

MOPSEA

MONITORING PROGRAMME ON AIR POLLUTION FROM SEA-GOING VESSELS

Duration of the project: 15/12/2003 – 30/04/2006

Budget: € 138.360

Keywords: Transport Emissions, Monitoring Programme, Marine Environment, Emission Model

CONTEXT

This project fits within the Second Scientific Support Plan for a Sustainable Development Policy (SPSD II), Part II "Global Change, Ecosystems and Biodiversity". Since several years emission regulations have been drafted with respect to road vehicles resulting in the improvement of their environmental performance at a fast rate. Regulations with regard to emissions from waterborne transport however have been lagging behind for a long time. Nevertheless waterborne transport was and still is considered to be one of the most environmentally friendly modes of transport. This however is being diminished by the fact that ships attribute to an increasing contribution in the total transport emissions.

It is within this respect the International Maritime Organisation adopted an Annex to the existing marine environment pollution convention in order to minimise especially the waterborne emissions from nitrogen oxides and sulphur dioxide.

PROJECT DESCRIPTION

Objectives

Emissions are not locally based and since it is worldwide acknowledged that emissions should be treated on an international scale, agreements have been made between the different states with regard to reporting their emissions from different sources and for different pollutants. It is also within this respect that different monitoring programmes or methodologies were drafted. For example one of the most frequently used is the COPERT model for the reporting of emissions resulting from road-vehicles. With respect to the reporting of ship emissions there is no consistent reporting mechanism, methodology nor monitoring programme.

Since Belgium however needs to comply with international and European agreements a monitoring programme is needed. This study focuses on the feasibility of such a monitoring programme and will give an inside in the availability of different datasets and the bottlenecks that can be encountered.

Methodology

The project combines a general overview of existing information with regard to legislation, monitoring programmes and emission data with the setting up

of a new monitoring programme for the estimation of emissions resulting from ships within Belgian jurisdiction. This project will be directly relevant towards the Belgian obligations regarding international agreements and will be accomplished through a sequence of different work packages (tasks).

In work package one the existing information will be evaluated. A brief overview of existing air-legislation on a international, European and national (regional) level will be provided. This is necessary in order to get a clear view on the agreements made and in order to determine whether Belgium can comply with the international or European made agreements. In this first work package an overview is also given of the traffic volume, type of ships and their expected emissions. Only ships entering Belgian Sea-ports (Ostend, Seabruuges, Antwerp and Ghent) will be considered in this study.

In work packages 2 and 3 the existing monitoring programme, which currently only focuses on bunker fuel related emissions will be analysed and bottlenecks will be listed.

In a following work package a feasibility study on a new approach will be carried out. This new approach will focus on traffic related datasets. Again bottlenecks that were encountered will be listed and a quality control system will be drafted. Further on, emissions from sea-going vessels in Belgian seas (seashore and continental shelf – ships entering a Belgian Sea-port) will be forecasted for the year 2010 under a well-defined business-as-usual scenario. Comparing these figures to those of 1990, gives Belgian policy makers inside in the role sea-going vessels could play within the Kyoto Protocol.

The comparison of the two approaches (bunker fuels and traffic related emission models) will also feed policy makers for discussions at international level concerning the allocation of greenhouse gases and other air pollutants from sea-going vessels.

