



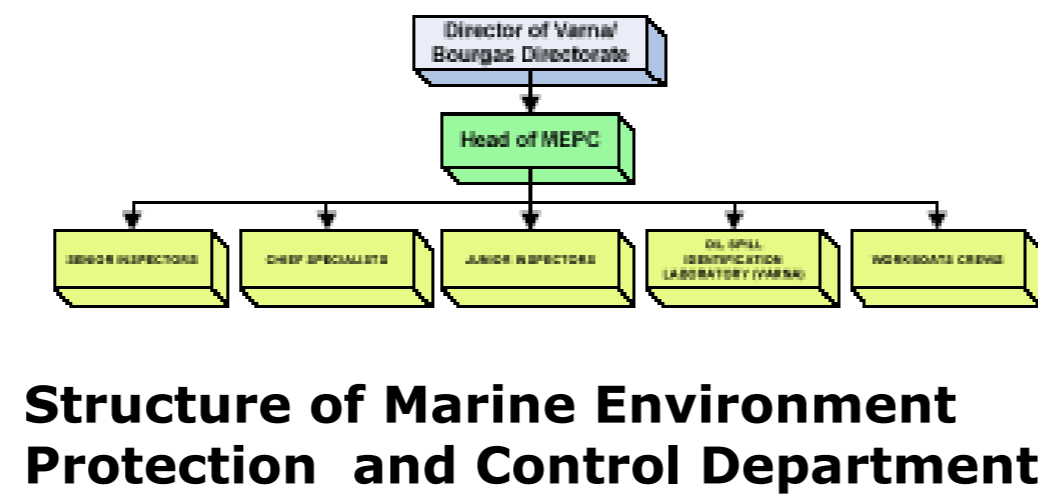
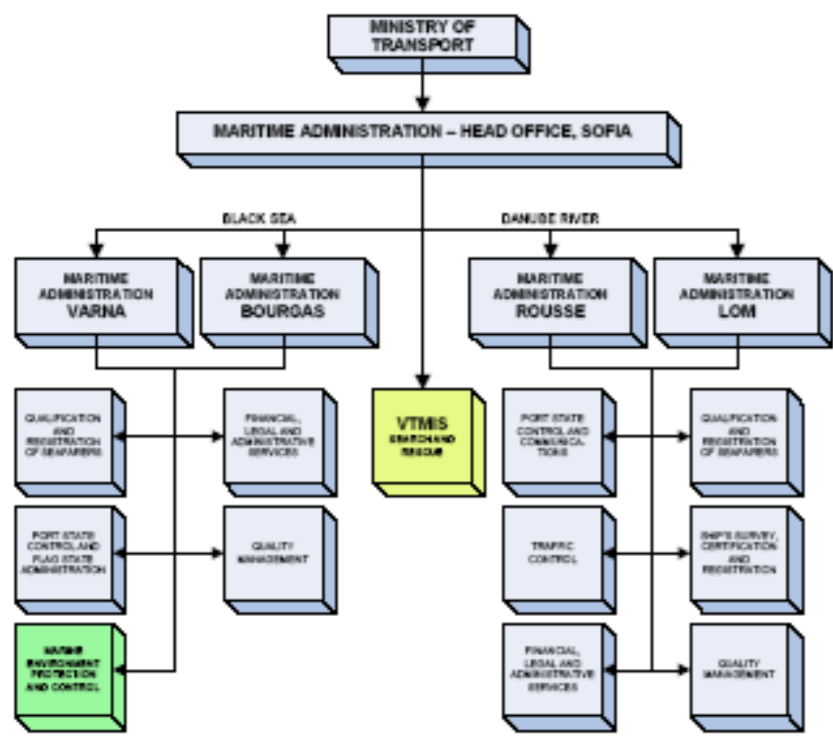
UNDP GEF Black Sea Ecosystem Recovery Project

Vessel Traffic Oil Pollution System (VTOPIS) Pilot Project

Objectives

- Assessment of the current situation on management of VTOPIS related information in Bulgaria
- Design a Vessel Traffic Oil Pollution Information System for collection, update, exchange and management of information, including generation of required reports
- Develop a proposal for multiplication of VTOPIS in the other Black Sea countries

