

Climate change and health, local level perspective

Gígja Gunnarsdóttir, MPH

Program manager Health promoting community

National network coordinator WHO Healthy Cities



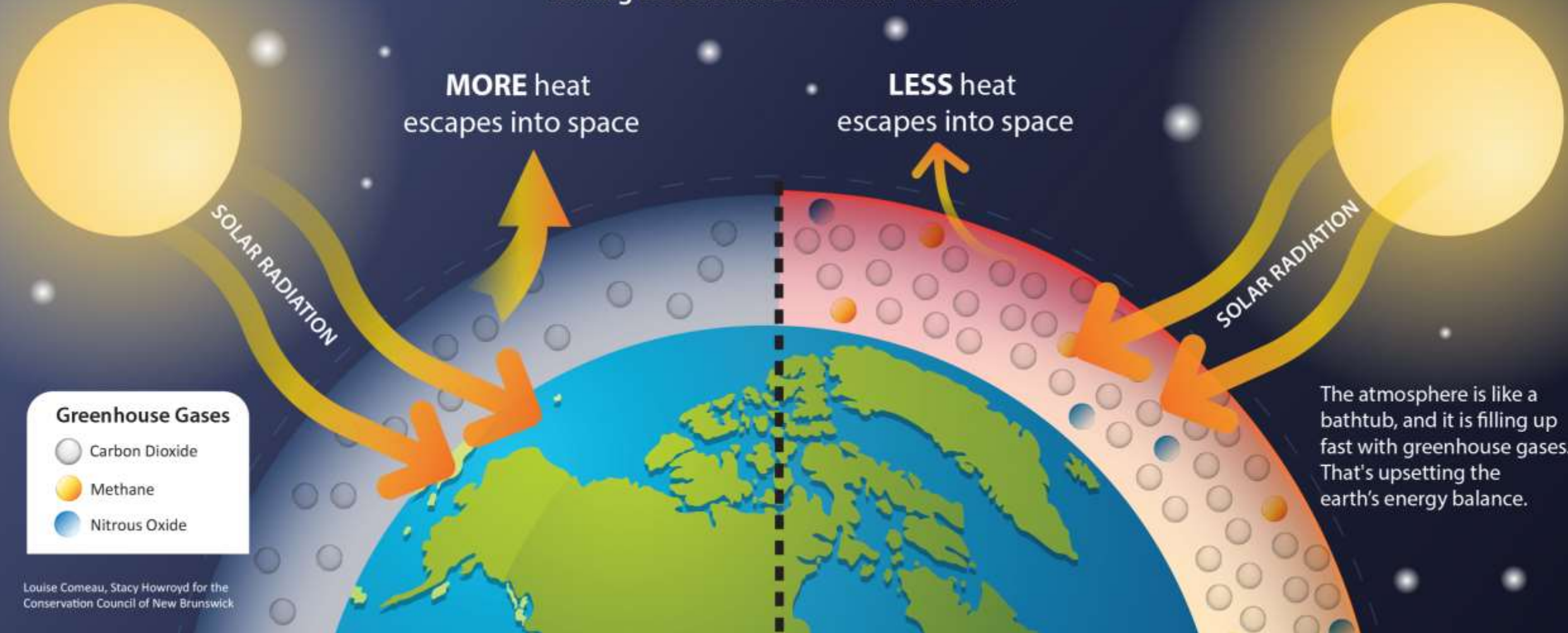
Climate change - WHAT?

Earth's Energy Balance

Less heat energy is escaping to space. It's like adding extra blankets around the Earth.

