

# Enhancing Maritime Transport Security

## ConTraffic project

90% of the world's cargo is transported in maritime containers, but only 2% is physically inspected by customs authorities, opening the possibility for illicit activities, such as avoiding customs duties, circumventing quotas or smuggling nuclear materials and weapons.

Today, it is widely believed that the only viable way to control containerized cargo is through information-based risk analysis followed by non-intrusive detection technologies. In this way, it becomes possible to target high-risk consignments and proceed with physical checks, only where needed.

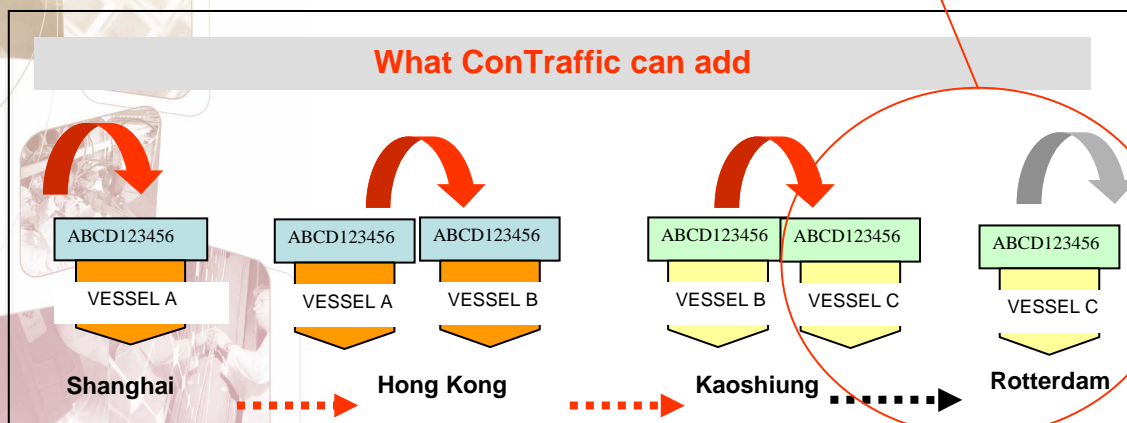
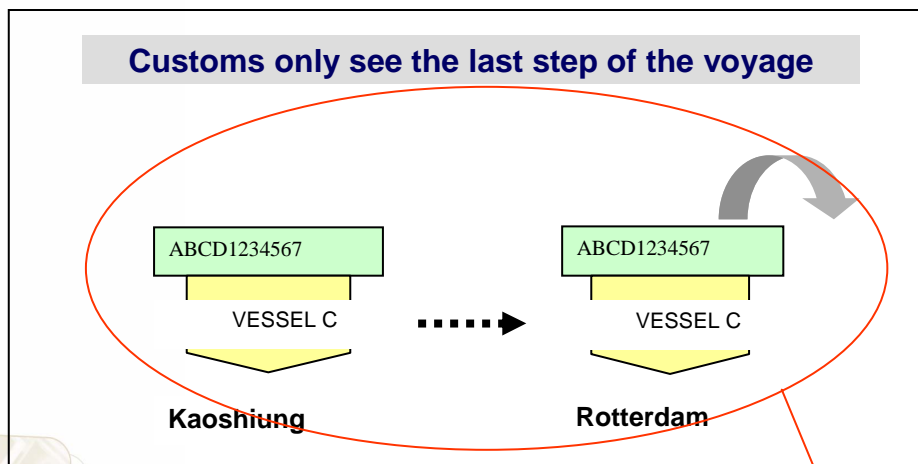
Customs authorities have been using risk analysis to identify suspicious containers for quite some time. However, their analysis is based on customs declarations and involves a number of risk indicators, such as on the entities involved in the transaction, the type of goods transported, the origin declared etc. A common characteristic of these risk factors is that they are mostly of a "local nature", in the sense that regional or national-level knowledge is sufficient to assess the threats associated to transport transactions. However, due to difficulties in collecting and analyzing the information required, risk analysis currently carried out by customs authorities does not take into account the detailed route followed by specific containers at global level – the port of loading, the several transshipment ports, the port of discharge – though it is known to be an important risk factor.

DG JRC, in collaboration with the European Anti-Fraud Office (OLAF), has developed a technology (project ConTraffic) to automatically gather and analyze data on global maritime container movements to enable the identification of potentially suspicious consignments. The project is carried out in the framework of mutual assistance between EU customs. The system was tested very successfully for cases of *false declaration of origin* such as to circumvent *anti-dumping duties* and *quotas*, to smuggle prohibited or counterfeited goods.



## ConTraffic – automatic data gathering and route-based risk analysis system

*ConTraffic* is an experimental system that gathers data from several dozen sources in parallel. It allows customs officers to retrieve movements of specific containers over the last 2-3 years. *ConTraffic*'s experimental database is sufficiently populated to allow a statistically sound route-based risk analysis. Its 40% success rate in detection based on routes information alone can add great value to customs' own risk analysis systems.



The two figures above show how *ConTraffic* can give customs additional information with respect to what is indicated in customs declarations, i.e. the intermediary transshipment ports and the origin of the goods. In fact, customs authorities do not know the entire route of a container: from where it was loaded to where it was discharged and via which transshipment ports. Unusual container itineraries or unusual collective behaviour of groups of containers are likely to hide attempts to circumvent duties or to smuggle goods. Through *ConTraffic*'s risk analysis these abnormal events can be identified, thus allowing customs authorities to better target physical inspections.

DG JRC is currently extending the *ConTraffic* system to address maritime security and specific security related concerns including illicit trafficking of security-sensitive goods. *ConTraffic* can contribute to relevant EU and international regulatory activities (such as the Container Security and Proliferation Security initiatives) by providing new indicators based on global routes analysis for containerized cargo, that can support real-time control operations at ports and feed into a common set of minimum risk rules for container security in the EU.

## CONTACTS

Thomas Barbas  
Tel.: +39 0332 78 9512  
Fax: +39 0332 78 9098

e-mail: [thomas.barbas@jrc.it](mailto:thomas.barbas@jrc.it)  
websites: <http://ipsc.jrc.cec.eu.int/>  
<http://ses.jrc.it/>