

# **Customs risk management (CRiM): A Survey of 24 WCO Member Administrations**

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## **Executive Summary**

High volumes of trade, complicated structures of global supply chains, advances in criminal activities, and fear of terrorism, amongst other factors and trends, set challenges for Customs administrations worldwide, while aiming for high compliance rates and high degree of trade facilitation in their respective territories. One commonly quoted approach to assist Customs to achieve their objectives is the exploitation of Customs risk management (CRiM) – however, very limited research exists today explaining how CRiM is really being organized and put into practice at Customs administrations around the globe today. The goal of this study is to help to fill the gap in CRiM research, by proving a pragmatic framework for CRiM analysis and improvement purposes. In particular, the study aims to answer the following three research questions, derived by the Cross-border Research Association study team:

- What are the essential components and what is the state-of-play like regarding CRiM today, on global scale?
- Which aspects of CRiM differentiate administrations located in high GDP per capita versus low GDP per capita regions / countries?
- What can be done and how to improve CRiM on both strategic and operational levels, at various WCO member administrations?

The total of 24 out of the 36 invited WCO member administrations replied to the study questionnaire in due time, enabling the research team to provide solid answers to these three research questions. Based on the study findings, following two conclusions are drawn:

- CRiM as a management system should consist of a balanced combination of policies and strategies; processes and procedures; human resources; tools and techniques; and data and intelligence. All the 24 administrations in the survey had at least some of these elements understood and implemented. But, no administration appears to have CRiM as a masterpiece of their management systems, neither on strategic nor on operational level.
- Customs operating in less developed economies perceive the benefit potential as lower and obstacles as higher than their counterparts in the wealthier nations. Limited efforts to manage human resources, and lack of CRiM tools and data feeding into CRiM processes are key examples where the administrations in poorer countries are falling behind today.

Finally, twelve tangible recommendations on how to move towards next levels of maturity in CRiM are made, to be considered by Directors Generals, Heads of Risk Management and other Customs Management Team members, at all WCO member administrations worldwide.

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## Abbreviations

AEO	Authorized Economic Operator
AGV	Auditor General Victoria
ALARM	African Leadership And Reconciliation Ministries
APEC	Asia-Pacific Economic Cooperation
CBRA	Cross-border Research Association
CCC	Community Customs Code
CRiM	Customs Risk Management
DG	Director General
EC	European Commission
EPFL	Ecole Polytechnique Fédérale Lausanne
ERM	Enterprise Risk Management
EU	European Union
FP7	European Union Framework Program 7
GATT	General Agreement on Tariffs and Trade
GDP	Gross Domestic Product
HEC-UNIL	Haute Etudes Commerciales – Université de Lausanne
HR	Human Resources
HS	Harmonized System
IMA	Institute of Management Accountants
IPR	Intellectual Property Rights
MOU	Memorandum of Understanding
PARM	Public Administration Risk Management
PRM	Project Risk Management
RIMS	The Risk and Insurance Management Society
ROI	Return on Investment
SCRM	Supply Chain Risk Management
SNF	Swiss Science Foundation
UNCTAD	United Nations Conference on Trade and Development

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USAID	United States Agency for International Development
WCO	World Customs Organization
WTO	World Trade Organization



## **1 Introduction**

### **1.1 Background and acknowledgements for the study**

High volumes of trade, complicated structures of global supply chains, advances in criminal activities, and fear of terrorism, amongst other factors and trends, set challenges for customs administrations worldwide, while aiming for high compliance rates and high degree of trade facilitation in their respective territories. One commonly quoted approach to assist customs to achieve their objectives – often with decreasing resources – is the exploitation of customs risk management (CRiM) principles and practices.

However, when searching for literature on empirical studies and experiences in the broad field of CRiM, the results are very limited. Experts at the World Customs Organization, and a team of supply chain, security, and customs researchers in Lausanne, Switzerland, concluded few years ago that a clear gap exists between the supply and demand of empirical CRiM research.

To fill this gap in CRiM research, Ecole Polytechnique Fédérale de Lausanne (EPFL), the Faculty of Business and Economics, University of Lausanne (HEC-UNIL) and Cross-border Research Association (CBRA) (the research team) have been tasked by the World Customs Organization to carry out this study.

Besides expressing gratitude to the WCO, the research team would like to thank the Swiss Science Foundation (SNF), GreenLine Systems, and European Union Framework Program 7 (FP7), projects INTEGRITY and LOGSEC, for the various forms of support provided for this study.

### **1.2 Risk management literature**

Although managing risk has been fundamental in most business and governmental activities in the past, in recent years risk management has gained importance due to challenges caused by economic slowdown, regulatory changes, vulnerable (lean) production strategies, and the threat of terrorism, amongst other trends and factors (Kleffner 2003, AON 2009, Vanany 2009). Risk management has become an essential asset for an increasing number of practitioners, providing sensible methods to manage, mitigate, and avoid uncertainties in one's business operations (Childerhouse and Towill 2003). Also, academics across research disciplines have carried out an increasing number of empirical

risk management studies and conceptual model and theory development (AON 2009, RIMS 2009).

Risk management comprises a set of basic activities: initial identification and assessment of risks followed by prioritization and coordinated allocation of resources. Technically speaking, the objective is to minimize the probability and/or impact of undesired events and seize auspicious opportunities (Gates 2006, Fraser and Simkins 2007, CAS 2003). Board-level accountability and stakeholder involvement along with transparent communication are also considered as integral parts of modern risk management programs (Deloitte & Touche 2003, AON 2009, Gates 2006). Besides, risk management has become an eminent part of the management function – a holistic risk-oriented mindset and a strategic attitude are recommended in the literature across risk management domains (AGV 2004, IMA 2007). It is also emphasized that the context should be understood when implementing risk management programs – one size does not fit all (Gates 2006). Despite the general similarities, each risk management domain has its own distinctions.

Project risk management is a traditional risk management field that focuses on unique undertakings in project management calling for tailored solutions, usually involving a significant amount of uncertainty (Schwalbe 2006). Initial risk analysis is conducted in a design phase of a project. Based on the analysis, investors and authorities decide whether the project should be started or not. After the project is started, good project risk management principles suggest that the risk environment be monitored and managed on a regular basis.

Supply chain risk management was a considerably unexplored research domain and received wider attention in the business community following the terrorist attacks of September 11, 2001, which resulted in major cross-border trade disruptions. In the aftermath of the attacks, risk management became a top priority for supply chain decision makers (Hutchins 2003). Since 2001 both academics and practitioners have been eager to learn how risk management principles could be effectively applied to supply chain management (Harland and Brenchley 2001, Wendel and Norman 2002, Monathan et al. 2003). Supply chain risk management is seen as a prudent way to control uncertainties in the supply networks. By the use of risk management, companies can mitigate and avoid detrimental disruptions that hinder or even halt the flow of goods within supply chains. Enterprises also noticed that supply chain risk management can bring substantial cost-savings because supply chain risk management enables the companies to operate with smaller safety stocks and pipeline inventories (Christopher and Lee 2004).

