Air Pollution and Human Rights
Hungarian responses

Question 1

Ambient air quality is well-regulated in Hungary. Hungary is a member of the European Union since 2004. The Hungarian legislation on outdoor air pollution is fully compliant with the EU requirements.
Most elements of the control of air pollutants and the management of air quality are the same as the EU's practice.
According to Act XI. of 1991 the public health authority participates in the revision of the air quality limit values.

International bodies and EU have developed several regulations and guidelines on selected outdoor air pollutants; however, there is still no regulation on the concentration of indoor air pollutants, so indoor air quality guidelines/regulations shall be established at the national level.

Every Member State has limit values for workplace environments, but only a few Member States have guideline values and regulations for private and public places. According to Act XI. of 1991. the public health authority checks the indoor air quality in public places by used for the guidelines of National Public Health Center (NPHC).

In Hungary there are national and EU legislations, standards which specify public health and health protection requirements for ensuring adequate indoor air quality in building:

- Hygiene, health and environmental requirements of edifices (253/1997. (XII.20.) Government Decree),
- Energy performance specification of buildings and the regulations of the minimum ventilation ratio and the indoor temperature (7/2006. (V. 24) Ministerial Decree),
- General requirements for construction products (Act LXXVIII. of 1997),
- Regulation on the marketing of construction products (Regulation (EU) No 305/2011 of the European Parliament and of the Council),
- Regulation of planning and installation for construction products (275/2013. (VII.16.) Government Decree),

The competent authorities checks enforce the compliance the above legislations.

Hungary, as a Member State of the European Union, implements the EU legislation on chemical safety, particularly the requirements of Regulation (EC) No. 1907/2006 (REACH) and the Regulation (EC) No. 1272/2008 (CLP).
Regarding the management of unacceptable health risks (i.e. exposure via inhalation), restrictions under Annex XVII of the REACH Regulation are applicable, where the concerned substances are restricted or totally banned. Specifically, the following entries can be mentioned here: benzene, asbestos, CMR 1A / 1B substances, toluene, trichlorobenzene, PAH compounds.

The CLP Regulation is based on the United Nations' Globally Harmonised System (GHS) and its purpose is to ensure a high level of protection of health and the environment via universal warning pictograms and standardized labelling elements which provide relevant information on

hazardous substances and mixtures for users including the general public. This also covers the provision of information of aspirational hazards or acute toxicity by inhalation via labelling.

In Hungary, according to Act XLII of 1999 concerning the protection of non-smokers and the use and making available on the market of tobacco products the conditions of smoking become stricter from the first of January, 2012. It is forbidden to smoke in closed-air rooms of public buildings and workplaces or in any kind of vehicles used in the public transportation, including passenger trains so the quality of indoor air has improved.

Question 2

The NPHC provides strategies on reducing indoor and outdoor air pollution and its health effects to the general population and different stakeholders. An air quality health index has been developed and applied for the air quality data produced by the Hungarian air quality monitoring network. The four categories of the air quality index are based on the health effects of the major air pollutants (PM_{10}, O_3, NO_2, SO_2, CO). Since 2007, the index values are depicted on a map for all settlements where at least one monitoring station is located and published on the webpage of NPHC daily.

NPHC and its legal predecessors have been a partner of numerous EU-funded and other international projects focused on both indoor and outdoor air quality (e.g., ENVIE, SEARCH, SINPHONIE, Take a Breath! APHEA2, APHEIS, APHEKOM). More information is available at links at:

- http://www.sinphonie.eu/
- http://www.tabproject.eu/
- https://cordis.europa.eu/result/rcn/49589_en.html
- http://search.rec.org/
- http://aphekom.org/web/aphekom.org/why-aphekom;jsessionid=3E4C1A6931F37F675177BFDECF47956E

The outcomes of the projects have been published in both international and national papers and different communication materials (e.g., leaflets, posters, videos) have been produced to the general population and decision makers.

In the frame of an international project called InAirQ (2016-2019.), action plans have been developed and recently tested to improve indoor air quality in primary school buildings (https://www.interreg-central.eu/Content.Node/InAirQ/InAirQ.html).

Several monitoring campaigns including the investigation of air quality, different health aspects and other environmental parameters have been carried out outdoors (e.g., playgrounds, cycle paths) and indoors (e.g. primary schools, offices, dwellings, salt breath rooms, swimming pools).

A detailed guideline was produced for public health authority concerning the hospitals indoor air quality with respect to biological and chemical pollutants, and the health impacts of improper natural and mechanical ventilation.

Special attention is paid to the vulnerable groups (e.g. children). Salt breath rooms have recently become popular in the Hungarian primary schools. The NPHC conducted a monitoring campaign and developed a guideline describing good practices for operating salt breath rooms prepared to reduce and avoid the adverse health effects attributable to poor indoor air quality in these microenvironments.

Several handbooks, guidelines, and recommendations have already been published by the NPHC for different microenvironments and target groups. The preparation of handbooks is in progress for different sectors (i.e. municipality, educational, building) for capacity building purposes in the field of indoor air quality management.

The NPHC operates the Hungarian Aerobiological Network including 20 monitoring stations in Hungary. The most important pollens and fungi spores are monitored during the whole year. Daily forecast maps are produced for the most important allergen, the pollen of ragweed (https://www.oki.hu/projektek/r-pas; https://efop180.antsz.hu/munkacsoportok-konyezetegeszsegugy/c-ii-munkacsoport/parlagfu-pollen-riasztasi-rendszer.html).

The effect of the implementation of stricter restrictions of the Act concerning the protection of non-smokers on the quality of indoor air of certain catering facilities was monitored by the public health authority in 2012. During the tests the mass concentration of particulate matter less than 2.5 microns in diameter (PM2.5) was measured with SidePak TSI AM510 Personal Aerosol Monitor in five different catering facilities in the districts VIII and IX of the Capital.
When smoking was still allowed the average aerosol concentration (G) reached 393 µg/m3 (347-444) at those places, which value is nine times higher than the result of (44 µg/m3 (43-45)) which was received at the same places after the ban of smoking.
The findings of the survey unequivocally have proved the assumption that the ban on smoking significantly reduces the indoor air pollution. 89% decrease was observed in the average PM2.5 concentration (G) in all the examined sites after the implementation of stricter regulations regarding smoking.

The public health authority regularly checks the compliance with the restrictions established regarding the consumption of tobacco products and the use of e-cigarettes and other devices imitating smoking in the frames of on-site inspections, where necessary, with the involvement of co-operators even beyond working hours.

Question 4

The population is always informed on the actual level of air pollutants as well as on the short-term effects of air pollutants on the human health. Besides publishing the air quality health index daily, the NPHC provides strategies on reducing air pollution and its adverse health effects in the frame of intense communication campaigns. The NPHC participates in several conferences and programs as well. In the past years, several fora have been organized in the field of indoor air quality in school buildings to discuss the indoor air quality related problems, to provide solutions and to inform the audience about the latest outcomes of the recent NPHC projects.

In addition to the general prohibition of smoking indoor, in accordance with the provisions of *Act XLII of 1999* regarding the safety of persons requiring special protection by their age, in institutes of child welfare, child protection or public education and on playgrounds smoking areas shall not be established even outdoor.

In order to prevent the exposure of children to carbon monoxide in educational buildings in Hungary, it is compulsory to install carbon monoxide detectors if open combustion equipment (e.g. gas central heating) is present indoors and the combustion by-products can spread in the building by exchange of air (the Act CCXI. of 2015.).