



Ocena tveganja in presoja vplivov na zdravje v zvezi z izpusti iz sosežigalnice odpadkov Anhovo

DP6 6.2.4

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Pri sežigu in sosežigu, odvisno od številnih dejavnikov: kemijska sestava odpadkov, ki se sežiga, način sežiganja, učinkovitosti čistilnih naprav, vsakokrat nastaja in se v ozračje sprošča mešanica strupenih snovi, med njimi tudi kancerogene:

- trdi (angl. particulate matter, PM) in ultrafini delci,
- dušikovi oksidi (NO_x),
- žveplov dioksid (SO₂),
- ogljikov monoksid (CO),
- dioksini in furani,
- policiklični aromatski ogljikovodiki (PAH-i),
- težke kovine: Pb, Cr, As, Ni, Cd, Hg
- radioaktivni izotopi.

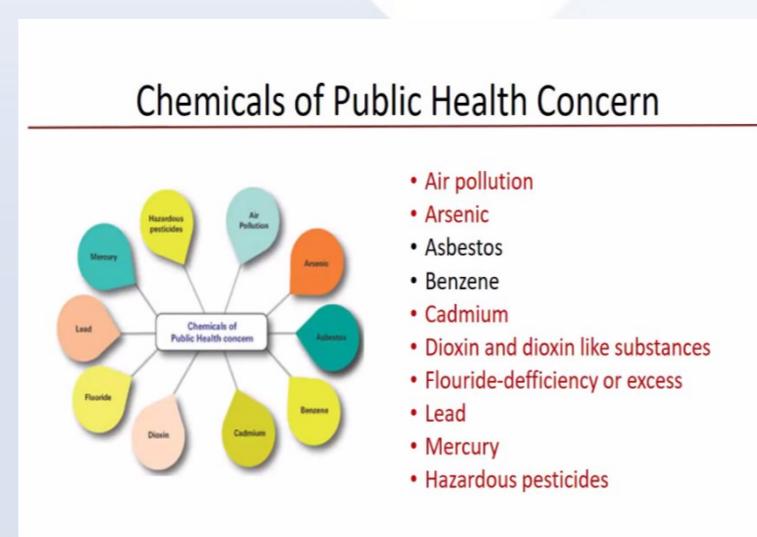
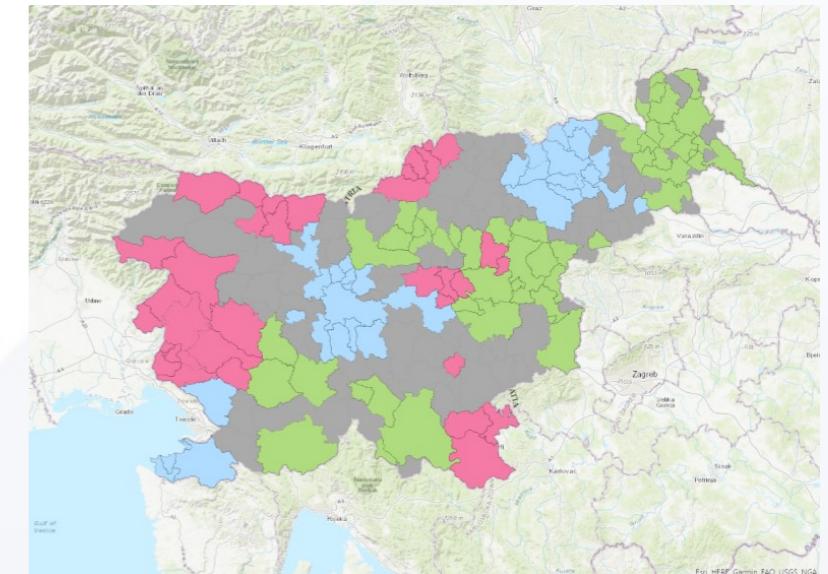
Vir: Poročilo in mnenje Zdravstvene podskupine Medsektorske delovne skupine glede možnosti izenačitve MEV sosežiga in sežiga v cementarni Salonit Anhovo, julij 2022