Ever-increasing pressure from shareholders has given the initial impetus for the development of enterprise risk management (ERM), which recommends holistic and cross-functional risk management and calls for the involvement of managerial-level officers in

risk management activities (CAS 2003, IMA 2007, AON 2009). ERM is seen as an integral part of modern corporate governance systems (Eulyl et al. 2006), while valid and updated risk information guides managers to make the “right” decisions. One distinctive feature in ERM is that it pays attention to both the downside and the upside of a particular risk, asserting that risks should not only be seen as detrimental to businesses: businesses have to take a risk to some extent in order to grow and out-perform competitors. In addition, ERM literature suggests that risk management issues should be considered both at the operational and the strategic level (Francis and Paladino 2008).

For the public sector, it may be beneficial to align its operations with the best practices of the private sector (Starovic 2001). The recent trend is that the public sector is implementing risk management programs at an accelerating pace (ALARM 2007). It has been reported that successful risk management programs contribute to a more efficient allocation of public sector resources. Besides, valid risk management information enables managers to make better decisions (Reith 1996). Leung and Isac (2008) note that cost-effectiveness can be achieved only by streamlining risk management activities in order to avoid excessive administrative burden. Nevertheless, public administration risk management is seen as a feasible way to respond to a major challenge: how to provide high-quality services to the taxpayers (citizens, businesses) with ever decreasing resources?

### 1.3 Customs risk management quotations in the literature

Customs risk management (CRiM) has its own limited legacy in literature, consisting mainly of policy papers, practitioner guidelines, technical reports, project reports, and press releases. Academic literature is currently very limited, possibly due to its previously perceived niche nature and security sensitivities linked with the topic. At first, the research team will share a few snapshots on project reports and press releases written by customs administrations themselves, in chronological order (*found through Google with the keyword “Customs risk management” in February 2010*):

- Indonesian customs administration talks about enhancing Customs risk management techniques for trade facilitation purposes: “...*To reduce the impact of Customs control to trade facilitation, effective risk management techniques should be applied. Therefore only high risk cargo would be controlled by Customs. Risk management techniques would be enhanced by training for Customs officers, exchange information with other Customs administrations, and utilization of modern device for Customs control*”. (APEC 2004).

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- *Vietnamese Customs risk management is to be enhanced by Japanese assistance, 29.1.2008 (exact source not documented)*
- *Taiwan Customs Administration on the implementation of a risk management program: “For the purpose of preventing illegal trafficking, the Customs continues to push ahead with the collection and analysis of all kinds of information and intelligence and to implement Customs risk management programs in order to upgrade efficiency in the Computerized cargo selectivity systems.” (GOV 2008)*
- *Customs risk management system wins Prime Minister’s Award in India, 21.4.2009 (exact source not documented)*

These four randomly selected snapshot news should provide some initial ideas on how customs perceive the linking of CRiM with trade facilitation, with electronic customs, with development aid, and even with winning national awards.

The following two longer quotes on CRiM link the discipline with the World Customs Organization (WCO), the United Nations Conference on Trade and Development (UNCTAD), and the World Trade Organization (WTO):

According to Harrison (2007): *“Risk management has always been at the core of customs administration and is a fundamental discipline enshrined within the WCO’s Revised Kyoto Convention on the Simplification and Harmonization of Customs Procedures. It has proven to be the most effective means of managing the huge volumes of cargo that enter the country every day of the week because it allows an administration to concentrate resources on areas of high-risk while allowing low-risk cargo to flow unimpeded into the commerce of the country. In short, risk management coupled with good intelligence and effective data analysis allows the profiling and targeting of cargo prior to arrival at a port so that low-risk cargo can be released immediately and high-risk cargo can be diverted for physical examination.”*

UNCTAD makes the following introduction to CRiM: *“The concept of risk management in Customs procedures can be considered under Article VIII of GATT 1994 (Fees and formalities connected with importation and exportation). In particular, paragraph 1 (c) recognizes “the need for minimizing the incidence and complexity of import and export formalities and for decreasing and simplifying import and export documentation requirements”. WTO members consider the introduction of risk management techniques in Customs procedures as a means to expedite clearance of goods. The WTO reference document for this topic is TN/TF/W/43 (see latest revisions under Expedited / simplified release and Clearance of goods”)* (UNCTAD, 2008).

A final quote from the literature comes from Baker (2002): *“The U.S. Customs Service, since its inception in 1789, has been charged not only with protection (and collection) of*

*the revenue, but also with enforcement of a broad and ever widening range of federal requirements. These include core Customs issues such as classification, valuation, and marking of imported merchandise; law enforcement actions such as narcotics interdiction, money laundering, export control, and intellectual property infringement; and regulatory activities such as product labelling (e.g., textiles and drugs). Customs also has responsibility for enforcement of quarantines and restrictions (endangered species, agricultural pests); collection of taxes and fees for other agencies (agricultural product promotion programs, harbour maintenance fees); trade restraints including dumping, countervailing duties, and tariff rate quotas; and evaluation and qualification of trade information (both for trade enforcement and the collection of import and export trade statistics for the Census Bureau). The most recent addition to this list of duties is responsibility for cargo security as part of the nation's antiterrorist activities."*

Baker (2002) also claims that *"Custom's recognition cannot actually review all shipments, however, has caused it to develop programs to evaluate and manage the risk to any noncompliance with laws and regulations which could result in loss or injury to trade, industry, or the public."*

Widdowson (2003), in his doctoral thesis, provides an academic view of CRiM by singling out CRiM from the pool of organizational risk management. For customs, the application of risk management principles takes place in a far more specific context within the public sector, according to Widdowson (2003). Customs around the world are highly regulated authorities which must fulfil their responsibilities while ensuring compliance with laws and regulations. In order to achieve this, customs must prepare for the potential risks of non-compliance by devising various risk treatment strategies, as stated also by Baker (2002). Besides ensuring compliance with national and international laws and regulations, customs administrations also strive for providing trade with an appropriate level of facilitation. *"Consequently, risks to the achievement of customs organizational objectives not only include the potential for non-compliance with customs laws, but also the potential failure to facilitate trade"*, states Widdowson (2003). These objectives of control and facilitation, often seen as being mutually exclusive, could be answered with proper risk management that makes efficient and effective use of customs' scarce resources by directing resources to high risk areas.

Hintsa (2011), in his doctoral thesis titled “Post-2001 Supply Chain Security – Impacts on the Private Sector” proposes that CRiM should be recognized as a key supply chain security related trade-government interface discipline in the future. “*Quantification of accepted levels of risk per economic operator; the role of post-clearance audits and systems based controls in CRiM; and collection and sharing of risk related data during customs fiscal-, AEO-, or other audits*”, require much attention in the future CRiM research, according to Hintsa (2011). Finally, Hintsa also published a summary of a recent on WCO CRiM Forum (June 2010) in Shippers Voice SCS Searchlight web-publication (July 2010), which is shared in Annex A of this report. This conference summary article, targeted primarily for cargo owners and shippers, explains how CRiM can help both customs and private sector actors to become more efficient in their operations, for example by “*pushing security further back up the supply chain*”.