Structure of Bulgarian Maritime Administration



Structure of Marine Environment Protection and Control Department

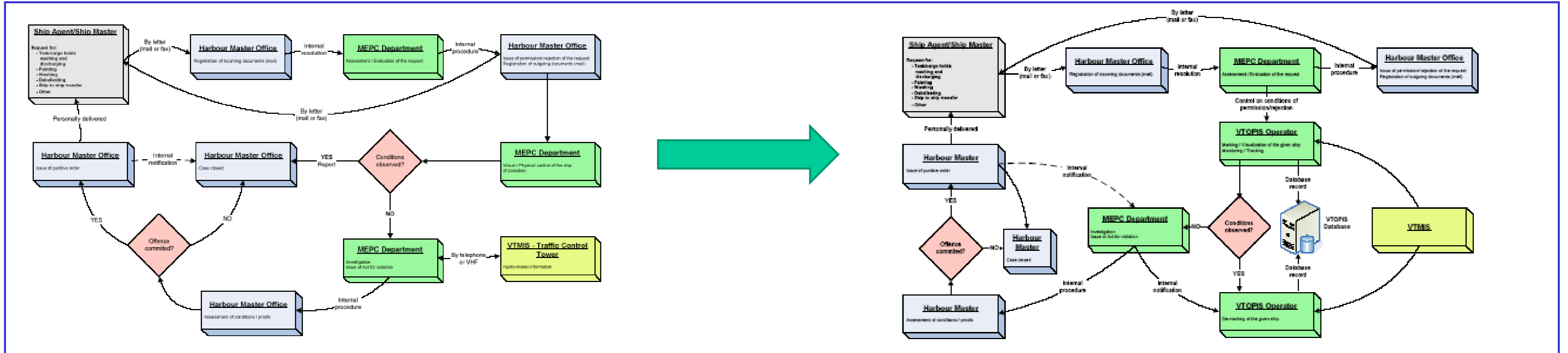
Main activities of the project:

- Assessment of the current situation, determination of a place of VTOPIS offices and identification of goals and objectives for VTOPIS
- Development of software for visualisation, tracking and backtracking of the ships' traffic, which could pose a high risk of pollution for the marine environment
- Development of an integrated database with the ship's pollution information, including collection and dissemination of information
- Determination of standard formats to report ships' pollution issues for related
- Development of data exchange formats between VTOPIS and national authorities in case of oil spills incident

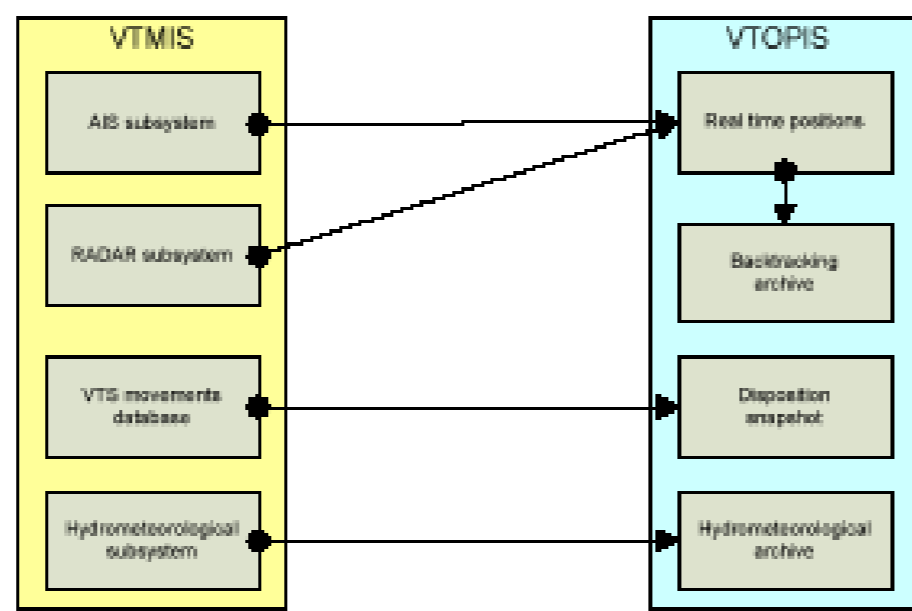
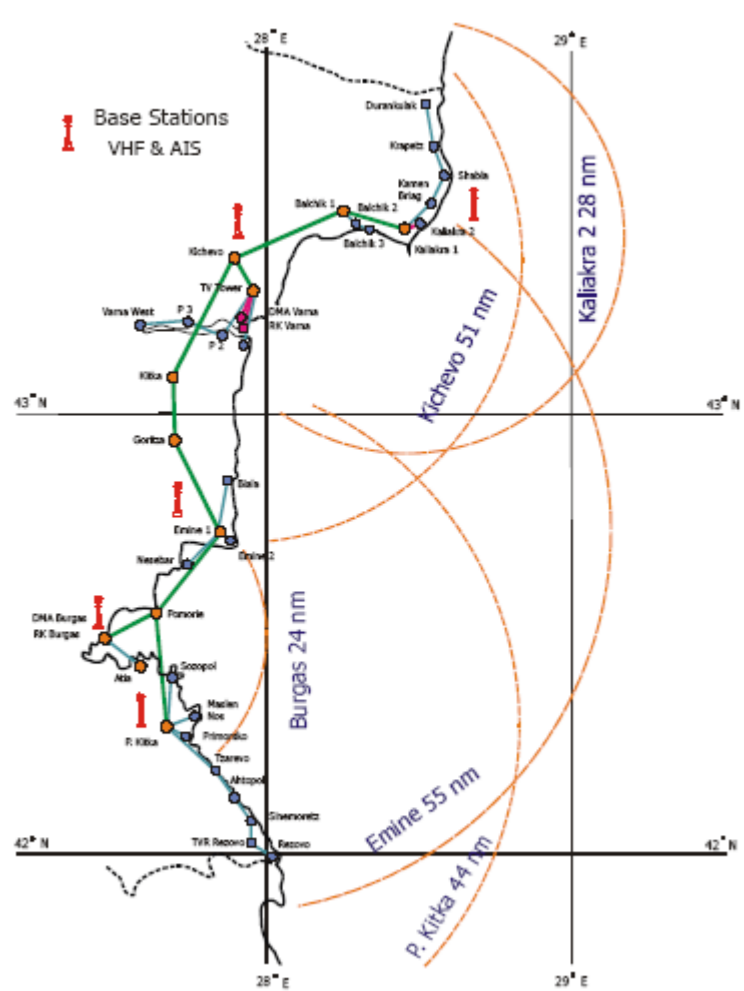
- Provision of hardware and software for building of the database, communications and oil spill modeling
- Installation of VTOPIS at Maritime Administration (Varna and Burgas, Bulgaria)
- Development of a proposal for multiplication of VTOPIS for the rest of the Black Sea countries

