

EXECUTIVE SUMMARY

The main scope of the assessment was to determine the technical and economic viability to implement a laboratory in Chile for the analysis of Persistent Organic Pollutants (POPs) included in the Stockholm Convention. A comparative analysis was performed between the alternative to improve and/or to optimize the existing laboratories and the alternative to build up one or several new laboratories.

The working methodology was as follows:

- a) national and international bibliographical revision, about the requirements for a POPs laboratory and QA/QC reviewing the state-of-the-art of the available methods for regulatory purposes relative to POPs, including harmonized and validated analytical methodologies for the analysis of POPs in environmental and human matrices, in addition to the QA/QC systems, for sampling and analytical techniques and national and international rounds of intercomparison;
- b) analysis and assessment of the laboratories in Chile able to make analytical determination of POPs including their instrumental and personnel capacity, according to a unique format of survey elaborated by the Consultant in agreement with the counterparts of the study;
- c) analysis of the implementation costs, considering the costs for improving the existing laboratories versus costs of the build up of a new laboratory;
- d) Proposal for the implementation of a POPs laboratory in Chile, containing information on: i) location; ii) costs of improvement

of existing laboratories versus costs of building up a new one iii) specific establishment of a global laboratory versus labs able to make POPs determinations in different matrices and analytes iv) Set up of analytical techniques to be internationally validated v) Implementation of Quality Assurance/Quality Control measures; vi) investment yield.

The analysis and assessment of the information gathered by the project, show that in Chile, of the universe of laboratories requested to give information (38), 18 laboratories make different types of POPs analysis, however a low percentage accounts an accreditation.

At present, there are national laboratories that possess the necessary equipment to carry out analysis of POPs, excepting dioxins and furans and, these have technical and professional capacities to cover all matrices in an environmental monitoring.

The evaluation concluded that from an economic and technical point of view, it is recommendable to implement a network of laboratories to carry out analysis of POPs in different environmental matrices instead of creating a new laboratory. The laboratories that integrate this network should be accredited by the INN as well as their methodologies of POPs analysis. In addition, the must be submitted to national and international rounds of intercomparison and intercalibration in order to maintain the quality standard of their services.

The creation of a reference laboratory for POPs is a matter of time, because it is essential to demonstrate firstly a large experience in high analytic quality and a good management in this type of laboratory.