#### 1.4 Study scope

This study focuses on all the risks related to the cross-border movement of goods, which have the following characteristics (Figure 1-1):

- Belong to customs responsibilities (as stated in the customs law); and
- Have negative impacts on citizens and/or nations (security, safety, health, economics etc.); and
- Cause problems in supply chains (costs, liabilities, reputational issues etc.)



Figure 1-1. Defining the focus point for the study

The scope includes risk related e.g. to: misdeclarations of imported or exported goods; smuggling of prohibited goods; intellectual property violations; and violations of international trade agreements, as these can have negative implications with all the three stakeholders in the diagram above. Risks relevant for just one (or two) of the stakeholders are not included in the scope, such as: project risks with an information systems project at customs; economic downturn related risks for citizens; or, supplier performance related risks for the supply chains.

## 1.5 Research questions

Based on the study mandate, on the literature review carried out, and on the definition of the study scope, following three main research questions were formulated by the research team:

1. What are the essential components and what is the state-of-play like regarding CRiM today, on global scale?
2. Which aspects of CRiM differentiate administrations located in high GDP per capita versus low GDP per capita regions / countries?
3. What can be done and how to improve CRiM on both strategic and operational levels, at various WCO member administrations?

## 1.6 Study questionnaire

A questionnaire with 19 questions (many of them with several sub-questions / options) was created by the research team, in close collaboration with multiple experts at the WCO. The questions are listed (without the sub-questions / options) below; the full questionnaire is placed in Annex B of this report.

1. In case you have strategic planning in place for your administration, does it make any references to risk management?
2. Does your administration have a definition for risk management in place?
3. Does the legal environment create any barriers to execute risk management for your administration?
4. Please characterize the degree of collaboration, information sharing, and/or recognition of risk management matters with other parties in your country and abroad?
5. Which of the following risk management documents (or electronic content) have had an impact on the setting up of risk management at your administration, and to which degree?
6. Do you review and update your risk management approach in order to keep up with the changing environment?
7. How is the risk management function organized at your administration?
8. Does your administration have a strategic management or board-level responsible person to look after the overall risk management portfolio?
9. How are the human resource management aspects to support risk management covered at your administration - assuming that there are specialized "risk management officers" in place?
10. How are the human resource management aspects to support risk management covered at your administration - regarding the whole personnel?
11. Please rank the overall relevance of each type of threat that your administration has to deal with regarding imports to your country?
12. Please rank the overall relevance of each type of threat that your administration has to deal with regarding exports from your country?
13. Does your administration follow systematically pre-defined risk management processes (or cycle models or other formal approaches)?
14. As part of the risk management processes, does your administration carry out quantified analyses, like threat likelihoods and consequences, and apply compliance management, for accepted levels of risk, etc.?



15. How would you characterize the application of risk management processes, techniques, etc., with various customs procedures?
16. Please rank the relevance of various data collection sets, regarding the risk management approaches at your administration.
17. Please rank the relevance of various inspection tools and techniques regarding risk management approaches at your administration.
18. Please rank the relevance (or benefit potential) of each argument when considering priorities for risk management enhancements at your administration.
19. Please rank the main obstacles, barriers, and bottlenecks that may hinder the further developments of risk management at your administration.

### 1.7 Study population

From the list of all member administrations of the World Customs Organization, the research team, in close collaboration with experts from the WCO Secretariat, prepared a range of parameters to determine a reliable and representative sample of countries. Based on the parameters, listed below, 36 administrations were invited to participate in the study – and 24 of them provided replies in due time. The selection parameters included the following four:

- Gross national product (GDP) per capita, i.e., to ensure equal representation between “poor and rich countries”
- Population, with great variety of population sizes represented
- Geographical locations, i.e., all continents represented
- Both seaport countries and landlocked countries

The participating countries in the CRiM study represent all regions of the world, with fairly equal number of participants from four major regions (see Figure 1-2) (*note: not using the WCO six regions here is intentional*).

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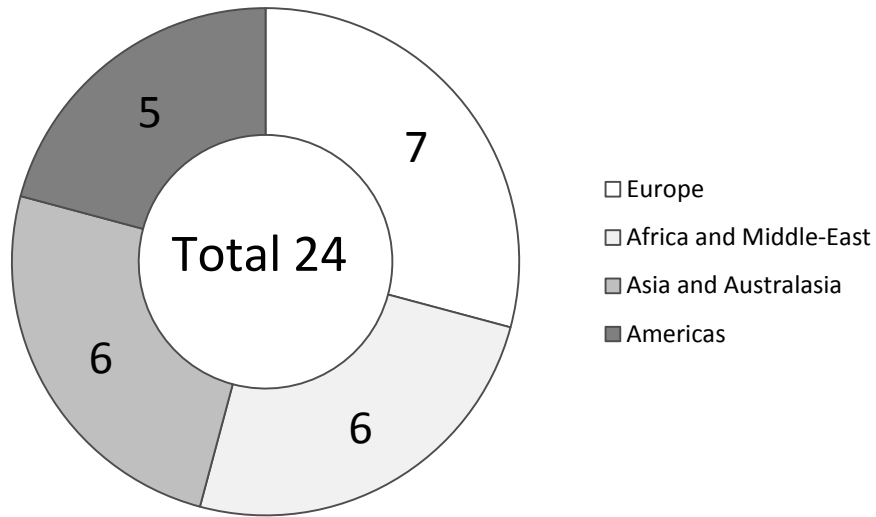


Figure 1-2. Geographical distribution of the respondents

The following graph (Figure 1-3) shows the GDP per capita and population of the 24 participating countries. The graph visualizes countries accordingly with population under 250 million and GDP per capita under 40 000 US dollars. Countries exceeding these numbers are placed at the very end of the y- or x-axis.

