



science and policy
for a healthy future

Evropska inicijativa za humani biomonitoring in projekt HBM4EU

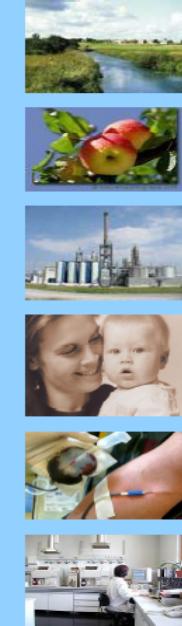
Nacionalni posvet

1. junij 2017

Reaktorski center Podgorica

Lijana Kononenko

Evropska inicijativa za humani biomonitoring - EHBMI



European Commission

European Human Biomonitoring

Support to the
EU Environment & Health Action Plan 2004 – 2010
COM(2004)416 final
Contract no. SSPE-2005-022580

funded by the European Commission (Directorate-General Research)
under the 6th Framework Programme for Research and
Technological Development in close cooperation with Directorate-
General Environment

ESBIO
Expert team to Support
BIOmonitoring in Europe

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- COPHES (Consortium to Perform Human Biomonitoring on a European Scale) funded by DG RTD
- DEMOCOPHES (DEMOstration of a study to COordinate and Perform Human biomonitoring on a European Scale co- funded by DG Environment through Life+ and the participating countries)
- ESBIO (Expert team to Support Biomonitoring in Europe) and COPHES
- “the development of a coherent approach to HBM in Europe in close cooperation with the Member States” (Commission of the European Communities, 2003)

EHBMI - srečanja iniciative



European Conference on Human Biomonitoring
From the use of human biomarkers to human biomonitoring

November 4-5, 2008

Conference organised under the auspices of the
French Presidency of the EU Council

EPHmodern, Brussels 8-10 November 2010
Environment and Public Health in Modern Society
Second European Conference

hosted by the European Union, and taking place at the end of the Environment & Health Action Plan 2004-2010 (EHAP) of the European Commission.

with support & under the Belgian Presidency of the Council of the European Union

**From HUMAN BIOMONITORING to European and national policies: meeting the MS representatives
Paris, 17 September, 2012**

**“Human Biomonitoring: Linking Environment to Health and Supporting Policy”
Larnaca, October 22-25, 2012**



From human biomonitoring to policy:
a sustainable ‘marriage’ between health and environment

EHBMI – nadaljevanje in rezultati aktivnosti

2014

- „Letter addressed to the heads of DG RESEARCH, DG ENV and DG SANCO - European Commission“ (Support for the coordination of European Activities on Human Biomonitoring)
 - Drž. sekretarka MZ Nina Pirnat podpisala pismo podpore, oblikovano v EU iniciativi, za namen pošiljanja nacionalne politične podpore Komisiji

2015

- Povabilo k imenovanju treh nacionalnih predstavnikov v koordinacijsko skupino - Steering Group „European Human Biomonitoring Initiative“ (SG EHBMI)
- Sledilo je pet srečanj SG EHBMI v teku leta (zadnje konec januarja 2016)
- 14. oktobra 2015 objavljen razpis Evropske komisije na področju programa Obzorje 2020, št. H2020-SC1-2016-2017, EHBMI - SC1-PM-05-2016, zaprtje 13. aprila 2016

2016

- Februarja pripravljen osnutek EHBMI programa in organizacijska struktura projekta, marca skupna končna verzija za prijavo, sodelovalo je 27 držav
- Uspešno izvedena prijava, prestan postopek validacije projekta in vseh udeležencev s strani Komisije
- iz Slovenije: podpisnika Grant Agreementa NIJZ in IJS, kot tretji osebi sodelujeta NLZOH in URSK (obenem lastnik programa skupaj z ARRS in mora zagotavljati sredstva lastne udeležbe v projektu)

HBM4EU - Cilji

- Premostiti vrzel med znanostjo in politiko
- Odgovoriti na pomembna vprašanja politike
- Spremljati učinkovitost obstoječih politik
- Izboljšati oceno tveganja za kemikalije
- Pripraviti evidence o izpostavljenosti ljudi kemikalijam
- Razumeti vplive kemikalij na zdravje
- Omogočiti dostop do evidenc skozi vozlišče znanja (Knowledge Hub)
- Omogočiti dostop do podatkov biomonitoringa preko IPCHEM

