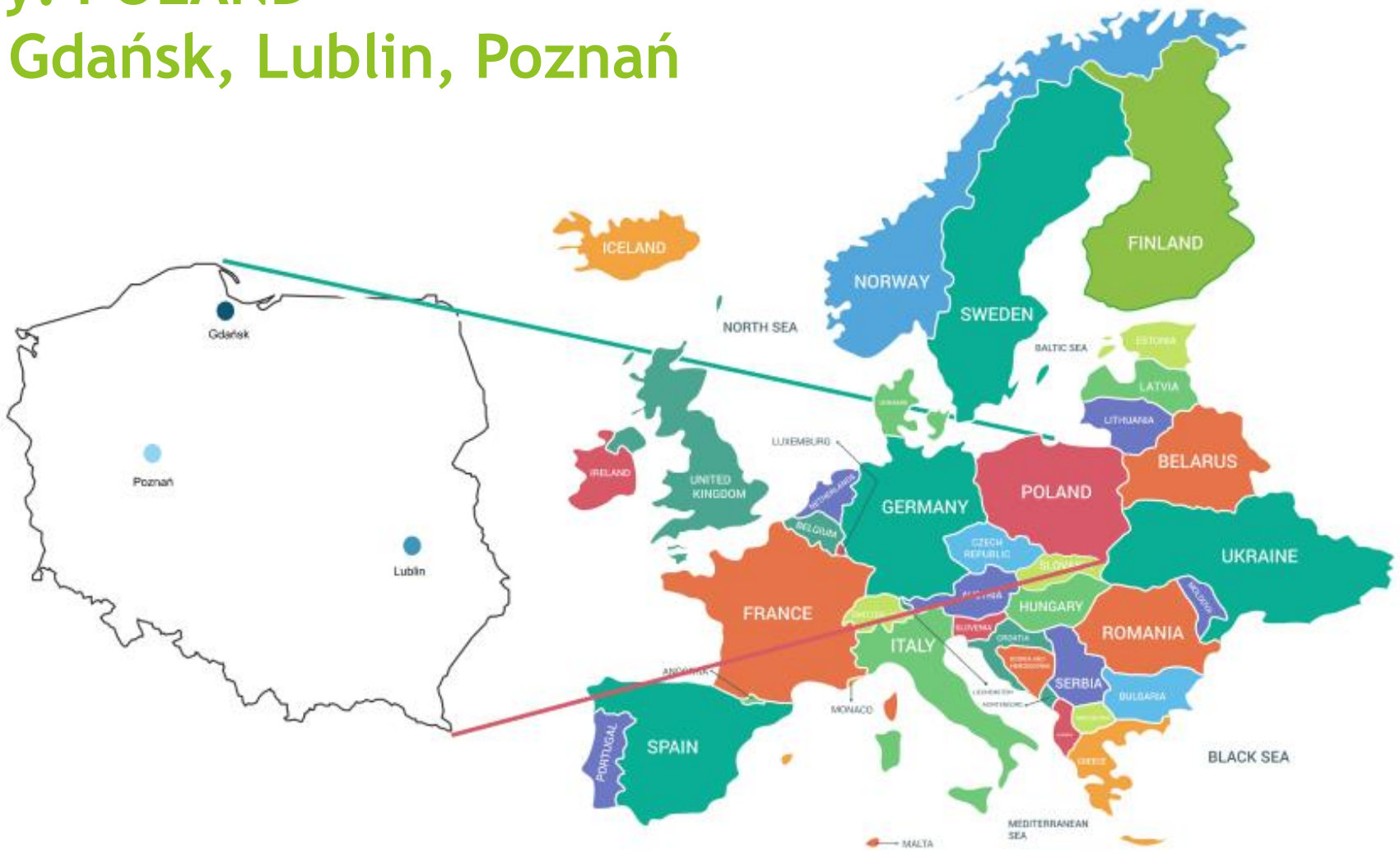
TTD on Urban Heat Poland

Final presentation of Gdansk, Lublin and Poznan

- Brief description of challenges
- Learning goals
- Key takeaways from the TDD
- Transfer to our context
- Barriers to implementation and solutions
- Action plan and accountabilities
- Follow up with Singapore partners