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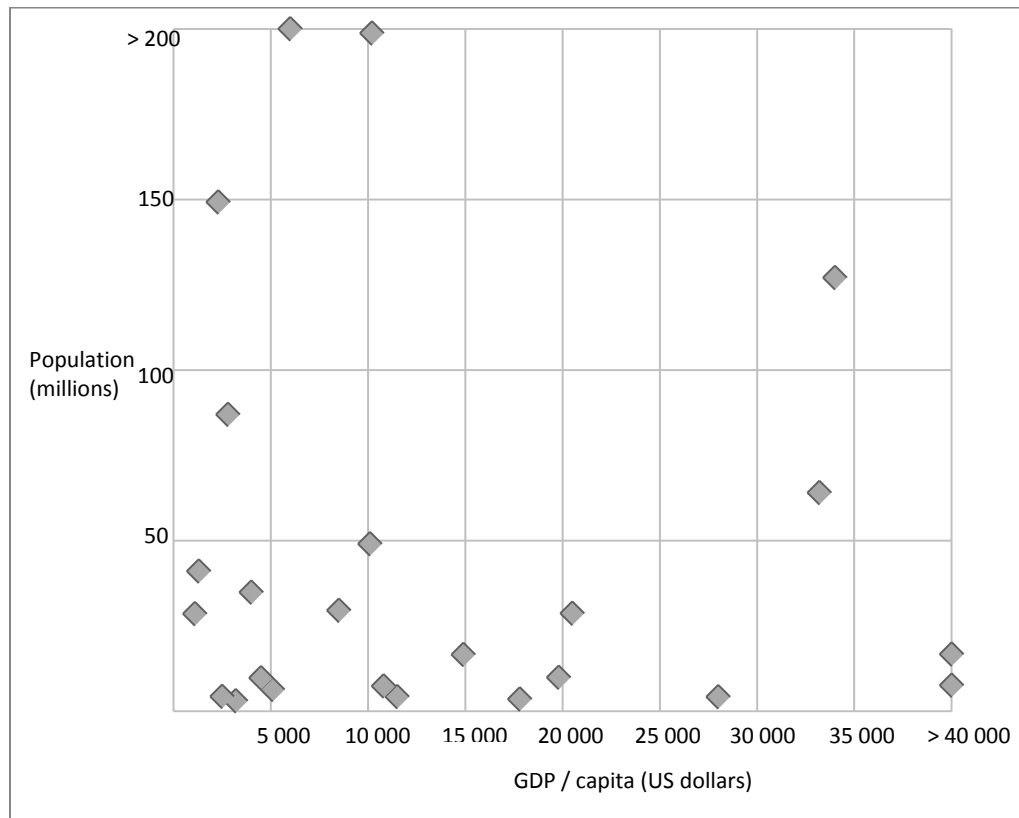


Figure 1-3. Population and GDP/capita of participating countries

In order to explore how differences in wealth affect how customs risk management programs are put into practice, the sample of 24 customs administrations was split into three groups on the basis of gross domestic product (GDP) per capita:

- Top6 includes the six wealthiest countries of the sample, with GDP per capita over 20.000 USD
- Medium12 includes the twelve countries, which have an ‘intermediate’ GDP per capita in the overall sample, from 4.000 to 20.000 USD
- Low6 includes the six countries with the lowest GDP per capita, being less than 4.000 USD

### 1.8 Report structure

The structure for the rest of the report is following:

- Chapter 2. Main findings
- Chapter 3. Comparison between Top6 and Low6 GDP per capita countries
- Chapter 4. Summary, conclusions and recommendations

## 2 Study findings

### 2.1 Linking the questionnaire with the study findings

The questionnaire used for this study consists of 19 questions, listed in Chapter 1.6 (plus full questionnaire laid out in Annex B). In the diagram below, a mapping between the questionnaire (study questions 1 to 19 = SQ1 to SQ19) and the sub-chapters for the findings (Chap2.2 to Chap2.13) is done, in order to provide an overview on which questions were used for which set of actual findings (Figure 2-1).

<b>Definitions for CRiM</b> (SQ2 >> Chap2.2)
<b>Expected benefits of CRiM</b> (SQ18 >> Chap2.3)
<b>Planning of CRiM activities</b> (SQ1 & SQ13 >> Chap2.4)
<b>Review and updating of CRiM processes</b> (SQ6 >> Chap2.5)
<b>Documents, standards and training materials</b> (SQ5 >> Chap2.6)
<b>Organizational set-up with CRiM</b> (SQ7 & SQ8 >> Chap2.7)
<b>Human resources management</b> (SQ9 & SQ10 >> Chap2.8)
<b>Risks regarding imports and exports</b> (SQ11 & SQ12 & SQ15 >> Chap2.9)
<b>Quantified CRiM techniques and CRiM tools</b> (SQ14 & SQ17 >> Chap2.10)
<b>Data sets in use</b> (SQ16 >> Chap2.11)
<b>Information sharing with partners</b> (SQ4 >> Chap2.12)
<b>Bottlenecks in CRiM exploitation and development</b> (SQ3 & SQ19 >> Chap2.13)

Figure 2-1. Mapping between the study questionnaire and study findings

## 2.2 Definitions of CRiM

Customs risk management, CRiM, is not different from other risk management fields with regard to the importance of establishing explicit terminology and definitions. Clear definitions are essential in creating a common and consistent understanding of the subject matter among all stakeholders. Furthermore, mutually agreed terminology, especially when based on international standards or best practices, establishes a solid foundation for the application and future development of risk management within the organization as well as for the development of solid customs cooperation in the field of risk management. The CRiM survey discovered that 83% of the participating administrations have formal definitions for CRiM in place. While these definitions have distinctive characteristics, they share similarities, most of them calling for systematic risk management procedures, including identification, assessment, and constant monitoring of risks in order to more efficiently and effectively detect and prevent non-compliance with the customs law.

Some of the respondents reported using multiple official definitions for CRiM in parallel, while several administrations relied on prevailing CRiM definitions published by the World Customs Organization (WCO) and by the European Commission (EC) - Community Customs Code (CCC) (*note: the latter is natural for those administrations who belong to the European Union*).

- [Risk management means] The systematic application of management procedures and practices which provide Customs with the necessary information to address movements or consignments which present a risk (WCO 2005).
- Risk management means the systematic identification of risk and the implementation of all measures necessary for limiting exposure to risk. This includes activities such as collecting data and information, analyzing and assessing risk, prescribing and taking action and regular monitoring and review of that process and its outcomes, based on international, Community and national sources and strategies (CCC 1992).

Additional explanations provided by the respondents give further insight into how risk management is understood among the customs administrations (see Table 2-1). In some of the cases, risk management definitions are verbatim excerpts from the national customs law. Some countries use multiple (and sometimes contradicting) sources in parallel when defining CRiM. Some of the respondents have a detailed definition for CRiM in place, whereas some customs administrations have a general description of one sentence. Several definitions refer explicitly to the application of continuous improvement. One of the definitions takes into account the upside of risk (which is typically seen in Enterprise Risk

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Management, ERM), encouraging the administration in question to pursue auspicious opportunities.

In Table 2-1, countries that belong to the survey’s six wealthiest countries (by GDP per capita) are grouped under the title “Top 6”. Accordingly, the “Low 6” group includes the six countries with the lowest GDP per capita, and the “Medium 12” includes respondents with a figure falling between these two groups. The breakdown into these three groups is used throughout this report.