HBM4EU - Časovni okvir in proračun

5-letni projekt: **1. januar 2017 do 31. december 2021**

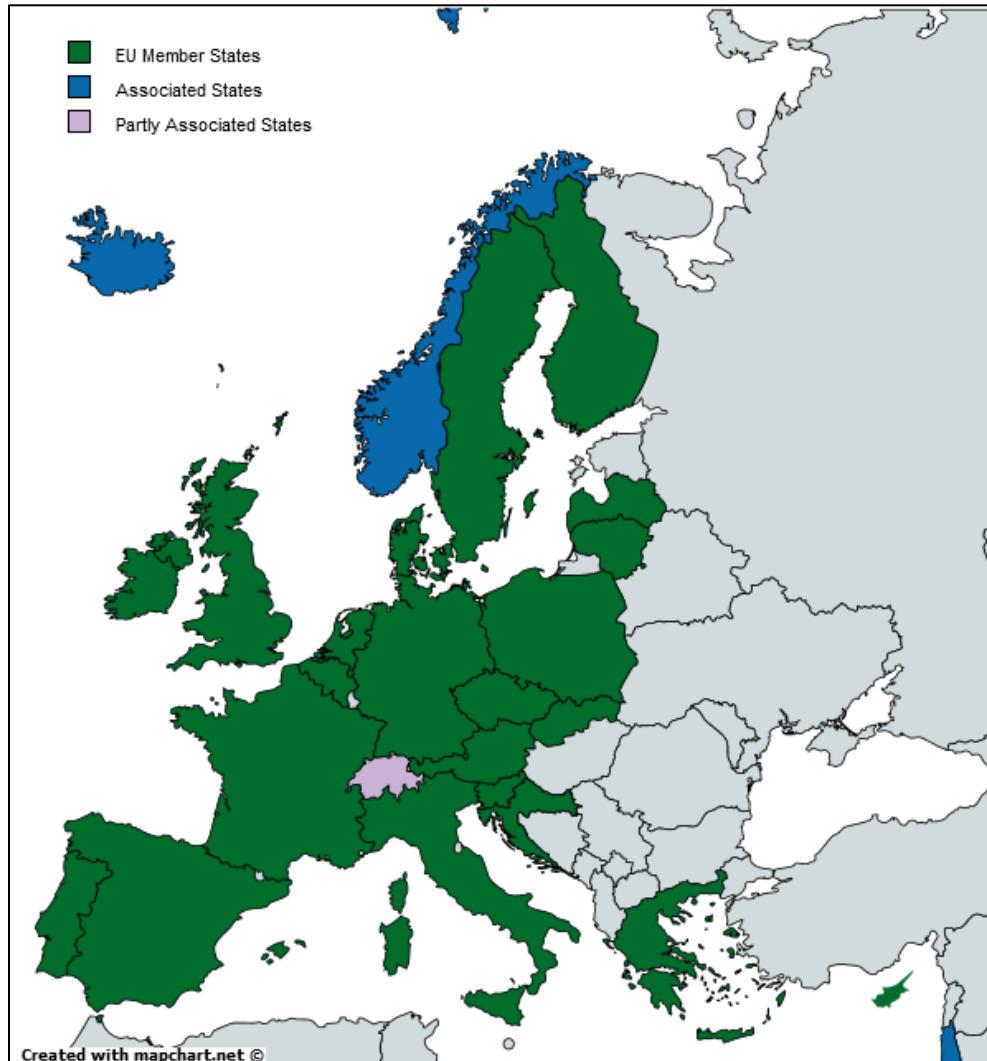
Finančno orodje: Horizon 2020, European Joint Programme Cofund

- Povračilo stroškov s strani EK 70%
- Sofinanciranje s strani partnerjev (lastna udeležba) 30%