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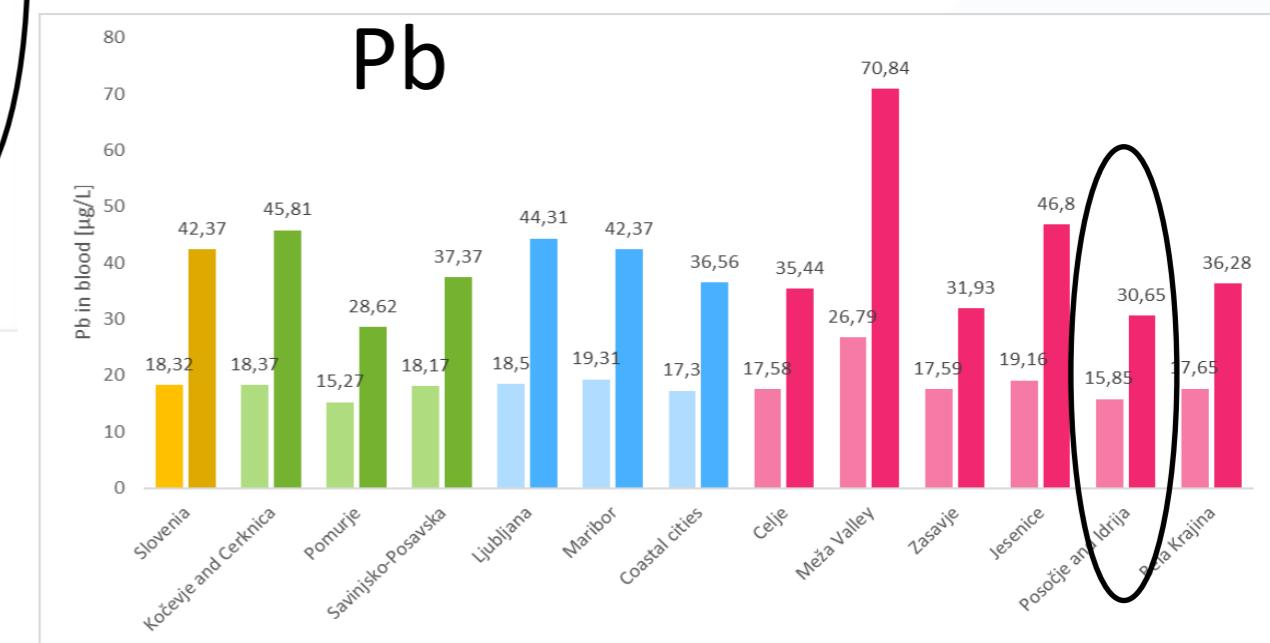
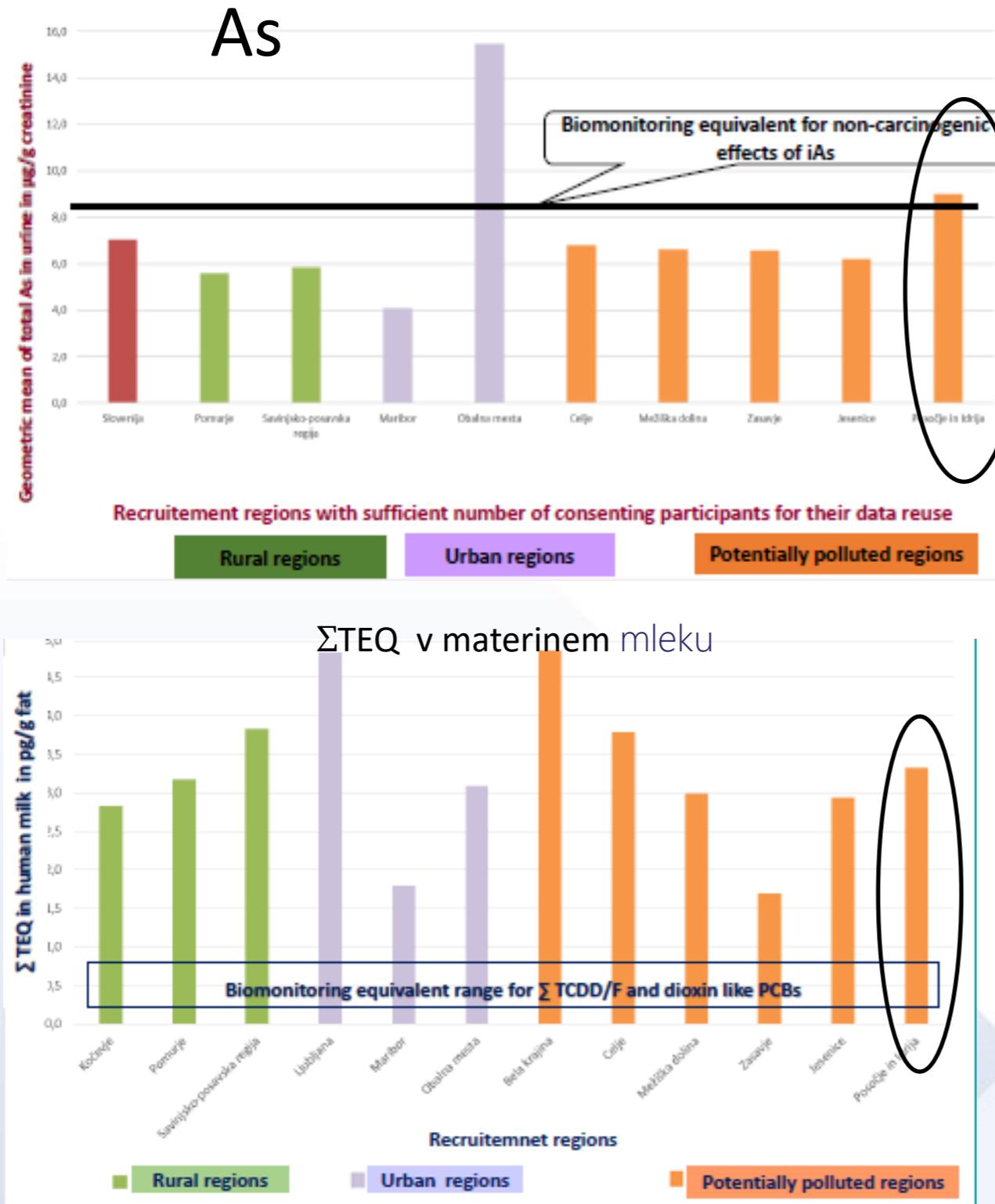
Za oceno tveganja imamo podatke iz HBM - humanega biomonitoringa

