

Group 2 National Hub Template (HBM data for policy development)

Group Leader: Tamar Berman ([Tamar.berman@moh.health.gov.il](mailto:Tamar.berman@moh.health.gov.il))

Ministry of Health, Jerusalem (MOH-IL)

Name and email of National Hub Author: Nataša Janev Holcer; [natasa.janev@hzjz.hr](mailto:natasa.janev@hzjz.hr); Croatian Institute of Public Health- Croatia;

<b>Introduction:</b>	
Background information on the evolution and status of HBM in your country.	<p>In Croatia, Human Biomonitoring Program (HBM) is not established at a national level. Existing data from previous studies on human exposure are inconsistent and continuous as they have been conducted in some Croatian counties, not on national level and show the results of these individual studies (1,2,3,4,5,6).</p> <p>Even the Croatia was not among 17 European countries were in 2011 and 2012, the COPHES/DEMOCOPHES twin projects performed the first ever harmonized human biomonitoring survey, Institute for Medical Research and Occupational Health (IMROH), was adhoc member in COPHES and advisory partner in DEMOCOPHES project (7).</p> <p>Croatian Institute of Public Health (CIPH) recognizes the need to have the data comparable with other studies implemented in the EU. Data collection is necessary to characterize the distribution of exposure levels among the population and to obtain the most representative data for specific areas with different kinds of expected environmental impacts.</p>
<b>Main text - Results and Discussion</b> <b>ENSURE YOUR NARRATIVES ARE REFERENCED AS FAR AS POSSIBLE</b>	
<ul style="list-style-type: none"> <li>Description of HBM programme if it exists e.g. implementation of a HBM module into HES or development of a standalone HBM programme.</li> </ul>	<p>In Croatia implementation of a HBM module into HES implementation of a HBM module into HES do not exists. There is intention of development of a standalone HBM programme on national level through incorporation into certain strategies of these ministries and implementation.</p>
<ul style="list-style-type: none"> <li>Examples of HBM data for policy development. Please specify chemicals or chemical groups.</li> </ul>	<p>Arsenic: Groundwater in Eastern Croatia contains elevated concentrations of inorganic arsenic. The biggest well field in the area has an average arsenic concentration of 200 µg/L and it supplies the population of around 200,000 people with drinking water. Croatian Regulation has adopted guidelines from the European Council Directive for the maximum concentration limit of 10 µg/L of As in drinking water. However, it has been estimated that almost 120,000 people drink water from that well field with a concentration of arsenic over 10 µg/L. To reduce the health risks associated with arsenic contaminated water intake in Eastern Croatia it is important to develop proper strategies that will use one of the following technologies for arsenic removal: oxidation, coagulation-flocculation, adsorption, ion exchange or membrane technologies.</p>

<ul style="list-style-type: none"> <li>• Describe which ministries (Environment, Health etc.)/policy makers and stakeholders involved in /steering/financing the HBM programme.</li> <li>• Describe steps/processes used in involving policy makers.</li> <li>• Is HBM included in their business/strategic/action plan.</li> <li>• State which ministry is HBM data reported to or its being utilized.</li> </ul>	<ul style="list-style-type: none"> <li>• Ministry of Health (8), Ministry of Economy and Sustainable Development (9) which decision determines the acts of strategic planning related to the conditions that enable the implementation of European Union funds in the period from 2021 to 2027, the deadlines for their adoption and the bodies in charge of their preparation, Ministry of Interior.</li> <li>• Steps/processes used in involving policy makers included appointments of key policy makers from ministries and the organization of meetings during each year. The members were also presented with the results of previous activities.</li> <li>• HBM is included in ministries strategic plan, but no funding is currently provided.</li> <li>• Ministry of Health is ministry to which HBM data will be reported.</li> </ul>
<ul style="list-style-type: none"> <li>• Describe barriers e.g funding; challenges e.g. participant recruitment; opportunities e.g. enhancing cross government working and linking of env data with exposure measurements currently at play in your country with regards to HBM.</li> <li>• Have any of these barriers been addressed by HBM4EU? If yes - describe.</li> </ul>	<ul style="list-style-type: none"> <li>• Recognised barriers: enhancing cross government working and linking of env data with exposure measurements currently at play in Croatia regards to HBM.</li> <li>• Two members of National Hub changed position and moved to new position</li> <li>• Lack of their active involvement in process</li> <li>• Opportunities: participants and the general population showed an interest in participating in those types of research, also there were interested in results.</li> </ul>
<ul style="list-style-type: none"> <li>• Elaborate on issues which propelled the HBM data of choice e.g. disaster, pollution, incidence/prevalence of a health-related issue</li> </ul>	<p>At the moment in Croatia is third round of consultations through Ministry of Economy and Sustainable Development (still working document). Document name: Climate change adaptation action plan through: Strengthening the capacity of key existing public health laboratories towards human biomonitoring, with the aim of integrating epidemiological data with the results of analyses in environmental and human samples (hair, serum, urine, etc.); Strengthening the capacity to assess human exposure and exposure to environmental factors related to climate change.</p> <p>The purpose of the measure is to expand the capacity of institutions with existing (human, analytical, spatial) foundations for a scientific approach by increasing the knowledge base and bioindicators related to the impact of climate change on health</p>
<p>Future plans -</p> <ul style="list-style-type: none"> <li>• Are there plans to increase the use of HBM data in the future for</li> </ul>	<ul style="list-style-type: none"> <li>• Yes, there are plans to increase the use of HBM data</li> <li>• Data from HBM4EU will be used to inform general population but also to inform above mentioned</li> </ul>