Country: POLAND
Cities: Gdańsk, Lublin, Poznań



Warsaw skyline

Fast development of the country in the last 20 years

Natural environmental assets of Poland

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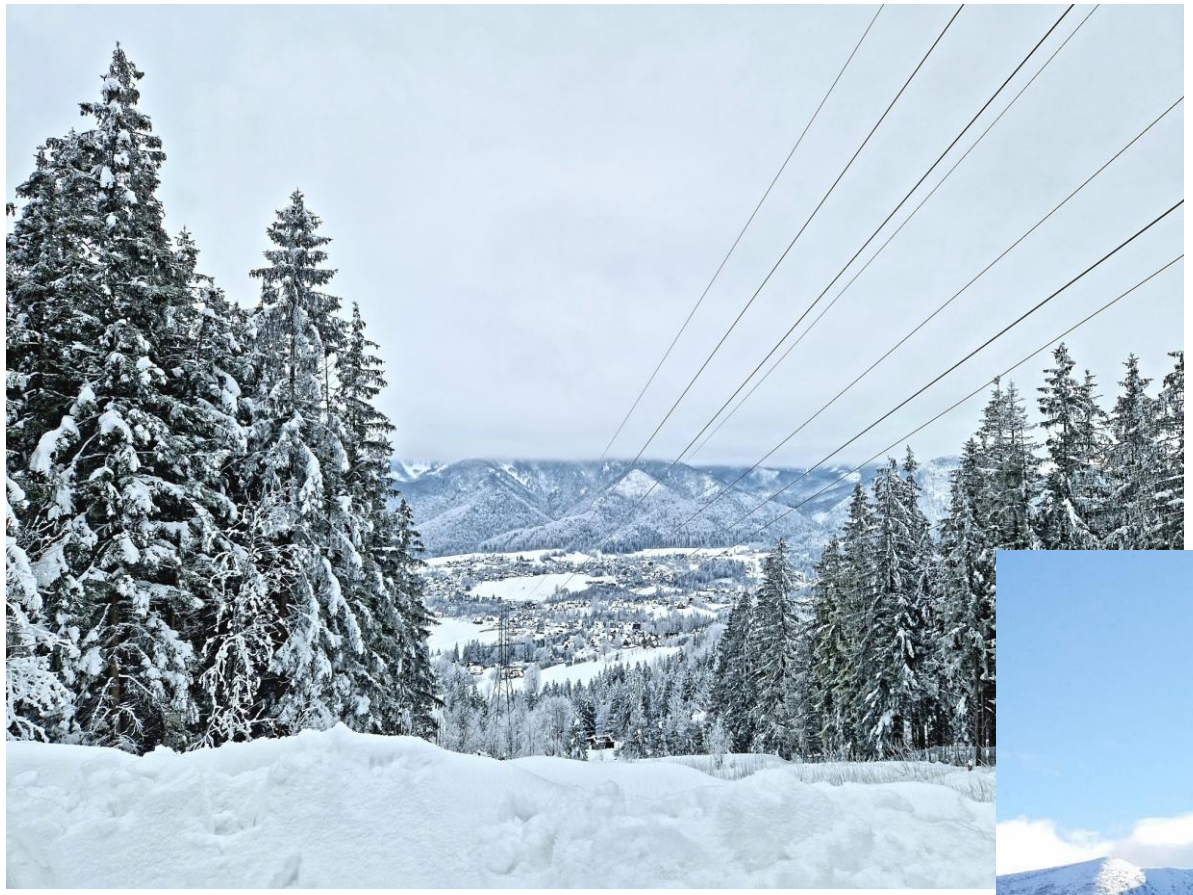