NATURAL
Greenhouse Effect

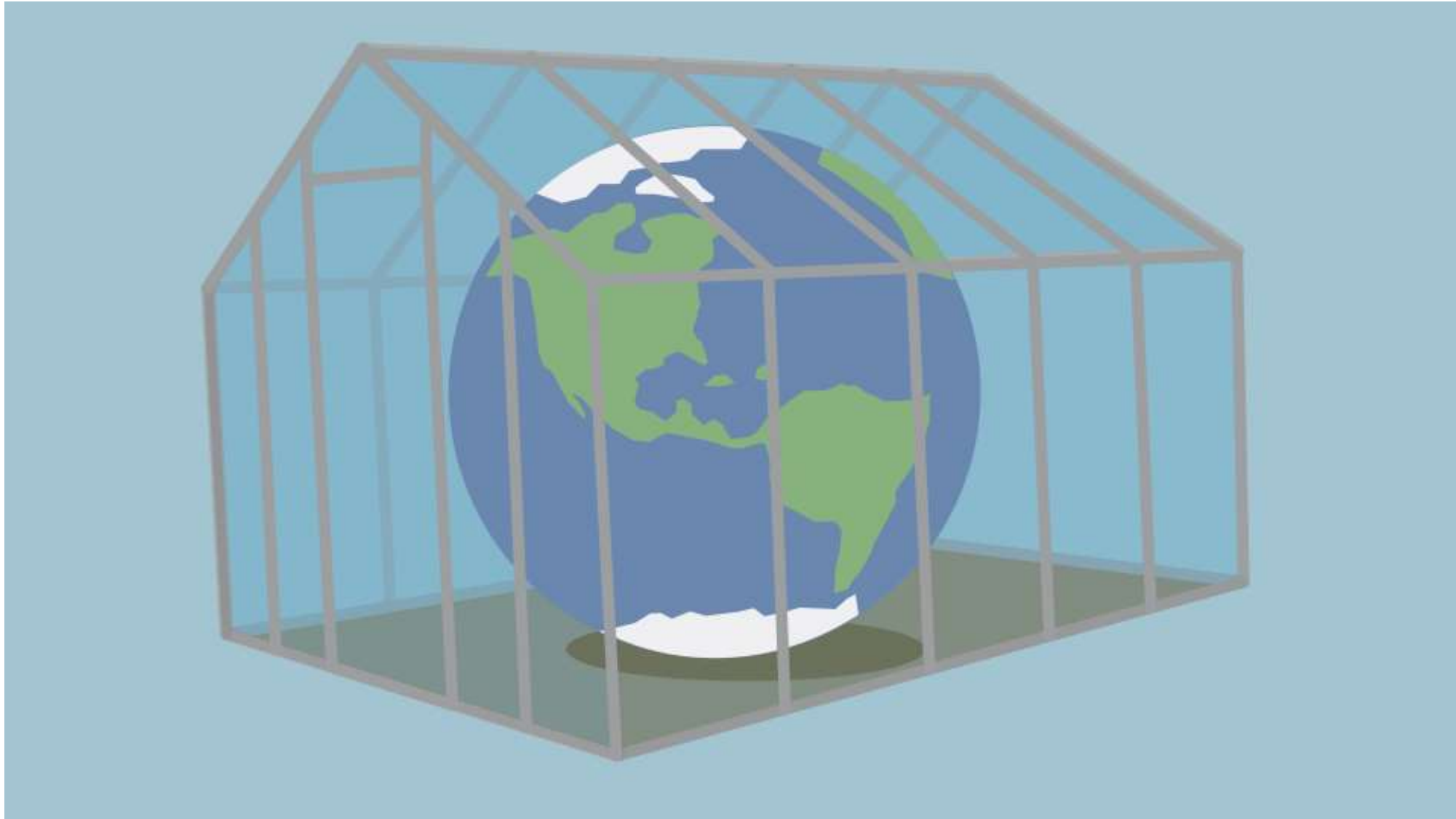
UNNATURAL
Greenhouse Effect



- Greenhouse Gases**
- Carbon Dioxide
 - Methane
 - Nitrous Oxide

Louise Comeau, Stacy Howroyd for the Conservation Council of New Brunswick

Climate change - WHAT?



Icelandic Act on climate change

- [Act on climate change nr. 70/2012:](#)

The objectives of this acts:

- a) to **reduce greenhouse gas emissions** in a cost-effective and efficient manner,
- b) to **increase the binding of carbon** from the atmosphere,
- c) to **promote adaptation to the consequences of climate change**, ...
- d) to create conditions for the government to meet Iceland's international commitments in climate matters...



Common, global challenge across countries, levels and sectors – no longer a question of if, rather how fast and how much...

c) The extent to which current and future generations will experience a hotter and different world depends on choices now and in the near-term