Celotni stroški: 74 milj. EUR

Znesek povračil: največ 50 milj. EUR

Konzorcij - partnerji

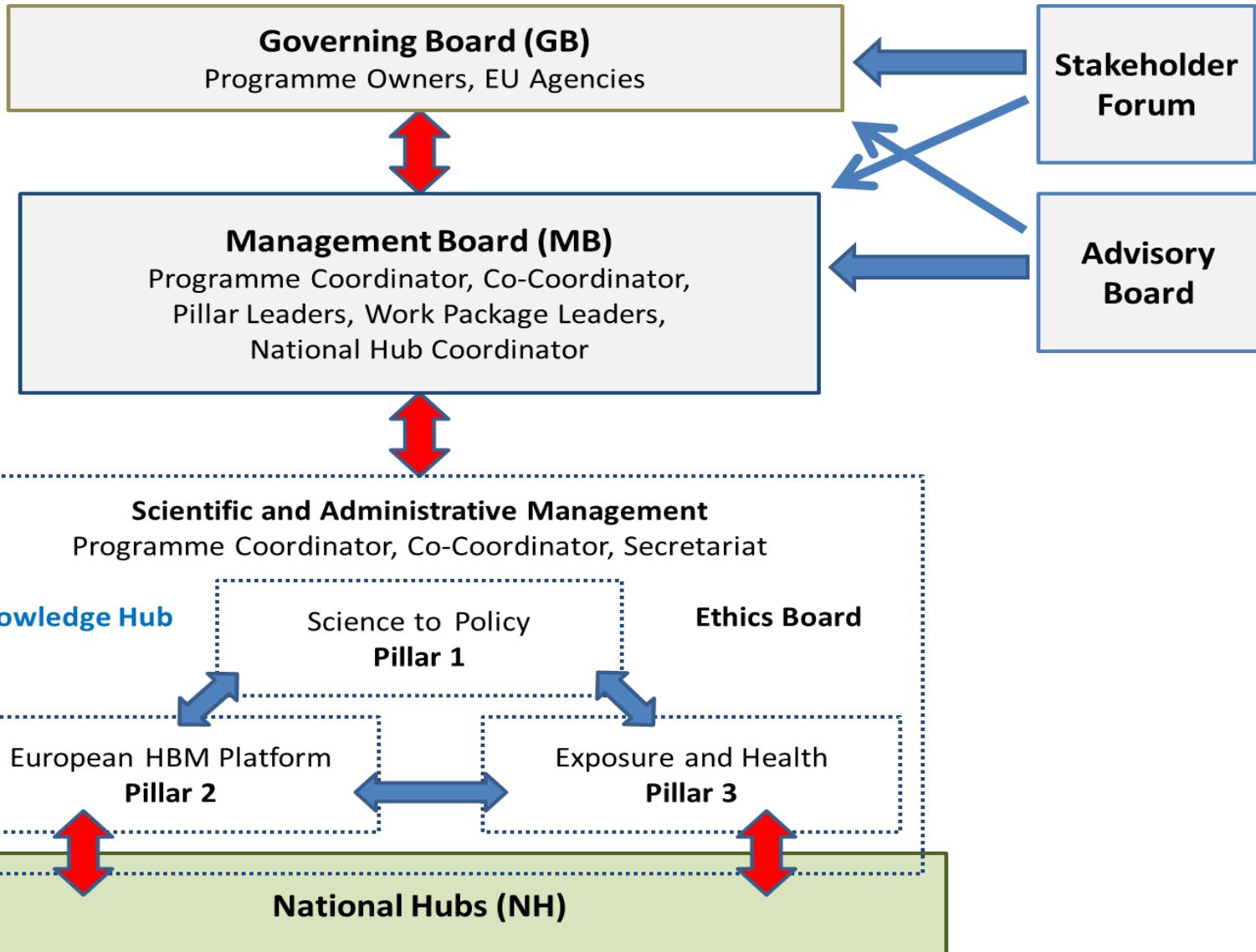


26 držav in Evropska agencija za okolje

