of each one have been described. Estimated profiles have been compared with measured ones. Based on the average annual BaP level measured (1.3 ng/m^3 in 2009, 1.8 in 2010), 2 excess cancer cases are estimated to result from a life-time exposure based on 2009 data, and 3 cases are expected according to 2010 values.

Conclusions Among different emissive sources, the analysis identifies theoretical sources whose profiles, compared with observed data, allow to identify dominant contributions to PAHs pollution and to design corrective actions to reduce environmental and health impact.

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SOURCE APPORTIONMENT OF POLYCYCLIC AROMATIC HYDROCARBONS (PAHS) AND CARCINOGENIC RISK ESTIMATE IN TARANTO, ITALY

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Objectives In last 2 years the limit value of benzo(a)pyrene (BaP) in ambient air of 1.0 ng/m3 has been exceeded in the urban district of Taranto near the industrial area. In these cases Italian law prescribes the adoption of corrective measures on emission sources. The objectives were: to identify emission sources and quantify relative contribution to the PAHs levels; to estimate health impact associated to PAHs exposure in general population.

Methods For the source apportionment multivariate receptor models have been used. Data of monthly average concentration of PAHs measured in several location have been analysed. US-EPA UNMIX software has been used to estimate profiles of unknown sources and uses diagnostic tools to identify the respective number and which chemical species are significant for analysis. To compute the lung cancer risk the WHO unit risk estimate for BaP (8.7 x 10^{-5} ng/m^3) has been adopted.

Results Preliminary results show that the models employed identify 3 to 4 emission sources. Profile and temporal trends