

6.2. HEALTH IMPACT ASSESSMENT AND POLICY

Risk and health impact assessment are moving away from the “one-chemical one-health outcome” model toward a new paradigm of monitoring the totality of exposures that individuals may experience in the course of their lifetime. Today, health impact assessment (HIA) and risk assessment are powerful tools that contribute to informed decision-making in public health and policy development. They can systematically evaluate the potential health effects of policies, programmes, or projects, and provide valuable insights into the risks and benefits associated with different interventions. The amalgamation of scientific evidence, community input, and policy considerations they offer is central to the success of their assessments.

Unlike traditional assessments that tended to focus on singular exposures or risks, the exposome broadens the scope, encompassing the totality of environmental exposures that individuals encounter throughout their lives. By considering the *cumulative impact of multiple exposures* (Tulve et al., 2024) – ranging from air quality and lifestyle factors to socio-economic determinants –, the exposome provides a holistic understanding of health influences. The need for cumulative impact assessments emerges from the growing recognition of the urgency for actionable science to address the *needs of overburdened communities*.

As we navigate the intersection of exposome research, health impact assessment, and policy development, we identify new avenues for *precision public health interventions* and policies that address the complex interplay of environmental factors on human health.