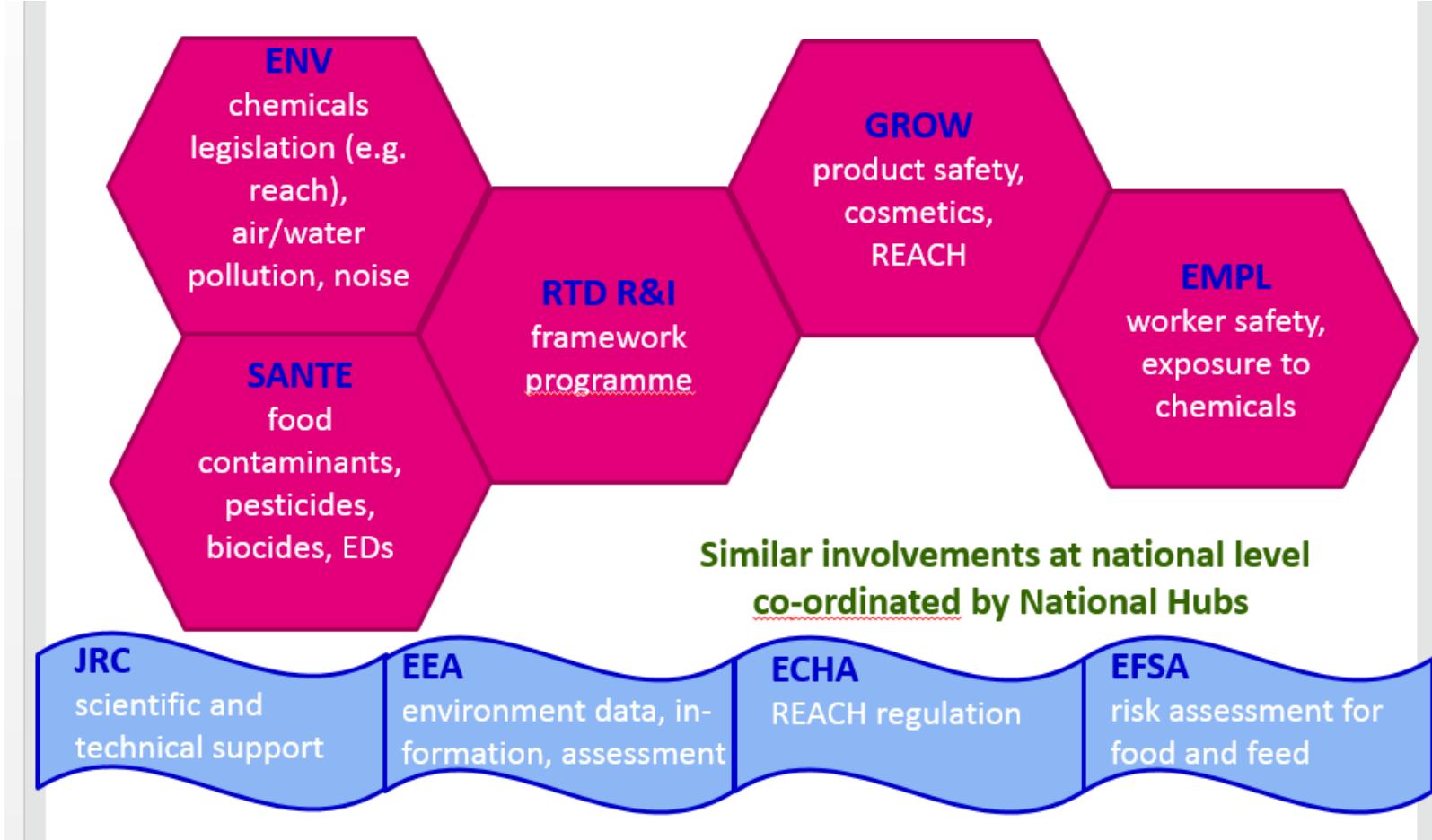
- 22 držav članic EU
- 3 pridružene (associated countries): Islandija, Izrael, Norveška
- Švica (delno pridružena)