Table 2-1 Definitions of CRiM

<b>Top6</b>	<p>Risk management is a systematic way of fighting non-compliance behaviour with the purpose of letting customers voluntarily fulfil their legal obligations.</p> <hr/> <p>Definition by the Community Customs Code (CCC)</p> <hr/> <p>Risk management: the culture, processes and structures that are directed towards the effective management of potential opportunities and adverse effects.</p> <p>Risk management process: the systematic application of management policies, procedures, and practices to the tasks of establishing the context, identifying, analyzing, evaluating, treating, monitoring, and communicating risk</p> <hr/> <p>A systematic application of procedures and administrative activities that may provide the Customs concerned staff with the information required for interdicting suspected consignments and movements that might imply risk for the objectives outlined by the Customs. In addition, it is a work method that aims at achieving maximum benefit from the resources available with the Customs in order to minimize the occurrences of the customs violation and smuggling</p>
<b>Medium12</b>	<p>Definition by the Community Customs Code (CCC)</p> <hr/> <p>Risk management is a logical and systematic process that can be used when making decisions to improve effectiveness and efficiency. Risk Management can be defined as the systematic application of policies, procedures, and management practices to the task of identifying, analyzing, evaluating, treating, and controlling risks.</p> <hr/> <p>WCO definition, ISO definition, national Customs and Revenue administration definition: Risk analysis is a systematic method to identify, evaluate and control events and potential adverse consequences that enables us to achieve compliance with legislative requirements through a mix of facilitation and application of the law. Also provides Management with the specific information to make decisions about threats and to allocate resources to areas</p>

	of high risk.
	Risk Management is a systematic determination of risks and implementation of all necessary measures for restriction of risks, meaning prevention of possibly harmful effects to the country.
	Risk management consists of the application of risk analysis in order to identify situations or players on which Customs Administration must act, including the best moment and way to deal with it.
	WCO definition.
	Risk management involves applying appropriate techniques and analytical mathematical models to assess the probability of a Customs offence.
<b>Low6</b>	Risk management is the systematic application of measures, operational procedures, and practice to enable Customs Authorities to properly allocate its resources for effective management of areas and subjects identified as risky.
	Risks management refers to the systematic use of the information collected by the customs authorities in order to establish the causes and conditions of the risks occurrence, their identification, and assessment of the consequences of non-observance of the legislation.
	Systematic identification, assessment, treatment and monitoring of the risks involved in customs business.
	Definitions by IMF Mission guidelines and UNCTAD risk management report.

### 2.3 Expected benefits of CRiM

Gaining benefits which exceed the costs is crucial for any type of risk management effort in public and private sectors, that goes without saying. The Global Risk Management Survey (AON 2009) interviewed practitioners from multiple industry sectors around the globe. In the survey, a lower total cost of insurable risk was ranked as the number one benefit of coordinated and consistent risk management programs. The survey also revealed that risk management related information supports managers to make more informed decisions on risk-taking and risk retention. According to a survey carried out by Gates (2006), implementation of ERM programs resulted in the following benefits: greater enterprise-level risk information, more precise risk terminology, quantifying risks to the greatest extent possible, reduced risk of non-compliance, and increased awareness and accountability among staff. Academics assert that holistic corporate-wide risk management results in a reduced total risk level (Kleffner 2003). It is also claimed that risk management programs establish a virtuous culture of vigilant risk monitoring in an organization. Kucuk

et al. (2006) conclude that successful risk management programs help business operations run more smoothly and effectively in a turbulent business environment.

This study asked the customs administrations to rank the relevance of CRiM-related benefits. Overall, the potential benefits of risk management support a customs administrations objective for achieving its overall organizational goals, i.e., to protect the safety of citizens, domestic industry, and sovereignty of state (USAID 2008). It is therefore a logical consequence that “achieving better overall organizational objectives” ranks above all other benefits. The results also indicate strong assurance among customs that risk management is the key methodology to simultaneously improve customs control and security on the one hand and trade facilitation on the other. In addition, the respondents expressed a general consensus that by using risk management, customs can improve overall management processes, which eventually leads to improved risk-based resource allocation.

The benefits relating to reputation are ranked between medium and high in relevance. Trusted relationships with the private sector have become a critical component for those customs administrations that have to manage ever increasing trade flows with the same (or even declining) workforce. A good reputation also plays a vital role in partnering with other customs administrations for sharing information (e.g., sharing seizure information, customs offences, and data related to new smuggling trends) or mutually recognizing AEO programs. In addition, a partnership-oriented relationship with the private sector and a good reputation for predictable and fast service delivery can have a significant impact on the competitiveness of the country and its attractiveness for foreign direct investments.



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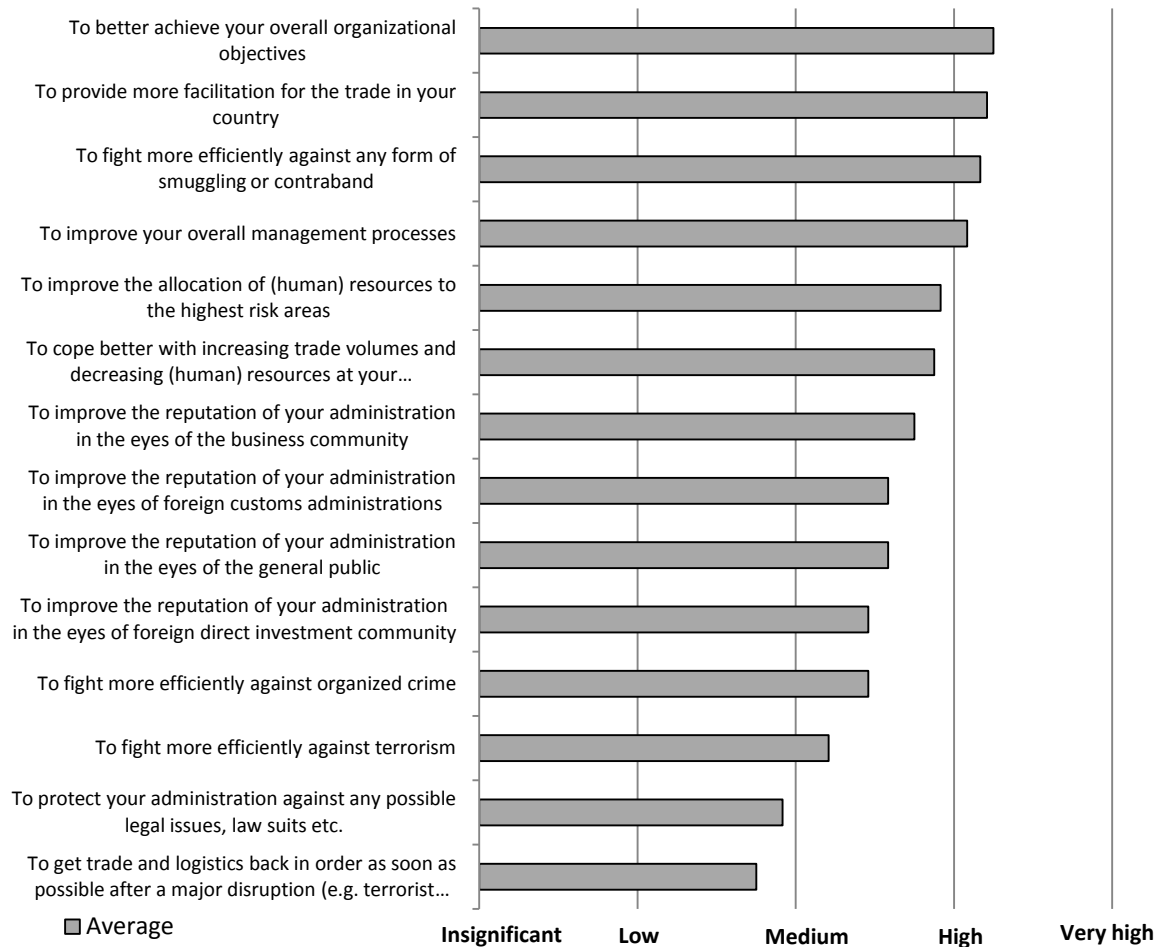