Information Flow BEFORE Installation Of VTOPIS

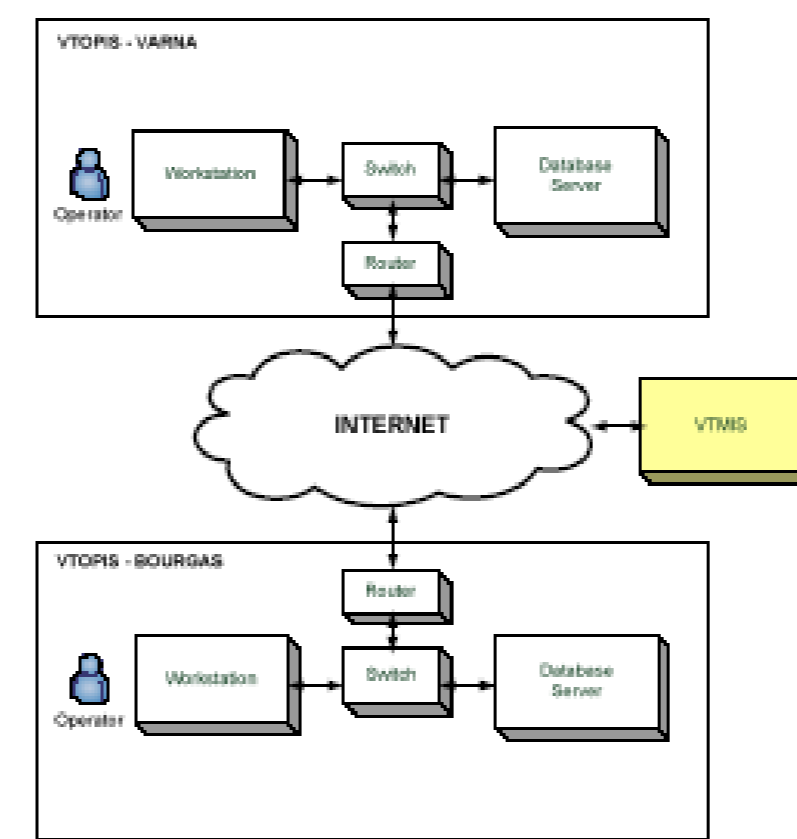
Information Flow AFTER Installation Of VTOPIS