- nacionalna HBM I, odrasli 2007-2014
- HBM Prekmurje 2017 - 2019
- Nacionalni HBM 2008 – 2022

Rutinski podatki – drugi viri in dodatne meritve:
Okolje: zrak, voda, zemljine
HBM: težke kovine, PCB, PBDE, PAHs, ...



HBM - humani biomonitoring



GM in P95 Pb in blood, regije, Slovenija 2007 – 2014

concentrations of Σ TEQ PCDD, PCDF and dioxin like PCBs in human milk
in 12 regions of Slovenia from 2009–2014

Influence of waste co-incineration in a cement plant on cancer burden

PARC 6.2.4 case study

prof. Vesna ZADNIK, MD, PhD
Epidemiology and Cancer registry
Institute of Oncology Ljubljana

- Routine data & additional sampling:
 - Environmental: air, water, soil
 - HBM: Heavy metals, PCB, PBDE, PAHs, ...
- National research project in course

Influence of waste co-incineration in a cement plant on cancer burden

EXPOSURE DATA

- CANCER
- incidence / mortality
- risk / PAF (population attributable fraction)
- population-based cancer registry
- sex, age, SES, cancer type
- cases geolocated to the coordinates



Influence of waste co-incineration in a cement plant on cancer burden

HEALTH OUTCOME

Part 1: Risk assessment for carcinogenic effects

- HBM data, HBM-GVs

Part 2: Geographical analysis

- Bayesian hierarchical modelling
- Small area mapping (polluted/non-polluted areas)
- CanMapTool