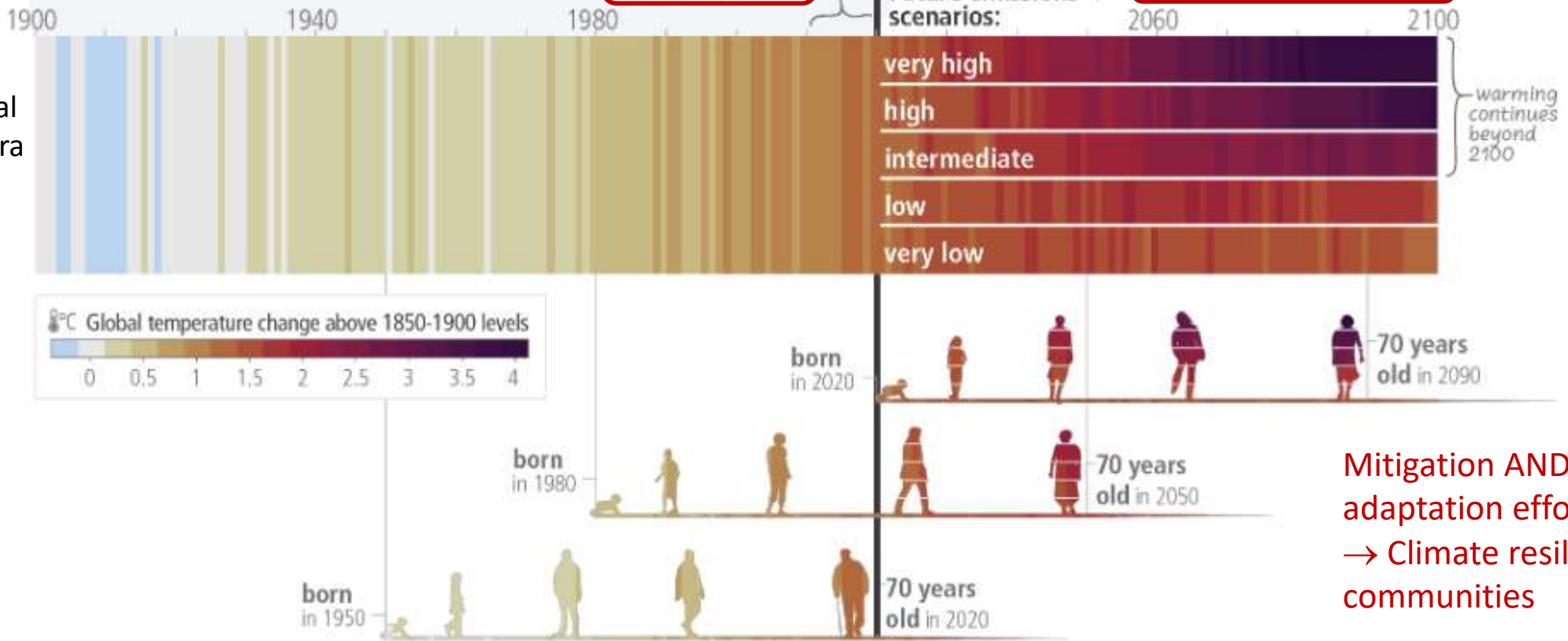
Shift to wellbeing economy?
→ Focus on the quality of growth for people and the planet, not just quantity

Narrow focus on GDP → un-sustainable economy

2011-2020 was around 1.1°C warmer than 1850-1900

2020

future experiences depend on how we address climate change



Mitigation AND adaptation efforts needed
→ **Climate resilient communities**

WHY this fuss about 1,1°C?



Louise Comeau, Stacy Howroyd for the
Conservation Council of New Brunswick

Fact sheet - Health

Climate change and human health and wellbeing: Risks and responses

CLIMATE HAZARDS, VULNERABILITY AND EXPOSURE		IMPACT AND RISKS	SOLUTIONS SPACE AND CLIMATE RESILIENT DEVELOPMENT PATHWAYS	
Vulnerability and upstream determinants of health outcomes	Exposure pathway	Example health outcomes	Health System Solution Space	Climate Resilient Development Pathways
Environmental factors Air pollution Biodiversity loss Deforestation Desertification Land degradation Land-use change Water pollution	Social factors 	Physical and mental health risks, displacement, forced migration, other context-specific risks	Environmentally sustainable and resilient technologies and infrastructure	Fully implementing climate-resilient health systems Achieving universal healthcare coverage Achieving net zero Greenhouse Gas Emissions from healthcare systems and services Achieving the Sustainable Development Goals Adopting mitigation policies and technologies with significant health co-benefits
Socioeconomic factors Growing inequity Demographic change Economic growth Migration and (im)mobility Urbanization Science and tech investment	Vector distribution and ecology 	Chikungunya, dengue, hantavirus, Lyme disease, malaria, Rift Valley, West Nile, Zika	Health information systems (includes integrated risk monitoring and early warning and response systems, vulnerability, capacity, and adaptation assessments, health component of national adaptation plans, health and climate research)	
	Nutrient dense diets and food safety 	Malnutrition, salmonella, foodborne diseases	Service delivery (includes climate-smart health programs, management of environmental determinants of health, disaster risk reduction)	
	Water quality and quantity 	Diarrheal diseases, campylobacteria infections, cholera, cryptosporidiosis, algal blooms	Collaborations with other sectors, agencies, and civil society	
	Air quality 	Exacerbated respiratory diseases, allergies, cardiovascular disease	Leadership and governance Coherent policies and strategies Sufficient health workforce	
Susceptibility Political commitment Social infrastructure Socioeconomic conditions Population health status Individual factors	Heat stress 	Heat-related illness and death, adverse pregnancy outcomes, lost worker productivity	Health authorities Strengthening health delivery and system resilience Leveraging climate change specific funding streams	
	Extreme weather events 	Injuries, fatalities, mental health effects		

Figure 1: Multiple socio-economic environmental factors interact with climate risks to shape human health and well-being. Achieving climate resilient development requires leveraging opportunities in the solution space within health systems and across other sectors. (Figure TS.8)



Co-benefits of tackling climate change and HP in cities?

Health and wellbeing is a result of complex interactions between individuals and their environment and conditions.

Rainbow model of Determinants of health was tailored to the Icelandic context (2019)



The UN Sustainable Development Goals and Determinants of Health and Well-being, Dahlgren and Whitehead (1991), adapted version by the Directorate of Health Iceland 2019 (3.0).

HUMAN AND PLANET HEALTH IS INSEPARABLE