Figure 2-2. Expected benefits of CRiM

### 2.4 Planning of CRiM activities

Successful implementation of risk management in an organization benefits from a prior definition of a holistic risk management strategy in order to integrate risk management activities in the overall business processes, which may have to be adjusted to meet the risk management requirements and objectives. By definition, “strategy” means a long-term plan of action that aims to achieve predefined objectives (Mintzberg 1994). Strategic thinking focuses on understanding the big picture, which includes a thorough consideration of risks and possibilities within an operational environment and an assessment of the strengths and weaknesses of an organization. Abrams (2007) argues that risk management programs should be aligned with organizational strategy. In addition, evidence is found in Public Administration Risk Management and Enterprise Risk Management (ERM) literature that

no risk management program should be implemented without clearly defined objectives (Fraser and Simkins 2007; Auditor General Victoria 2004). ERM literature especially emphasizes a strategic approach in risk management activities. Recent research reveals that a diverse set of leading companies have integrated their risk management programs in their strategic planning (Paladino 2009). Private sector actors argue that linking risk management and strategy helps companies to achieve organizational objectives (Francis 2008). Consequently, embedding risk management programs into the overall corporate strategy plans has become a best practice in the private sector. The latest survey results reveal that a clear majority of companies want to move towards more strategic risk management (RIMS 2009). Mintzberg (1994) explains that strategic planning helps companies survive in a turbulent business environment.

Today, the public sector has to share similar strategic mindset with the private sector. Because of the constant review of budget allocation and private sector scrutiny, the public sector faces increased pressure to enhance productivity. “Do more with less resources” is a frequently repeated mantra. Countering the productivity challenge is not easy. Obligations of public organizations are usually fixed by law, which puts them in a difficult position which makes strategic manoeuvres difficult (Stewart 2004).

The evident trend toward a more strategic approach to risk management, both in the private and the public sectors, led us to formulating the question: “In case you have strategic planning in place for your administration, does it make any reference to risk management?”

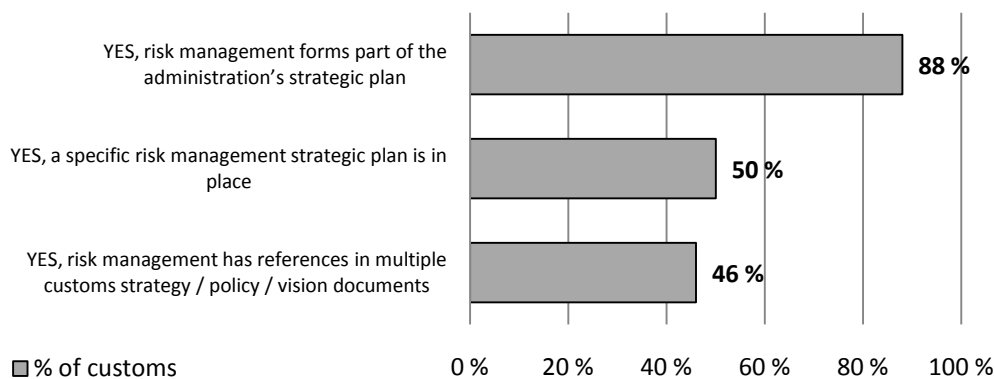


Figure 2-3. CRiM links to strategic planning.

Clear majority of respondents referred in some way to customs risk management in their strategic decision-making process. Around nine in ten (88%) of the respondents reported

that risk management is taken into account in strategic decisions, whereas half of the customs respondents have specific strategic plans in place for risk management activities. Also roughly half (46%) of the administrations make multiple references to risk management in their strategy, policies, and/or vision documents and statements.

When asking explicitly whether the administrations follow pre-defined strategic or operational risk management processes, following observations could be made: on operational level, the majority (79%) do follow pre-defined processes; while on strategic level only around half (46%) claim to do so. And every administration considering the strategic level processes, did also so on operational level, thus leaving around one fifth (21%) of the administrations without any pre-defined processes implemented today (see Figure 2-4). *(Note: the study team intentionally avoided providing a priori definitions for strategic or operational CRiM processes, leaving them for the participating administrations to consider).*

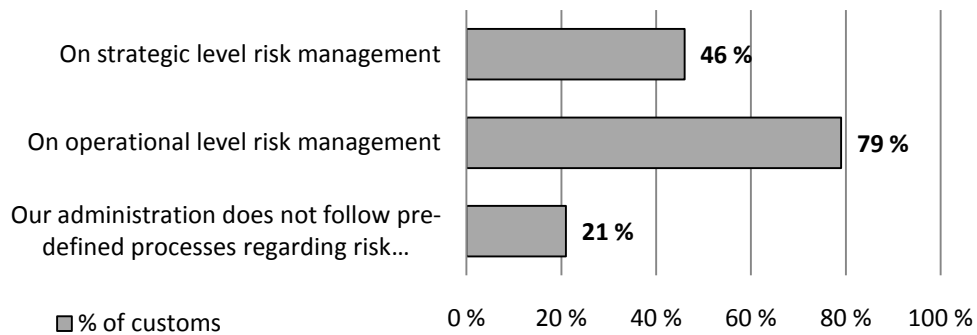


Figure 2-4. Pre-defined CRiM processes followed.

Few of the countries provided detailed descriptions of their pre-defined risk management processes (see Table 2-2), some of the replies distinguishing between strategic and operational risk management processes.

Table 2-2. Descriptions of pre-defined risk management processes.

**Top6**

Strategic: We have enforcement plans for each year, we prioritize and continuously keep working on the next years while learning from the current year. We're currently in the second year of working like this, planning much more in advance, and in general try to find out what's the best way to approach risks.

The whole reorganization will put more emphasis on management in general.

Operational: apart from trying to fit everything in the yearly plans (see above) we

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apply the learning circle (as the EU requires)

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Strategic Risks: Each year an Organizational Risk Profile is completed. This involves an environmental scan, discussions with senior management and others. Identified risks are assessed, evaluated, and ranked. The information is then used for strategic planning and work group annual plans, etc.