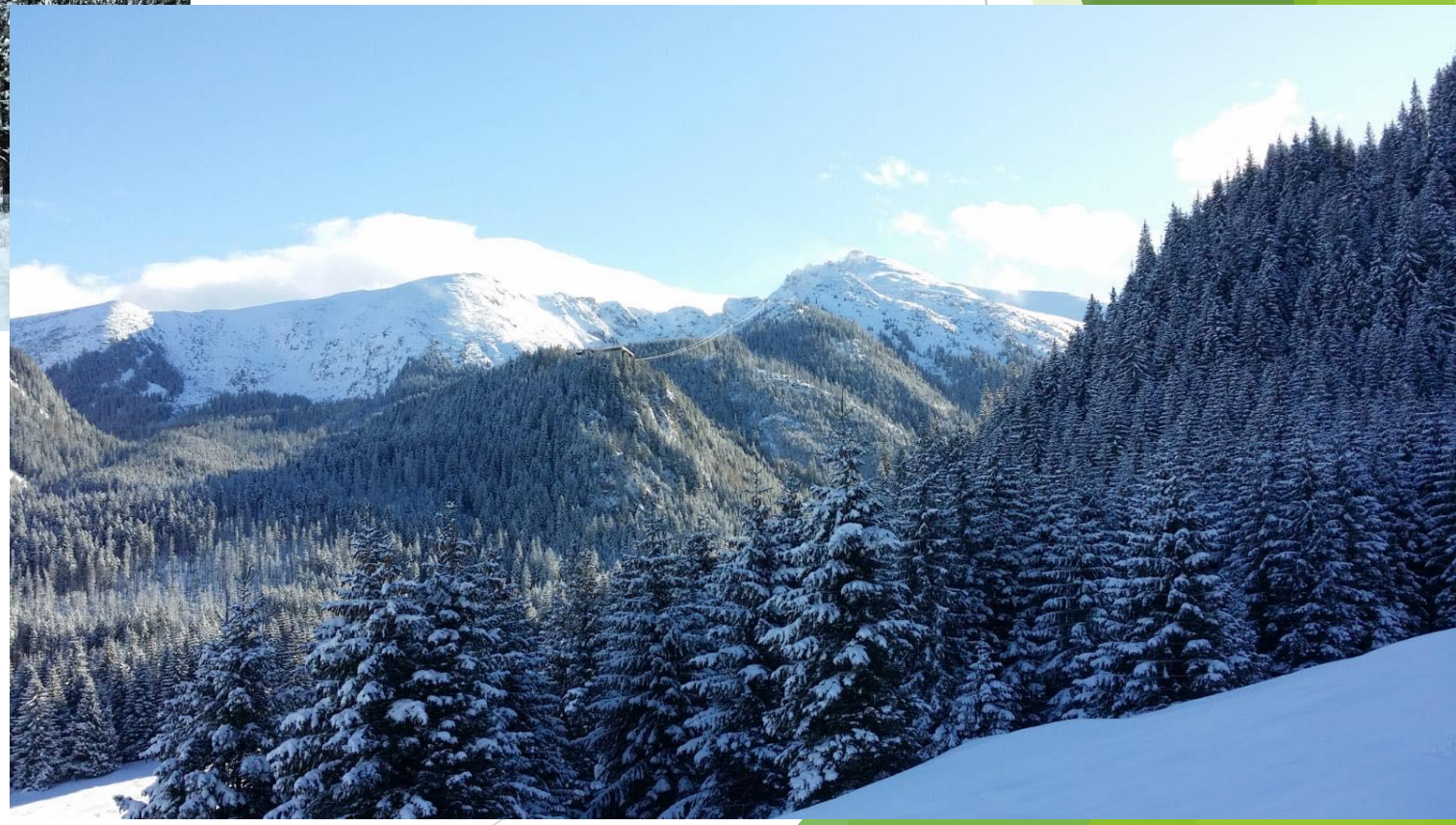

Natural environmental assets of Poland

BACKGROUND – Polish cities

- Climate changes – extreme, immediate weather changes (heat waves with tropical nights, heavy rains, stormy winds, dry seasons without rainfall – no snow, no rain, temperature amplitudes)
- Limited space for greenery and urbanization/investment pressure on existing greenery
- Heritage buildings – restrictions
- Concrete spaces – individual transport / parking spaces
- Heating – traditional sources (coal)
- Air pollution
- Immigration 10 mln of refugees last year / 38 mln people