<p>policy give clear examples.</p> <ul style="list-style-type: none"> <li>• Will the data from HBM4EU be used?</li> <li>• Has HBM4EU re-enforced the need for a National programme?</li> <li>• What are your future plans?</li> <li>• Do you think PARC will be crucial to the development of your HBM programme?</li> </ul>	<p>ministries of importance of those data and hopefully reenforcement the need for the national program</p> <ul style="list-style-type: none"> <li>• Our future plans are to insists on implementation of measures which are incorporated in documents</li> <li>• PARC will not be crucial to the development of Croatian HBM programme, but definitely will significantly contribute to the development</li> </ul>
--	---

### References:

1. Capak K, Janev Holcer N, Jeličić P, Šekerija M, Jurasović J, Bucić L, Benutić A, Trumbetić I, Čukelj P. Implementation of human biomonitoring survey of prenatal exposure to mercury in two Croatian regions using the standardized WHO methodology. Zagreb: Croatian Institute of Public Health, 2017.
2. Miklavčić A, Casetta A, Snoj Tratnik j, Mazej D, Krsnik M, Mariuz M, Sofianou K, Špirić Z, Barbone F, Horvat M. Mercury, arsenic and selenium exposure levels in relation to fish consumption in the Mediterranean area. Environmental Research. 2013; 120: 7-17.
3. Janev Holcer N, Maričević M, Miočić-Juran A. The use of mercury-ased metric devices across Croatian healthcare facilities. Arhiv za higijenu rada i toksikologiju. 2012; 63 (1): 239-246.
4. Janev Holcer N, Delalić A. Exposure of nurses to mercury from broken medical equipment. Safety. 2011; 53(4): 371-379.
5. Jergović M , Miškulin M, Puntarić D, Gmajnić R, Milas J, Sipos L. Cross-sectional Biomonitoring of Metals in Adult Populations in Post-war Eastern Croatia: Differences Between Areas of Moderate and Heavy Combat
6. Janev Holcer N, Vitale K. How to set up public health campaign: Croatian example of environmental mercury exposure. Periodicum biologorum. 2009; 111(1): 99-105.
6. Janev Holcer N, Vitale K, Senta Marić A, BrumenV, Mustajbegović, J, Andabaka D. Fish consumption and mercuy boda burden in women of reproductive age from urban area in Croatia. In: Vaclavikova M, Vitale K, Gallios G, Ivaničova L, editors. Nato Science for Peace and Security Series-C: Environmental Security-Water Treatment Technologies for the Removal of High-Toxicity Pollutants. Amsterdam: Springer in cooperation with NATO Public Diplomacy Division, 2009. 29-39.
7. Institute for Medical Research and Occupational Health (IMROH), Croatia. Web page: <http://www.eu-hbm.info/cophes/project-partners/institute-for-medical-research-and-occupational-health-imroh>
8. National Health Care Strategy 2012-2020. <https://zdravlje.gov.hr/UserDocImages/dokumenti/Programi,%20projekti%20i%20strategije/Nacionalna%20strategija%20zdravstva%20-%20za%20web.pdf>
9. Implementation program of the Ministry of Economy and Sustainable Development for the period 2021-2024. <https://mingor.gov.hr/UserDocImages//GLAVNO%20TAJNI%20C5%A0TVO/Strategija,%20planovi%20i%20ostali%20dokumenti//Provedbeni%20program%20Ministarstva%20gospodarstva%20i%20odr%20C5%BEivog%20razvoja%20za%20razdoblje%202021.%20%E2%80%93%202024.%20godine.pdf>