

## Environmental Sanitation Parameters Recording in Refugee-Migrants Camps in Greece, 2017

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**Abstract :** Recent migration crisis led to a vast migrant - refugees movement to Greece which created an urgent need for hosting settlements. Taken into account the protection of public health from possible pathogens related to water and food supply as well as waste and sewage accumulation, a 'Living Conditions Recording Form' was created in the context of 'PHILOS' European Program funded by the Asylum Migration and Integration Fund (AMIF) of EU's DG Migration and Home Affairs, in order to assess a number of environmental sanitation parameters, in refugees - migrants camps in mainland. The assessment will be completed until the end of July. From March to June 2017, mobile unit teams comprised of health inspectors of sub-action 2 of "PHILOS" proceeded with the assessment of living conditions in twenty-two out of thirty-one camps and 'Stata' was used for the statistical analysis of obtained information. Variables were grouped into the following categories: 1) Camp administration, 2) hosted population number, 3) accommodation, 4) heating installations, 5) personal hygiene, 6) sewage collection and disposal, 7) water supply, 8) waste collection and management, 9) pest control, 10) fire safety, 11) food handling and safety. Preliminary analysis of the results showed that camp administration was performed in 90% of the camps by a public authority with the coordination of various NGOs. The median number of hosted population was 222 ranging from 62 to 3200, and the median value of hosted population per accommodation type was 4 in 19 camps. Heating facilities were provided in 86.1% of camps. In 18.2 % of the camps, one personal hygiene facility was available per 6 people ranging in the rest of the camps from 1 per 3 to 1 per 20 hosted refugees-migrants. Waste and sewage collection was performed depending on populations demand in an adequate way in all recorded camps. In 90% of camps, water was supplied through the central water supply system. In 85% of camps quantity and quality of water supply inside camps was regularly monitored for microbial and chemical indices. Pest control was implemented in 86.4% of the camps as well as fire safety measures. Food was supplied by catering companies in 50% of the camps, and the quality and quantity food was monitored at a regular basis. In 77% of camps, food was prepared by the hosted population with the availability of proper storage conditions. Furthermore, in all camps, hosted population was provided with personal hygiene items and health sanitary educational programs were implemented in 77.3% of camps. In conclusion, in the majority of the camps, environmental sanitation parameters were satisfactory. However, waste and sewage accumulation, as well as inadequate pest control measures were recorded in some camps. The obtained data have led to a number of recommendations for the improvement of sanitary conditions, disseminated to all relevant stakeholders. Special emphasis was given to hygiene measures implementation during food handling by migrants - refugees, as well as to waste and sewage accumulation taking in to account the population's cultural background.

**Keywords :** environmental sanitation parameters, food borne diseases risk assessment, refugee - migrants camps, water borne diseases risk assessment

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