Influence of waste co-incineration in a cement plant on cancer burden

DESIGN

PARC 6.2.4 case study proposal

Title	Influence of waste co-incineration in a cement plant on cancer burden			
Leaders	Vesna Zadnik	vzadnik@onko-i.si	OI (Institute of Oncology Ljubljana)	Slovenia

Partners	Lucija Perharic	Lucija.Perharic@nijz.si	NIJZ	Slovenia	Exposure modelling
	Manca Ahacic	Manca.Ahacic@nijz.si	NIJZ	Slovenia	Exposure modelling

WE WELCOME ADDITIONAL PARTNERS

Influence of waste co-incineration in a cement plant on cancer burden

PARTNERS

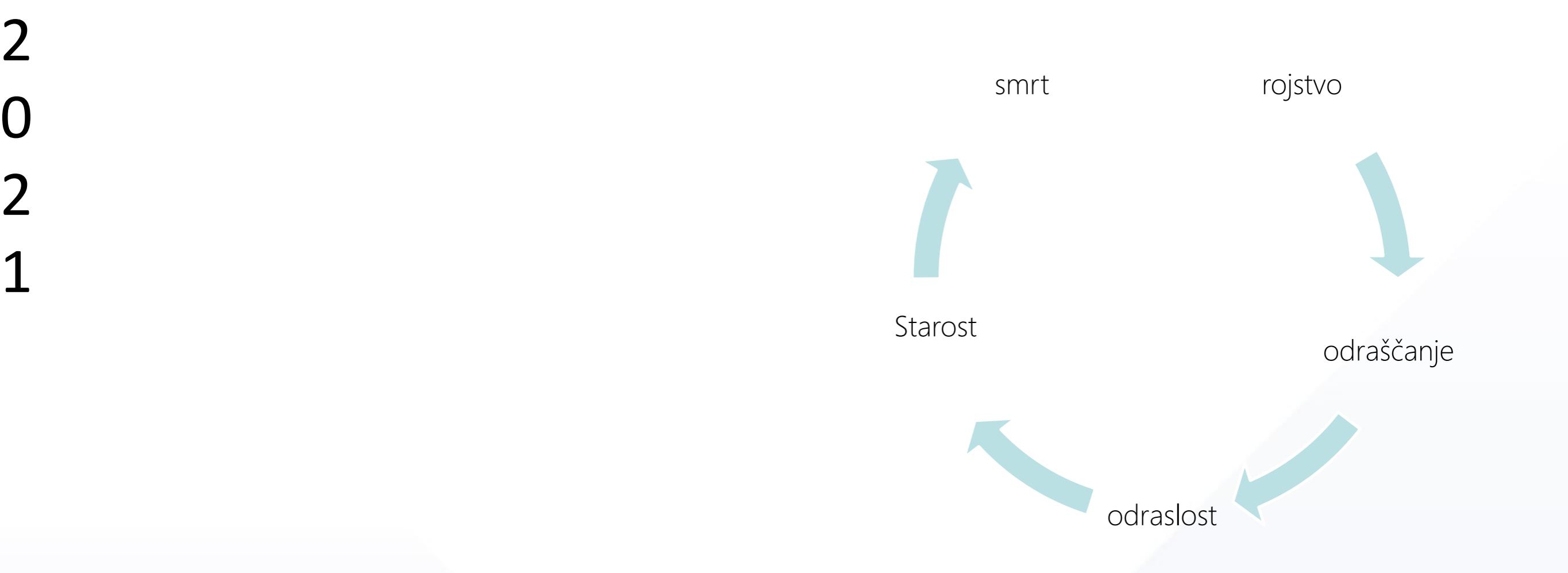
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odpadkov Anhovo

Dodatno še:

Breme bolezni merjeno z

DALY's: (Disability Adjusted Life Years) DALYs – the YLL death

Za regijo, ožjem področjem, po starosti, spolu



DALY

Disability Adjusted Life Year is a measure of overall disease burden, expressed as the cumulative number of years lost due to ill-health, disability or early death