Expected results and/or products

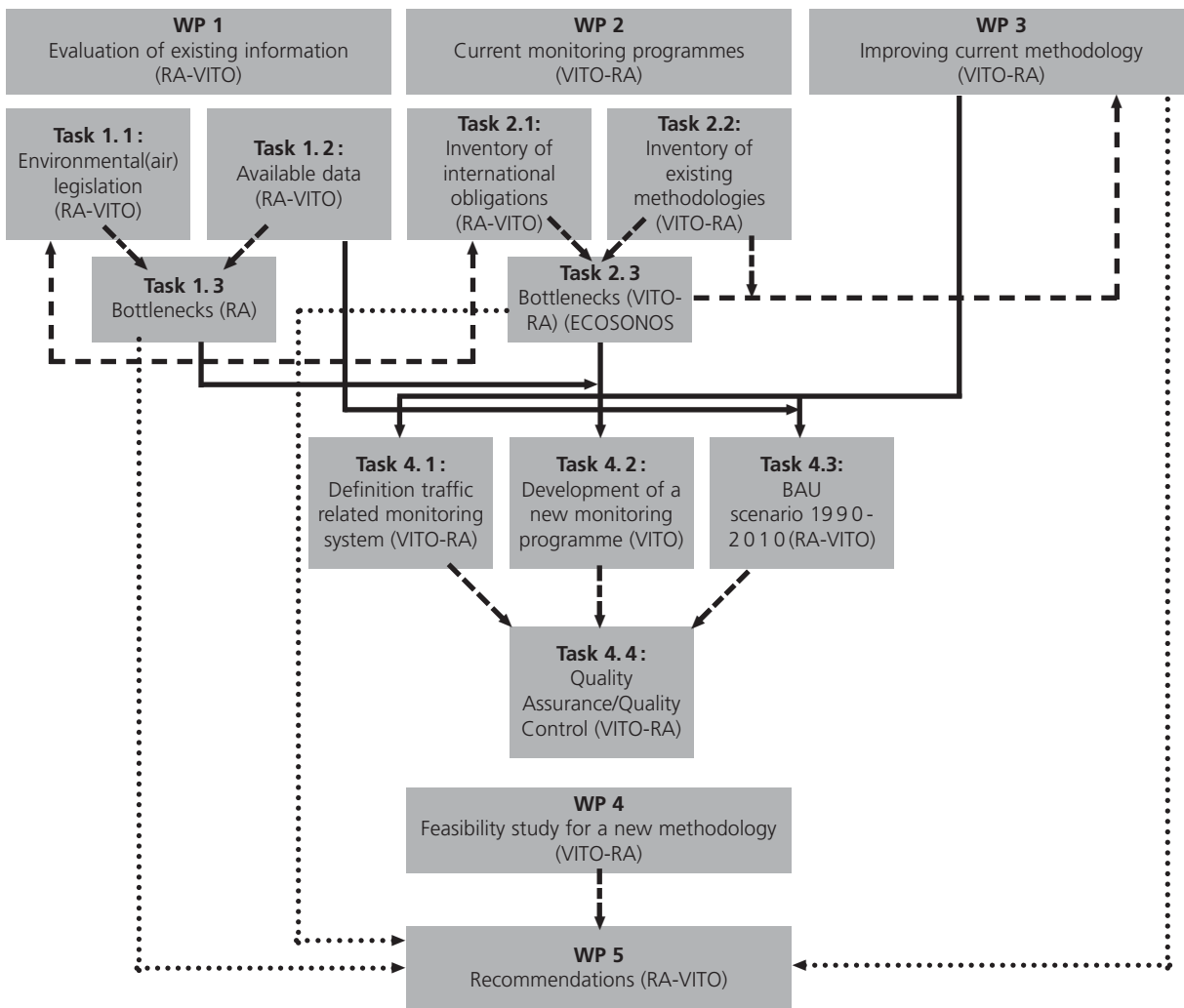
The project includes the development of an emission model taking into account traffic parameters instead of starting from international bunker fuels to assess emissions from ships.

Interaction between the different partners

The distribution of the different tasks between the two partners is indicated in the following figure:



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PARTNERS

Activities

Resource Analysis

is involved in the REALISE (Regional Action for Logistical Integration of Shipping across Europe) project funded by the European Commission DG TREN under the fifth Framework programme. The proposed project will use research results from the REALISE project. The overall objective of REALISE is the development of technological strategies, methodologies, and tools for the European business community and decision-makers in order to encourage the use of short sea shipping. One of the work packages within this project deals with the development of a methodological framework for the quantitative comparison and evaluation of the environmental impact of different modes of transport, maritime transport and short sea shipping among others.

Vito

The MOPSEA proposal builds on a study carried out by Vito under the SPSP II (first call): SUSATRANS, Sustainability assessment of technologies and modes in the transport sector in Belgium. Within this project a state-of-the-art report of technologies for inland shipping is set up, as well as an emission model for evaluation of technological improvements in relation with inland vessels. This experience will serve the purpose of the current proposal as technological evolu-

tion for sea-going ships are rather comparable with these for inland navigation. Of course some technologies are typical for sea-going ships, so extension with these technologies will be made.

A feasibility study of the development of emission models for railway and shipping, commissioned by the Flemish Environment Agency, is being carried out by Vito. In this study possible users of the future emission modes are involved. Specification for inland shipping and short sea shipping are set up. The available data are being analysed and bottlenecks are pointed out. The results for short sea shipping will be valuable for the proposed MOPSEA project.

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Users Committee

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