Operational Risks: Transactions are lodged, the system checks transaction data for incomplete fields or incorrect data, the transaction is run against the alert database (or applied as manual profiles), matches generate operational activity (could be inspection, questioning, verification of documentation, etc.), information about the operational activity and results is fed back into the system, intelligence analysts process this information to inform subsequent alerts/profiles.

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**Medium12** Risk detection, risk analysis, risk assessment, decision on risk reduction measures, application of risk reduction measures, evaluation of results, risk detection.

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Institute of risk analyses and management in the Customs Administration is organized on 3 levels: strategic – Headquarters of the Customs Administration, operational – Customs Houses and tactical – operational organizational units (Customs Posts and Customs Units). At the strategic and operational level, specialized officers from Risk Analyses and Management Department are engaged (analysts and senior analysts), while for the tactical level, responsible persons are heads of operational organizational units.

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The application of Risk Management as a systematized mechanism of control is supported for the application of institutional alignments, risk priority, consideration of behaviour and international trade trend, which are considered in the Annual Plan of Customs Fiscal Control. This, jointly with the application of analysis techniques and risk assessment resulting from a knowledge process (experience from personnel that carries out control actions), computer processes based on data mining (neural network) and statistical models (including discerning analysis) allows the establishing of risk profiles that support a selection system of DUAs (Customs Unique Declaration) on a concurrent control basis, and a risk basis used for the selection of operators in a subsequent control stage establishing an appropriate channel or control action depending on the intensity of the identified risk and the operational capacity available from the administration’s fiscal control force.

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**Low6** The old Customs law enacted in 1996 does not expressly mention risk management. The new law in force since 1st July, 2008 includes mention of risk management.

Operational analysis staff or Risk Management team in centre, some officers work in other houses and branches, customs to develop good risk management systems in stages namely strategic and operational aspects.

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## 2.5 Review and updating of CRiM processes

The operating environment of customs is characterized by a constantly changing risk landscape. Customs antagonists (including smugglers, traffickers, and fraudsters) are dynamic enemies who review and reshape their operations constantly (see Hintsa et al. 2010, “dynamic behaviour of the enemy”). The illicit operators seek high profits and low-risk “business” opportunities, much as their legal counterparts do, while adopting new ways to conceal contraband, forge trading documents, or solicit customs officers. They do not hesitate to change supply routes if law enforcement is reinforced at a certain border point, that goes without saying.

CRiM survey requested the customs respondents to share whether they have any policies or processes to keep up with the changing environment. According to the CRiM survey, 70% of the administrations replied that they have permanent or regular monitoring and reviewing of risk management practices (Figure 2-5). 17% of the respondents announced that they do not review risk management practices at all. The remaining 13% adjust risk management policies and procedures only reactively, i.e., when security gaps are detected, e.g. in the aftermath of security incidents.

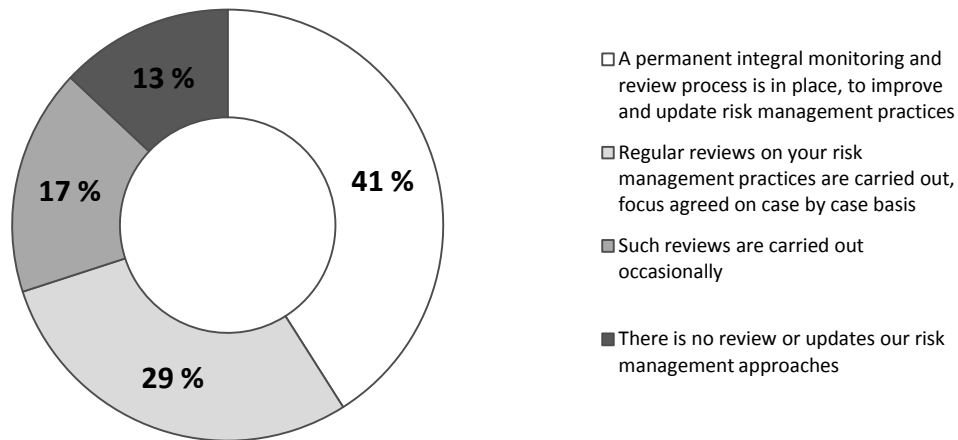


Figure 2-5. Reviewing and updating of CRiM processes.

Review cycles vary from monthly to bi-annually among the respondents. During a review, new risk profiles are added and old ones are updated. As many customs utilize computer assisted risk profiling, identified trends and patterns in the criminal activity are coded and entered in the data systems during the review process. Table 2-3 presents some further

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insights on review processes provided by three of the respondents, all from Medium12 group.

Table 2-3. Descriptions of review processes.

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**Medium12** IT applications used in the course of customs procedures contain risk management modules. It is possible to enter different risk profiles into the system (e.g., units of measurement, linkages, or profiles related to economic operators). These profiles are entered into different IT systems considering irregularities, tendencies and information on numerable risks or those which can be linked with algorithmic (e.g., TARIC code, code of county of origin) and signals are made automatically when a certain risk is identified (in process risk management). Risk factors, considerations and profiles are regularly reviewed and actualized taking into consideration the result of different customs controls (e.g., posterior control, classification of goods made by customs labs). On the basis of identified or proved risks, data on customs procedures are reviewed/filtered. Electronic customs procedures are continuously being checked by auditors and feedback on the results of ordered controls (e.g., goods controls) are entered into the system.

On the basis of the above, central risk management is applied but customs offices have their risk management procedures taking into consideration local specialties.

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Risk profiles are evaluated every three months, then a decision to cancel/improve/prolong risk profile is made. Reports on the effectiveness of risk profiles are made each month. Review of risk management practices is now in process; new risk management organizational structure is planned and should be implemented until the middle of the year 2010.

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Following documents (projects) were proposed to top management of the Customs Administration:

1. creation of proposal and adoption of a document (rulebook) on examination of goods;
  2. proposal for amendment of Codebook – Goods under the customs surveillance;
  3. creation of a guideline for procedure on submitted declarations, selective control of accepted declarations and termination of customs procedure;
  4. establishment of a working group with the task to produce amendments of the current program for processing offence procedures as well as a manual for its implementation.
-

## 2.6 Documents, standards and training materials

In recent years, increasing numbers of good CRiM publications have become widely available. Especially the Internet has enabled rapid distribution of a diverse set of CRiM-related documents, including training material, guidebooks, conventions, and newsletters. WCO has taken a key role in creating and providing CRiM-related knowledge for its members all around the globe. For instance, two salient CRiM-related instruments, the revised Kyoto Convention and the WCO SAFE Framework of Standards (SAFE), have been developed and are being administered by the WCO. Also, the WCO facilitates and encourages informal communication among the member administrations, combined with experts in the private sector and academia. Events like the annual PICARD conference and the recent Customs Risk Management Forum (June 2010) are important platforms to exchange tacit CRiM knowledge among the member customs administrations. Alongside the WCO publications, national and international standards like AS/NZS4360 and the new ISO31000 are important reference materials for customs administrations while developing further their CRiM practices and processes.