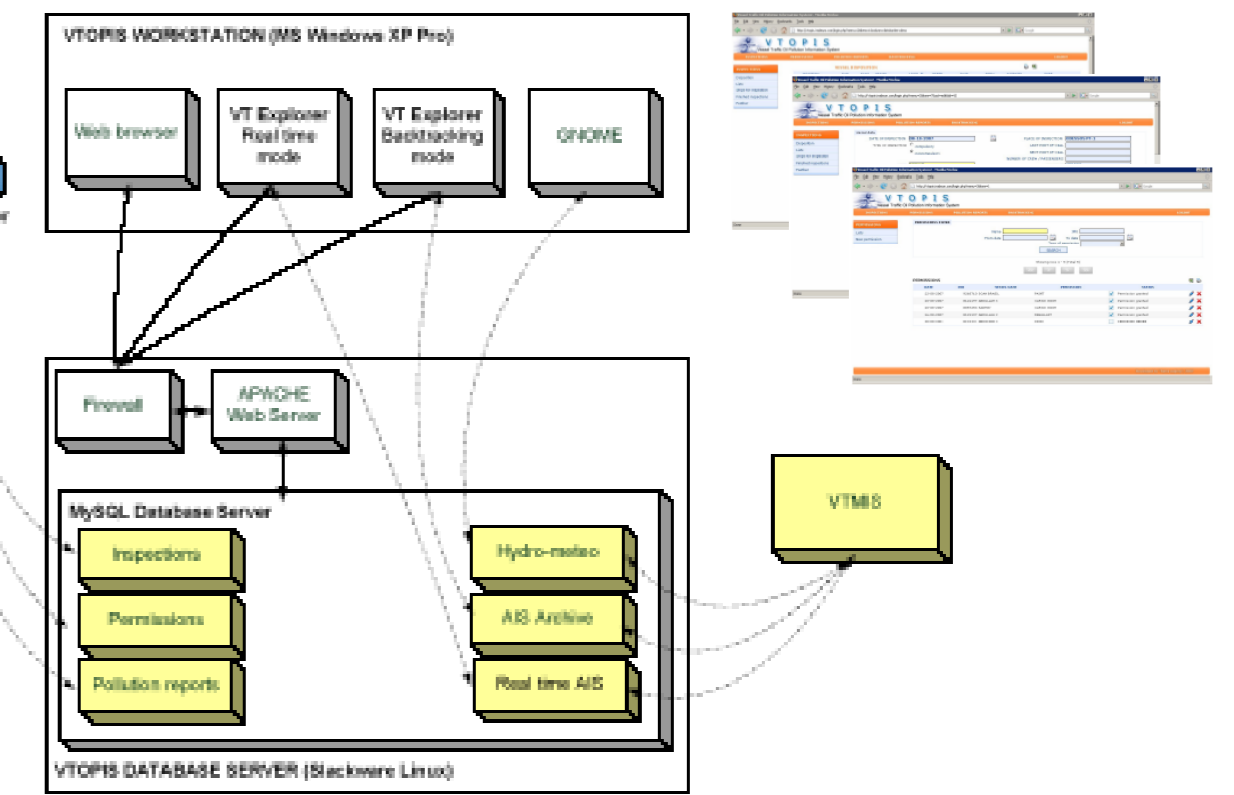
Coverage of AIS & VHF Sub-systems



Data import from VTMIS



Hardware and Network Structure



Software Structure



Real time visualization and Backtracking

- VTOPIS provides all necessary tools for the daily activities of MEPC department including management of the inspections, permissions and pollution reports
- The information management integrated in VTOPIS database provides fast and accurate generation of all needed reports. Implementation of data export in MS Excel format provides additional possibilities for generation of unlimited number of more "exotic" reports and data analysis
- Tight integration between VTMIS and VTOPIS is essential for the efficiency of the system. Real time visualization and backtracking are compulsory for effective monitoring of the vessel traffic and oil spill investigations
- Implementation of VTOPIS does not require expensive and specialized hardware equipment
- Implementation of professional and well supported oil spill modeling system requires more funds than provided in the pilot project
- For successful implementation of VTOPIS in the rest of the Black Sea countries more research of the legal basis in these countries is needed
- AIS data sharing between Black Sea countries will improve the readiness in case of oil spills and will provide valuable data for oil spill investigations