Challenges

- Mitigation of heat islands in cities
- Rainfalls / retaining and recycling rainwater (heavy rains), use in times of drought
- Greenery, biodiversity, fourth nature
- Air quality
- Immigration
- Education through science

Key takeaways from the TDD and transfer to our context

- Common problems of Asia and Europe – extreme consequences of climate change
- Greenery in limited spaces / every inch of free space is in greenery / incl walls and roofs
- Complex planning of urbanization process include thorough preparation / planning / implementation / Singapore
- Pilot projects transferred to big projects / Guangzhou
- Using “ancient” and simple techniques in modern architecture (“Old wine in new bottle”) Guangzhou / Singapore (white colors etc.)
- Small scale solutions in public space (both historical and modern) that improve quality of life in city and mitigation of climate change effects /Paris
- Water recycling – circular economy in all areas of city functioning / Singapore
- Measuring, modelling and evaluation / monitoring techniques – indicators, data, presentation of results
- Valuation of ecosystem services / World Bank
- Cooling system – inspiration for local systems of cooling and heating

Barriers and solutions

BARRIERS	SOLUTIONS
Low level of knowledge and awareness among decision-makers and citizens	Education Promotion of different solutions based on local examples (if possible)
Lack of legal regulations adjusted to dynamically changing situation / too many regulations / non-integrated	Recommendations based on good practices and scientific results Lobbying in government for law change Pilot projects
Financing system – for example to use the EU funds we need to contribute financially Short-term thinking in terms of investments	Public – Private Partnership Wise management of assets in scarce resources - Singapore Holistic approach to investments Carrot and stick method
Governmental system (central, regional, local) – political differences	Education !

Actions

1. **Reintroducing greenery to the city**

- Unsealing concrete spaces / replacing with permeable surfaces
- Introducing small scale NBSs (like Singapore)
- Using local species of plants to enhance their effectiveness and reduce costs of maintenance

2. **Blue infrastructure**

- Multifunctional areas, recreation / sports venues ect
- Bringing rivers and water basins back to citizens with respect to nature / re-naturisation
- NBS – raingardens, wetlands, meadows, recycle of rain water
- Water retention solutions

UNSEALING OF CONCRETE PAVEMENTS

Actions

3. **Enhancing and restoring biodiversity – fauna and flora**

- Preserve and reintroduce habitats for small animals: frogs, hedgehogs, squirrels and pollinators
- Promote endemic species of plants in public spaces / leave trees, pollinator friendly plants
- Limitation of grass-cutting, leaving wild parts in parks etc. (4th nature, dead trees etc.)
- Pocket parks
- Natural playgrounds and schoolyards, community gardens / urban farming

FLOWER MEADOWS

SUPPORTING BIORETENTION, IMPROVING MICROCLIMATE, INCREASING BIODIVERSITY, COMBATING AIR POLLUTION, SUPPORTING WILD POLLINATOR POPULATIONS

POCKET PARKS

AN AREA OVERGROWN WITH GRASS THAT WAS UNUSED HAS GAINED A NEW CHARACTER: A PERGOLA MADE OF CORRODED STEEL HAS BEEN PLANNED REFERENCING THE WORKING-CLASS CHARACTER OF THE DISTRICT, ALONG WITH A PLAQUE DESCRIBING THE HISTORY OF THE NEIGHBORHOOD, THE ROAD STRIP OF THE INDUSTRIAL WORKING-CLASS STREET HAS GAINED A NEW CHARACTER


Natural playgrounds


Eco-demonstrators educational tools for children


Floating gardens in Poznań


Allotment gardens

Actions

4. Air

- Trees, road greenery, introduction and protection
- Exchange of heating sources to more ecological
- Air corridors – ventilation of cities

THANK YOU!

- Please come to Poland
  to see our problems
  and experiences

- We are open and ready for further cooperation with you