= YLD
Years Lived with Disability

+ YLL
Years of Life Lost



Healthy life



Disease or Disability

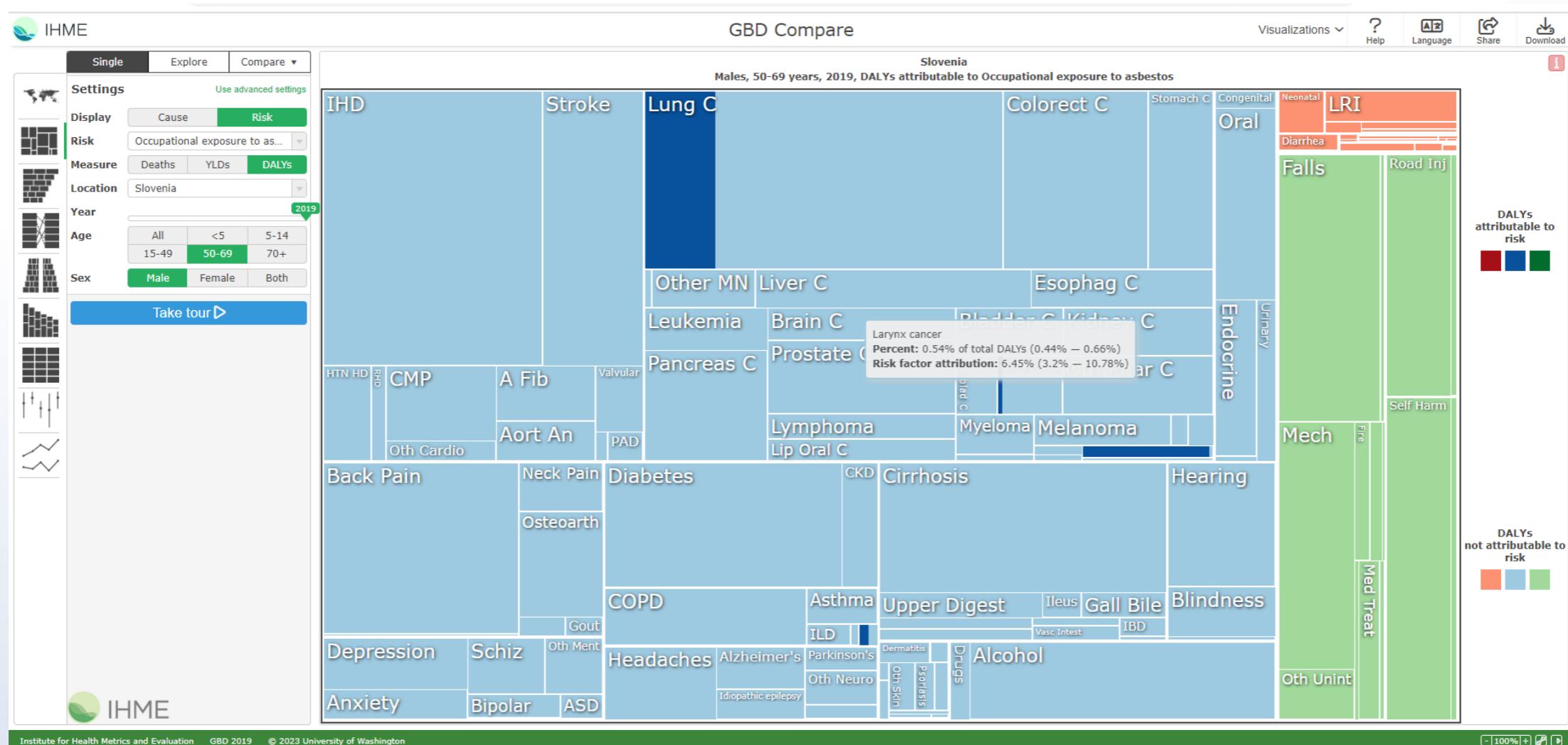


Early death

Expected life years

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Breme bolezni DALY's, larinks,moški, starostna skupina 50 -69 let,
Slovenija, 2019



Ocena tveganja in presoja vplivov na zdravje v zvezi z izpusti iz sosežigalnice odpadkov Anhovo

Breme bolezni DALY's, mezoteliom, moški, starostna skupina 50 -69 let,
Slovenija, 2019

