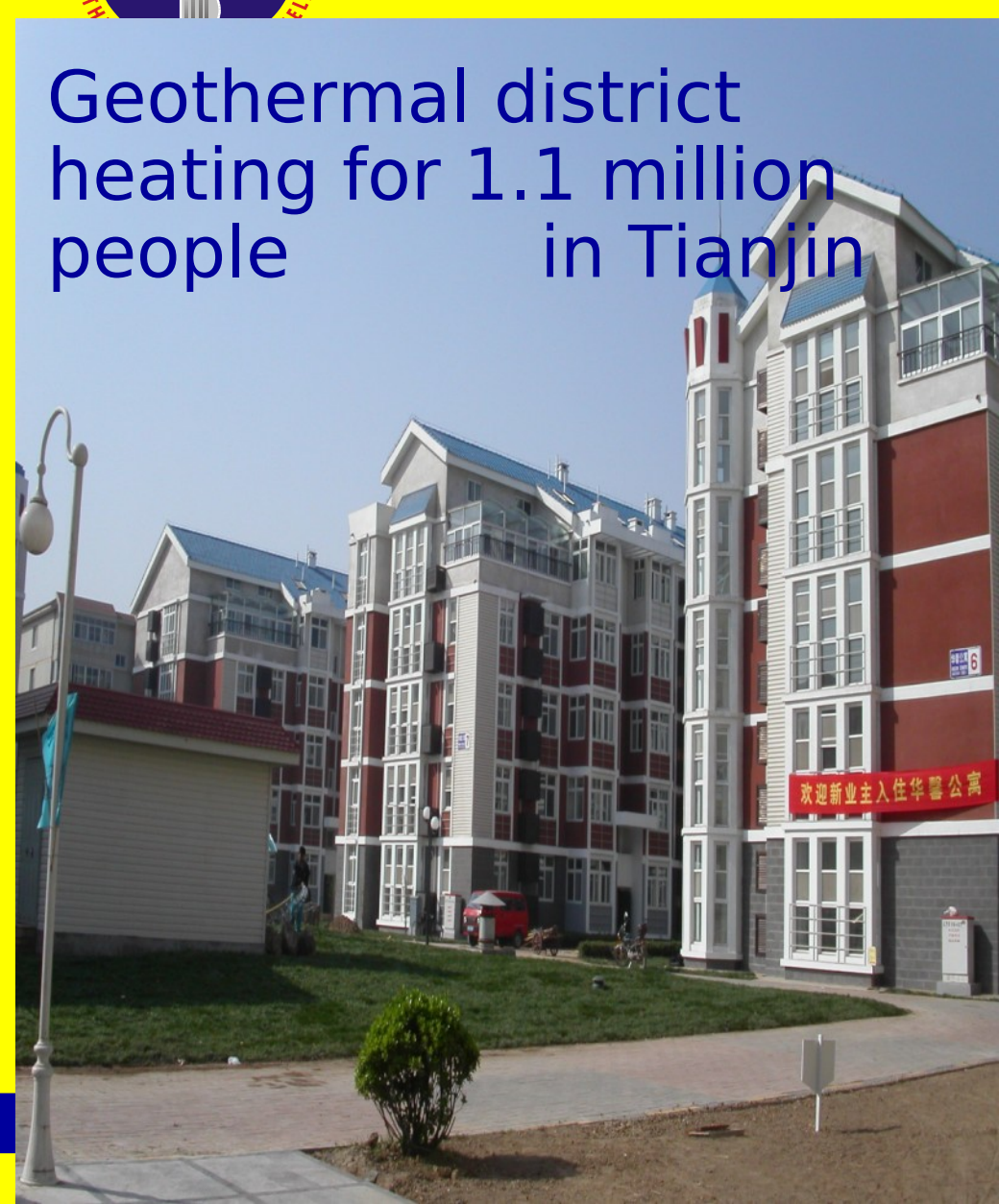
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1992
Tanggu