HBM4EU struktura vodenja

Decision making

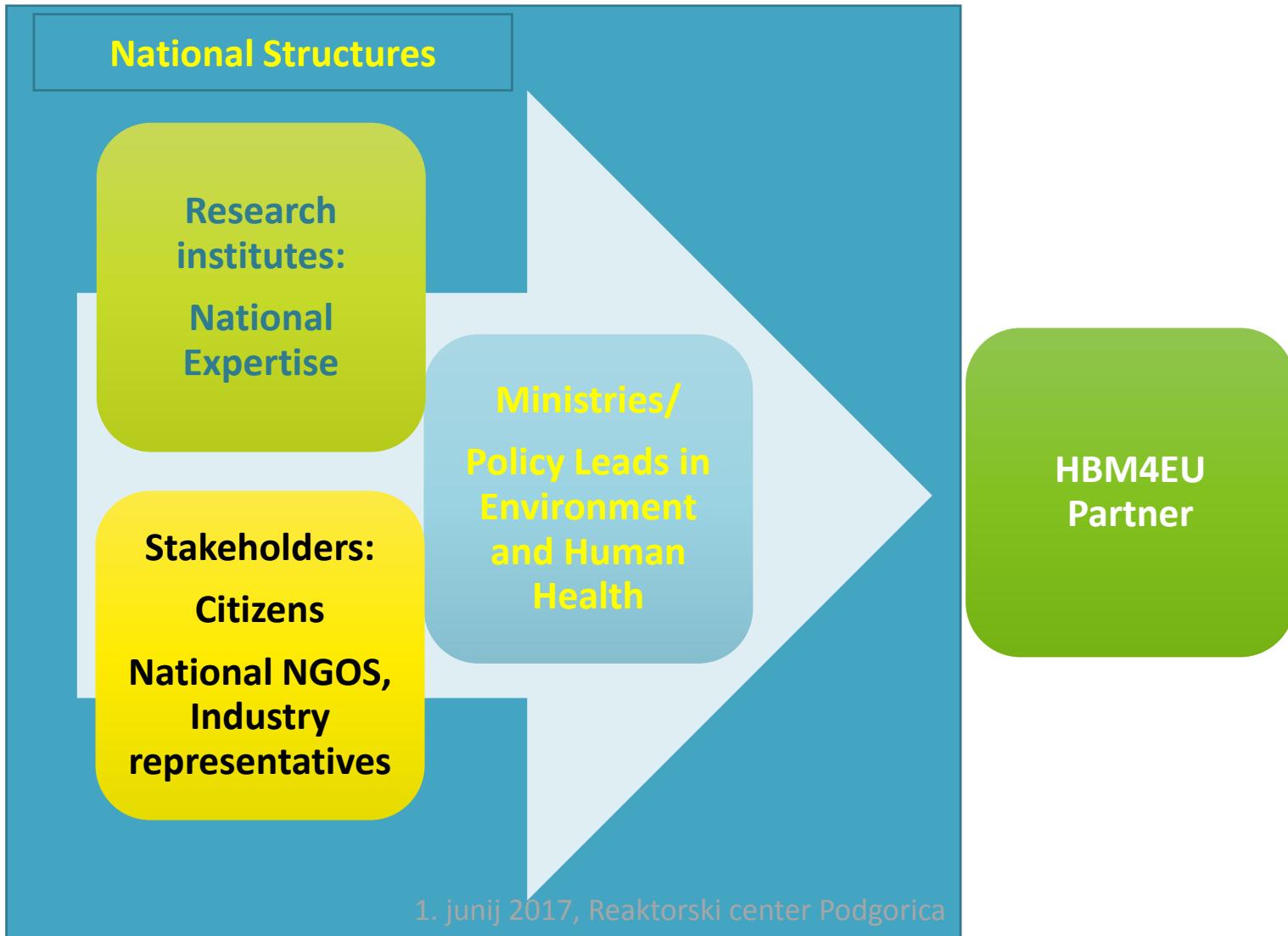


EU Policy Board



Nacionalna vozlišča - National Hubs

Support and Resource for HBM4EU



National Hubs

Vloga: posredniki med HBM4EU in nacionalnimi partnerji ter deležniki.

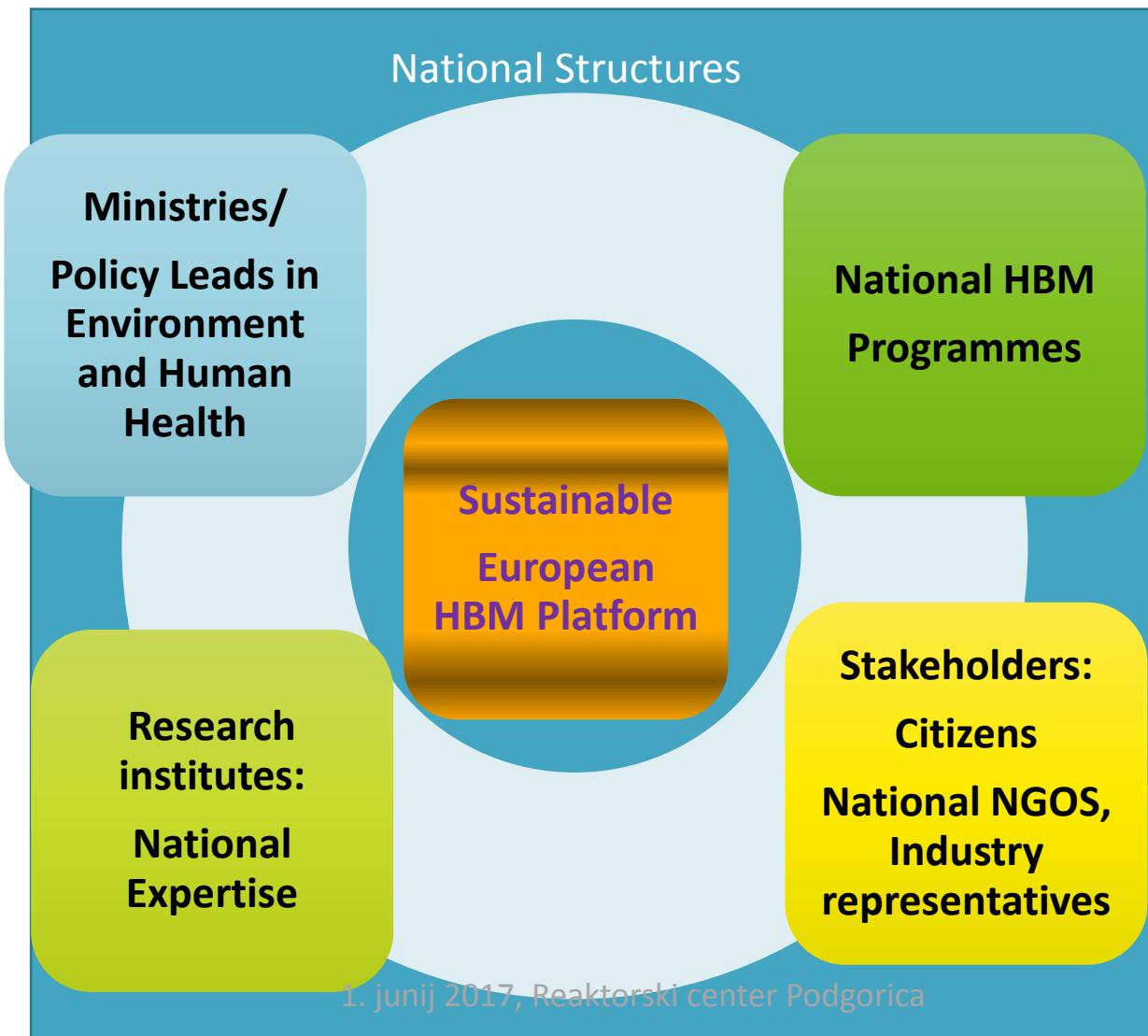
Naloge:

