

The SAICM, Chemicals Roadmap and Global Network of the WHO towards Sound Management of Chemicals

Rokho Kim[†]

Coordinator of Health and the Environment, WHO Regional Office for the Western Pacific

The outbreak of humidifier disinfectant poisoning in South Korea could be among the most tragic chemical incidents caused by under-regulated consumer products.¹⁾ Considering the size of the population at risk -more than 20% of the whole population- and the steadily increasing number of fatal and non-fatal cases confirmed by the authority, it is likely that the number of victims may be unprecedented, exceeding that of the Minamata Disease victims of Japan.²⁻⁴⁾ The importance of a comprehensive regulatory framework on chemicals in household products was pointed out as a lesson to prevent such tragic incidents.^{5,6)}

The World Health Organization (WHO) aims at the attainment by all peoples of the highest possible level of health. Health professionals and policy-makers throughout the world rely on WHO for science-based guidance and evidence-based policy options.⁷⁾ Through the International Programme on Chemical Safety (IPCS), WHO works to establish the scientific basis for the sound management of chemicals, and to strengthen national capabilities and capacities for chemical safety.

The sound management of chemicals is an important area of environmental health. Globally, 23% of global deaths are due to modifiable environmental factors.⁸⁾ Approximately 1.6 million lives and 45 million disability-adjusted life-years were lost in 2016 due to exposures to selected chemicals. This is higher than the estimates reported

previously.^{9,10)}

The Strategic Approach to International Chemicals Management (SAICM) is an international policy framework to foster the sound management of chemicals worldwide. SAICM tries to ensure, by the year 2020, chemicals are produced and used in ways that minimize significant adverse impacts on the environment and human health.¹¹⁾ In May 2017, the World Health Assembly (WHA) approved “the Road map to enhance health sector engagement in the SAICM towards the 2020 goal and beyond”. The road map identifies concrete actions where the health sector has a lead or an important supporting role to play in the sound management of chemicals.

As a companion to the road map, WHO developed “the WHO chemicals road map workbook”. It offers a structured way to work through the road map, choose priorities and plan activities. Use of the workbook will facilitate discussions within and among organizations about health sector priorities and potential activities to address these priorities. To facilitate health sector implementation of the road map, over 70 Member States have joined *the WHO Global Chemicals and Health Network*. Among them, 41 Member States attended the inaugural meeting of the Network held in Geneva, 5-8 November, 2018. The meeting led to the identification of common challenges and opportunities for collaboration in the implementation of the roadmap. At the 72nd WHA, a number of Member States noted the

[†]**Corresponding author:** Coordinator of Health and the Environment, WHO Regional Office for the Western Pacific, Manila, the Philippines, Tel: +63-908-891-8188, E-mail: kimr@who.int

Received: 1 August 2019, Revised: 15 August 2019, Accepted: 16 August 2019

usefulness of this Network and called on other Member States to join if they have not yet done so.

The governments are expected to ensure the consumers, workers, and children are well protected from emerging issues and risks associated with chemicals. In this standpoint, WHO convened “the Chemical Risk Assessment Network Workshop on Identification of Emerging Risk to Human Health from Chemicals” in Bilthoven, The Netherlands, February 2019, with the participation of 48 experts from 32 countries. The workshop discussed existing methodologies and systems, based on a literature review and the results of a stakeholder survey completed by 30 institutions from the Network or institutions involved with relevant networks or surveillance mechanisms. The national poison information centres shared case studies of emerging issues such as “street pesticides”, “household liquid laundry detergent capsules dangerous to children”, and “2,4-Dinitrophenol (DNP) toxicity”.

Chemical safety requires that all activities involving chemicals are undertaken in such a way as to ensure the safety of human health and the environment. It covers all chemicals, natural and manufactured, and the full range of exposure situations from the natural presence of chemicals in the environment to their extraction or synthesis, industrial production, transport use and disposal.¹²⁾ To be able to prevent such incidents caused by imported chemicals as the humidifier disinfectant disaster in the future, the governments are urged not only to strengthen their regulatory framework but also to cooperate with the *WHO Global Chemicals and Health Network* aiming at sound management of chemicals.

References

1. Kim P and Leem JH. The humidifier disinfectant scandal: the need for vigorous government oversight of chemicals and household products to secure public safety. *Environ Health Toxicol.* 2016; 31. Available: <https://www.eaht.org/upload/pdf/eh-31-e2016012.pdf>
2. Kim S, Paek D. Humidifier Disinfectant Disaster, what do we know and what are left to be clarified? *Environ Health Toxicol.* 2016 Dec. Available: <https://www.ncbi.nlm.nih.gov/pubmed/28111422>
3. Current data posted on a website of the Korea Environment Industry and Technology Institute (KEITI) Available: <https://www.healthrelief.or.kr/home/content/stats01/view.do>
4. Tamashiro H, Arakaki M, Akagi H, Futatsuka M, Roht LH. Mortality and survival for Minamata disease. *International Journal of Epidemiology.* 1985 Dec; 14(4): 582-588.
5. Lee JH, Kim YH, Kwon JH. Fatal Misuse of Humidifier Disinfectants in Korea: Importance of Screening Risk Assessment and Implications for Management of Chemicals in Consumer Products. *Environ. Sci. Technol.* 2012; 46(5): 2498-2500 Available: <https://pubs.acs.org/doi/full/10.1021/es300567j>
6. Choi Y, Lim HK, Lim SY, Paek DM. Health Damages and Lessons of the Use of Humidifier Disinfectants in Korea. *Korean Journal of Environmental Health Sciences.* 2012 Apr.
7. WHO. Evaluation of the Impact of WHO Publications - Corporate evaluation commissioned by the WHO Evaluation Office, Geneva, 2016 (Pre-publication version). Available: https://www.researchgate.net/publication/315477391_Evaluation_of_the_Impact_of_WHO_Publications
8. WHO. Preventing disease through healthy environments: a global assessment of the burden of disease from environmental risks. Geneva 2016. Available: https://www.who.int/quantifying_ehimpacts/publications/preventing-disease/en/
9. WHO. Public health impact of chemicals: knowns and unknowns Geneva, 2016. Available: <https://www.who.int/ipcs/publications/chemicals-public-health-impact/en/>
10. Addendum to the WHO publication “The Public Health Impact of Chemicals: Knowns and Unknowns”. 2016. Available: <https://apps.who.int/iris/bitstream/handle/10665/279001/WHO-CED-PHE-EPE-18-09-eng.pdf>
11. WHO. Third Meeting of the Intersessional Process for Considering SAICM and the Sound Management of Chemicals and Waste Beyond 2020. Geneva, 2018.
12. Rechel B, McKee M. Facets of Public Health in Europe, McGraw-Hill Education (UK); 2014. p.97.