Geothermal
pipes above
surface



Geothermal district heating for 1.1 million people in Tianjin

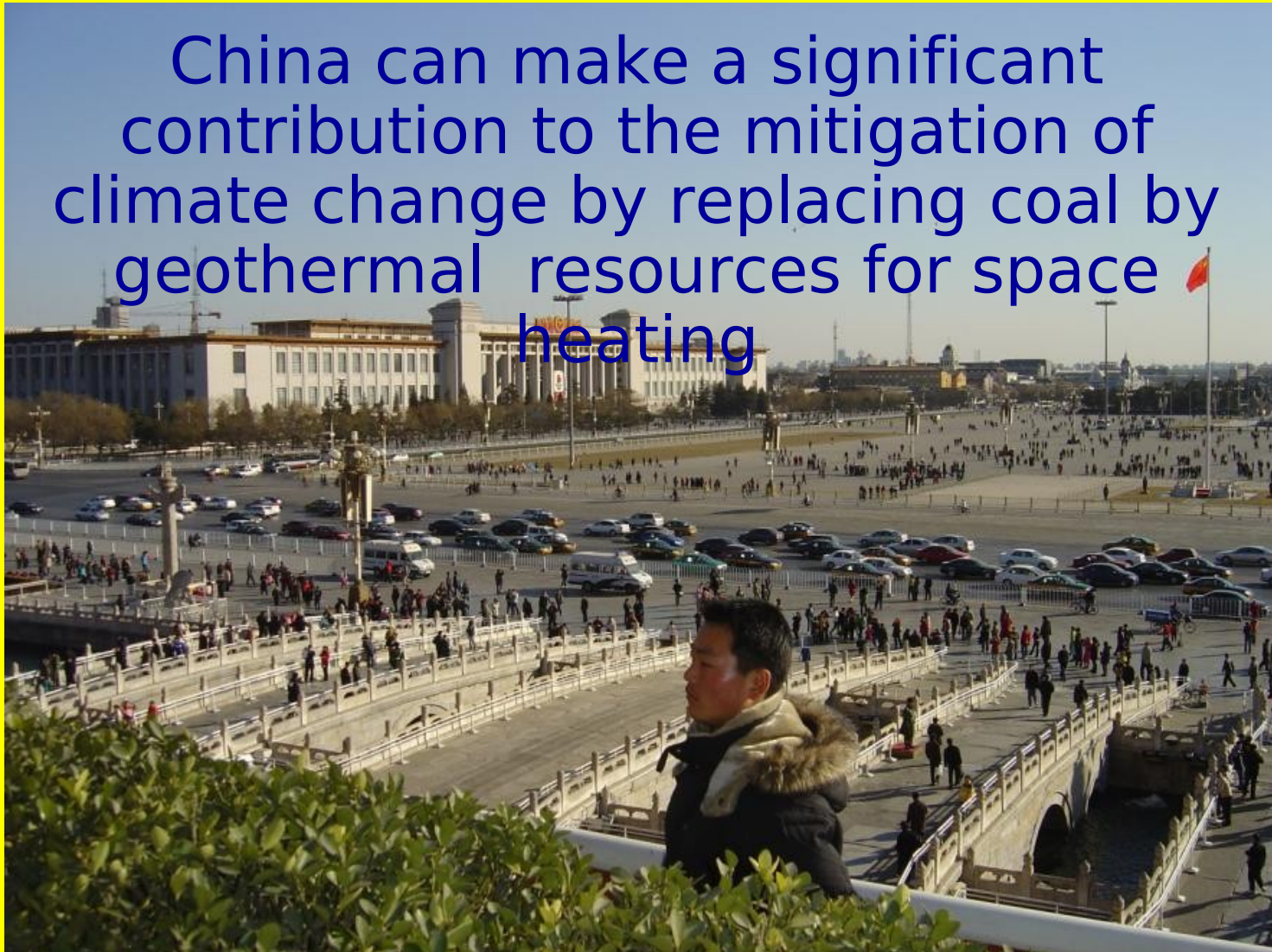


Radiators



Floor heating

China can make a significant contribution to the mitigation of climate change by replacing coal by geothermal resources for space heating





Short courses as Contribution to UN Millennium Development Goals

Government of Iceland funds UNU-GTP annual workshops/short courses in geothermal development in selected countries in Africa (started in 2005), Central America (started in 2006), and in Asia (starting in China 2008)

Workshop for Decision Makers on Direct Heating Use of Geothermal Resources in Asia held China in May 2008

Participants from China, India, Iran, Jordan, Mongolia, N-Korea, and S-Korea

Main aim to replace coal by geothermal in space heating sector