- vključenost v vse vidike delovnega programa
- sodelovanje z zainteresiranimi stranmi in s splošno javnostjo v okviru programa, da se zagotovi verodostojnost, odgovornost in legitimnost vseh dejavnosti in rezultatov
- ukrepanje na področju nacionalnih potreb kot npr. prednostnih kemikalij s pomočjo HBM4EU
- spodbujanje izradnje zmogljivosti na nacionalni ravni s programi usposabljanja in izmenjav

Rezultati:

- Temelji za trajnostno pan-Evropsko HBM platformo, izgrajeno na nacionalnih vozliščih in na obstoječi ekspertizi

National Hubs - osnova za prihodnjo platformo HBM4EU



HBM4EU aktivnosti

Pillar 1: Science to Policy

WP4: Prioritisation and input to the annual work plan

WP5: Translation of results into policy

WP6: Sustainability and capacity building

Pillar 2: European HBM Platform

WP7: Survey design and fieldwork preparation

WP8: Targeted field work surveys and alignment at EU level

WP9: Laboratory analysis and quality assurance

WP10: Data management and analysis

Pillar 3: Exposure and Health

WP11: Linking HBM, health surveys, and registers

WP12: From HBM to exposure

WP13: Establishing exposure health relationships

WP14: Effect Biomarkers

WP15: Mixtures, HBM and human health risks

WP16: Emerging Chemicals

WP3: Internal Calls

WP2: Knowledge Hub

WP1: Programme management and coordination

Pillar 1: Science to policy

WP4 Prioritisation

- Identifying policy relevant substances for research activities
- Developing annual work plans

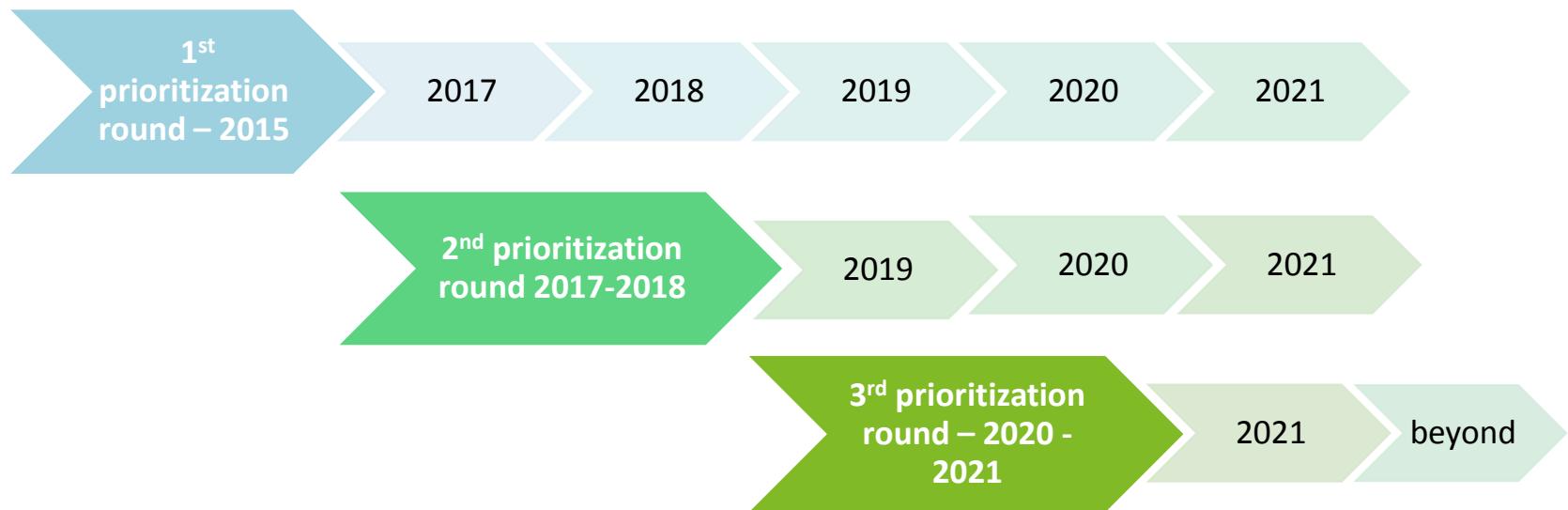
WP5 Translating results into policy

- Establishing health-based HBM values
- Use of HBM data in chemical risk assessment
- Translating results into policy recommendations

WP6 Sustainability and capacity building

- Lay the groundwork for a sustainable European HBM initiative post 2021
- Establish shared HBM programmes across partner countries

Prioritisation of substances



1st list of priority substances

Substance	Exposure routes	Policy relevance
Phthalates and DINCH	Consumer products	REACH, NOTES
Poly/per-fluorinated compounds	Consumer products, via environment, diet	REACH, Stockholm Convention, Food Contact Materials, NOTES
Bisphenol A, S and F	Consumer products, diet	REACH, NOTES
Brominated and organophosphate flame retardants	Consumer products	REACH, Stockholm Convention, NOTES
Poly aromatic hydrocarbons	Urban air	NEC Directive, Long Range Transboundary Air Pollution Convention, REACH, NOTES
Cadmium and chromium VI	Occupational exposure, environmental exposure, diet, smoking (Ca)	REACH, Water Framework Directive, Drinking Water Directive, NOTES
Aniline derivatives	Occupational exposure	REACH authorisation list
Mixtures	Multiple exposure routes	2012 Communication on combination effects, risk assessment of mixtures
Emerging substances	Multiple exposure routes	NOTES

Kako poteka prioritizacija snovi - postopno določanje in zapolnjevanje vrzeli



Pillar 2: European HBM Platform

WP7

Survey design

- Map existing HBM data and identify gaps
- Develop harmonized surveys
- Protocols for biobanking and sample exchange

WP8

Targeted fieldwork surveys

- Aligning current studies, where feasible
- New targeted surveys
- Analysis of biobanked samples

WP9

Lab analysis and quality assurance

- Harmonised analysis of biomarkers
- Networks of laboratories
- Quality assurance and quality control
- Develop new analytical methods

WP10

Data management and analysis

- Consistent procedures for data management and statistical analysis
- Derive EU-wide reference exposure values
- Make HBM data available via IPCHEM

IPCheM

IPCheM - informacijska platforma za spremljanje kemikalij je enotna vstopna točka za iskanje podatkov o spremljanju kemikalij in dajanje teh na razpolago za vrsto uporabnikov: Evropsko komisijo, evropske agencije, države članice, mednarodne in nacionalne organizacije in raziskovalce.

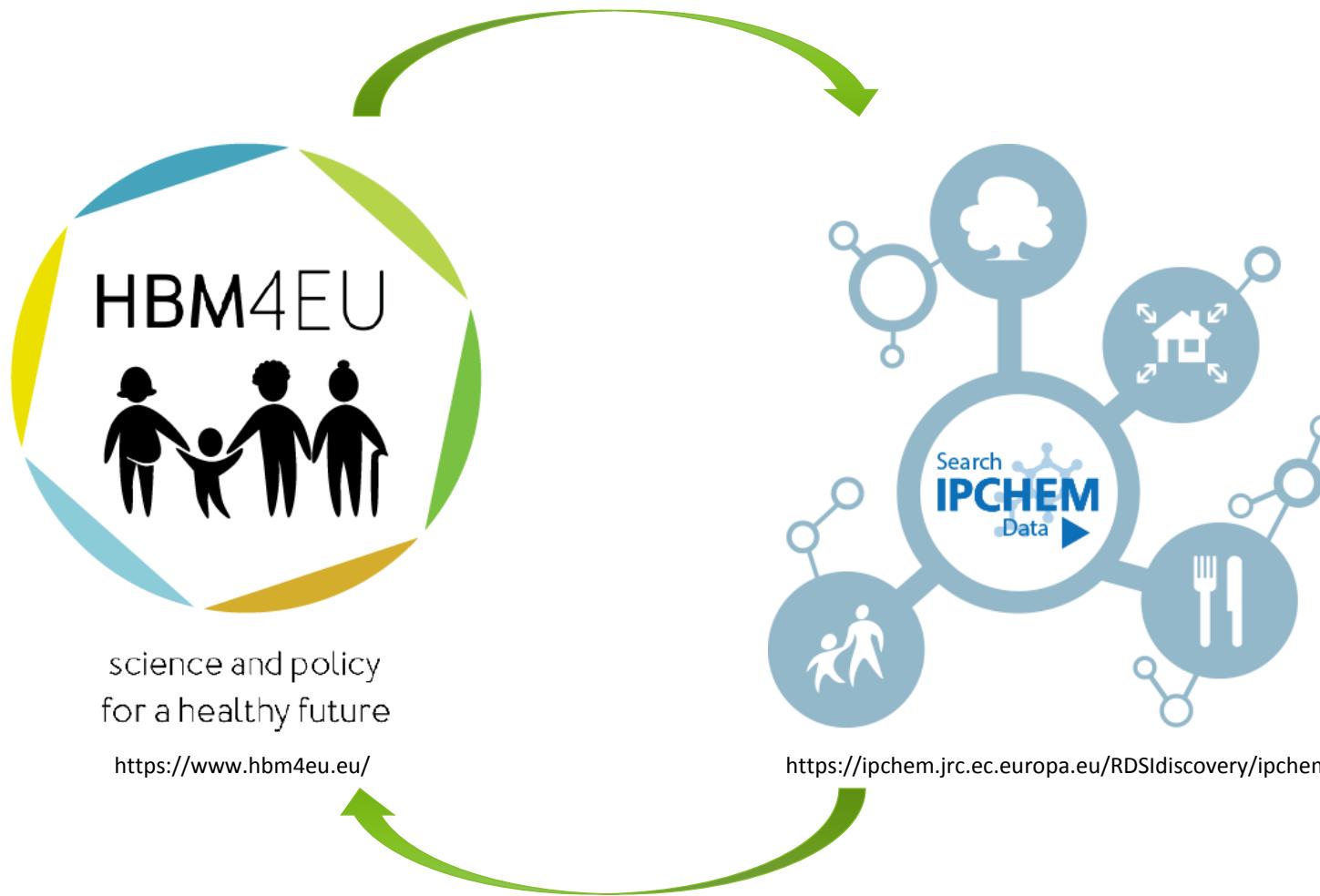
Namen platforme je podpora za bolj usklajen pristop k zbiranju, shranjevanju in dostopanju do podatkov s področja spremljanja kemikalij (snovi in zmesi) v ljudeh in v okolju.

IPCheM je decentraliziran sistem, ki zagotavlja oddaljen dostop do obstoječih informacijskih sistemov in dajalcev podatkov.

IPCheM je strukturiran v štirih modulih glede na vrsto kemijskega monitoringa, za upravljanje katerih je pristojnih več EU institucij:

- **Module on Human Bio-Monitoring (EEA)**
- **Module on Environmental Monitoring (EEA)**
- **Module on Food and Feed (EFSA)**
- **Module on Product and In-Door Air (JRC Institute for Health and Consumer Protection)**

Sinergije med HBM4EU in IPCHEM



1. junij 2017, Reaktorski center Podgorica

Sinergije med HBM4EU in IPCHEM

Humani biomonitoring:

- omogoča, da zajamemo odtis kombinacije izpostavljenosti kemikalijam pri ljudeh in njenem spremenjanju v prostoru in času;
- v kombinaciji z zdravstvenimi podatki nam pomaga razumeti tveganja za zdravje zaradi izpostavljenosti kemikalijam.

IPCheM:

- omogoča uporabniku neposredno in po meri povezavo do zbirke podatkov.
- ponudniki podatkov ohranijo strukturo njihove baze podatkov, hkrati pa je ta na voljo za iskanje in branje podatkov skozi edinstven vmesnik.

Ta nam omogoča širšo uporabo dragocenih podatkov spremeljanja kemikalij in s tem krepitev baze znanja za upravljanje nevarnosti kemikalij in komuniciranje.

Združevanje informacij o kemikalijah, prisotnih v različnih medijih okolja, potrošniških izdelkih, hrani in krmi ter v človeških tkivih in tekočinah, nam omogoča ustvarjanje zemljevida kombinirane izpostavljenosti kemikalijam in ugotavljanju, kako človeško telo privzema kemikalije.

Pillar 3: Exposure and health research issues



Pillar 3: Exposure and health

WP11

Linking HBM with
health information

- Link HBM data to health surveys
- Evaluate potential for the use of biological samples
- Provide tools for assessing correlations between chemical exposure and health outcomes

WP12

From HBM to
exposure

- Determine levels of external exposure to priority chemicals, including those above HBM values
- Assess regulatory thresholds
- Determine exposure routes
- Refine toxicokinetic modelling

WP13

Establish exposure-
health relationships

- Collect data on Adverse Outcome Pathways
- Investigate the connection between exposure and health
- Identify knowledge gaps in exposure-health relationships
- Link toxicity pathways with adverse outcome pathways

Pillar 3: Exposure and health

WP14

Effect biomarkers

- Identify biomarkers of effect for priority substances, linked to AOPs
- Apply biomarkers of effect to large scale HBM surveys
- Develop new biomarkers of effect, where needed

WP15

Mixtures, HBM and human health risks

- Develop indicators to describe exposure to mixtures
- Use HBM data to identify real-life exposure patterns for mixtures
- Develop methods to assess associated health risks

WP16

Emerging chemicals

- Create an inventory of known emerging substances
- Develop suspect screening analytical methods
- Develop methods for untargeted screening
- Identify emerging substances of concern in humans



REPUBLIKA SLOVENIJA
MINISTRSTVO ZA ZDRAVJE
URAD REPUBLIKE SLOVENIJE ZA KEMIKALIJE



biomonitoring



science and policy
for a healthy future

Hvala za pozornost!



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