Figure 2-6 confirms that customs law is considered as the main reference document when the customs are setting up risk management programs. The WCO SAFE Framework of Standards is ranked as the second most relevant CRiM resource, whereas the Revised Kyoto Convention is ranked third. The provisions on risk management in the Revised Kyoto Convention are contained in Chapter 6 of the General Annex, which is binding for all contracting parties, i.e. these provisions have to be translated into national law. The SAFE Framework of Standards, however, is not a binding instrument, despite the fact that 163 countries have signed a letter of intent to implement it. The Risk Management Guide, also published by the WCO, is ranked as the fourth most relevant CRiM documents. At the same time, high standard deviations (the thin lines in the graph below) indicate that the opinions of the respondents regarding the most relevant CRiM documents vary considerably.

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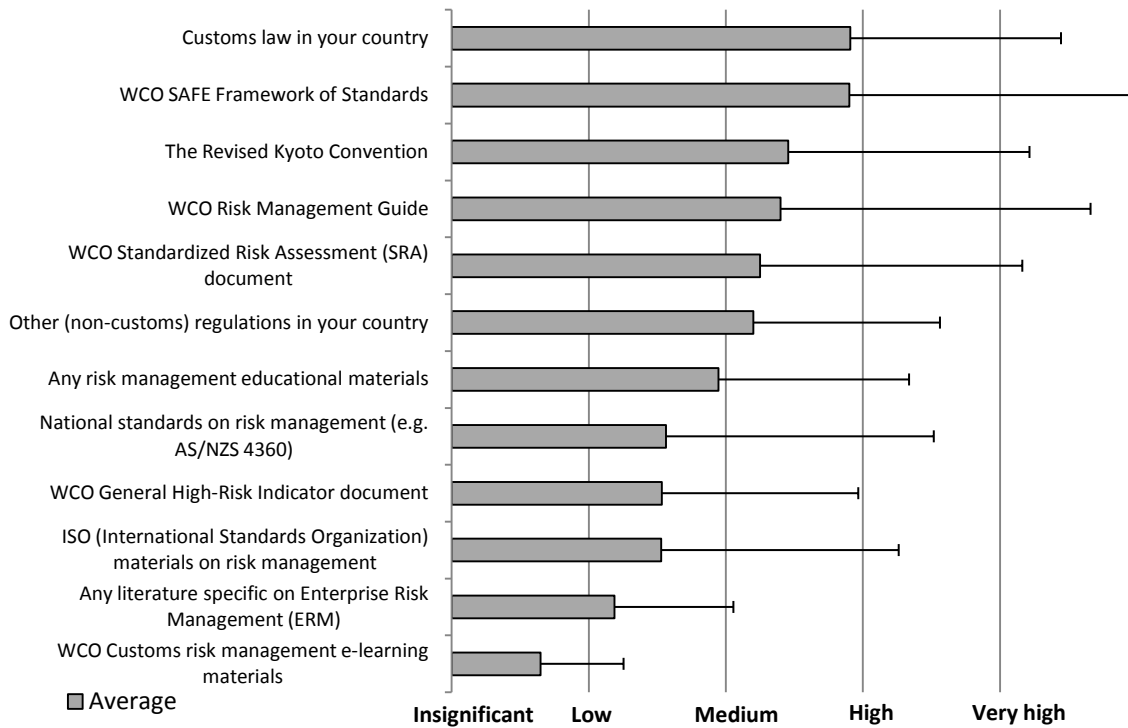


Figure 2-6. Relevance of CRiM-related documents (with standard deviations).

### 2.7 Organizational set-up with CRiM

The embedding of CRiM functions in the organizational structure has a great influence on how CRiM activities are carried out on a daily basis. The organizational structure determines who is vested with the power to make decisions. In case a formal centralized organization is in place, basic guidelines and policies are issued by high-level CRiM officers. These guidelines and policies are directed to the whole customs organization, obligating lower level officers to follow them. This leaves only a little room for discretion for an individual customs officer to carry out hands-on risk management tasks. Although centrally governed CRiM guidelines may suppress discretion, it can also prevent potential “bad practices” in the field. Contemporary enterprise risk management (ERM) literature reveals that a tendency towards centralized approaches can be recognized in the private sector. For example Gates (2006) states that a centralized risk management organization is regarded as the best practice to handle risks holistically in an organization-wide manner in the private sector.



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The CRiM survey inquired how the customs respondents have organized their risk management function. The results show that CRiM planning is often done in a centralized organization and day-to-day risk management activities are carried out in a decentralized manner (66% of the respondents) (Figure 2-7). 17% of the administrations have chosen a fully centralized approach, using possibly some form of “centralized targeting centres” as a practical way of carrying out centralized operations; while another 17% reported that they do not have any formal risk management organization established so far but risk management activities are dispersed throughout the organization.

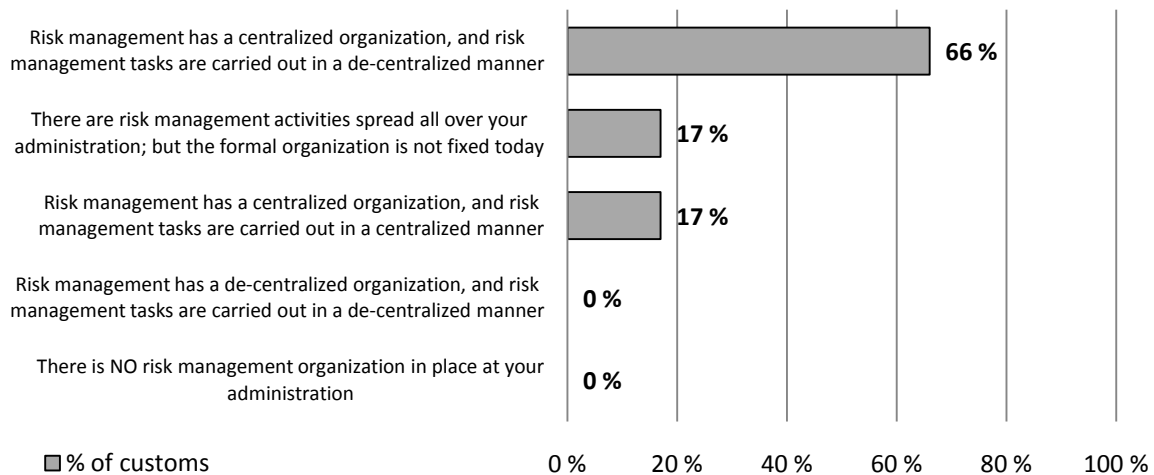


Figure 2-7. Organizational model (high-level) of the CRiM function.

Through Enterprise Risk Management (ERM) literature, involvement of high-level management in risk management activities is claimed to be a precondition for success in risk management programs. Clear majority (83%) of the survey respondents have a strategic management or board-level responsible person dealing with risk management issues (Figure 2-8). Only 9% of the respondents replied that risk management related decisions are made without the involvement of high-level staff.

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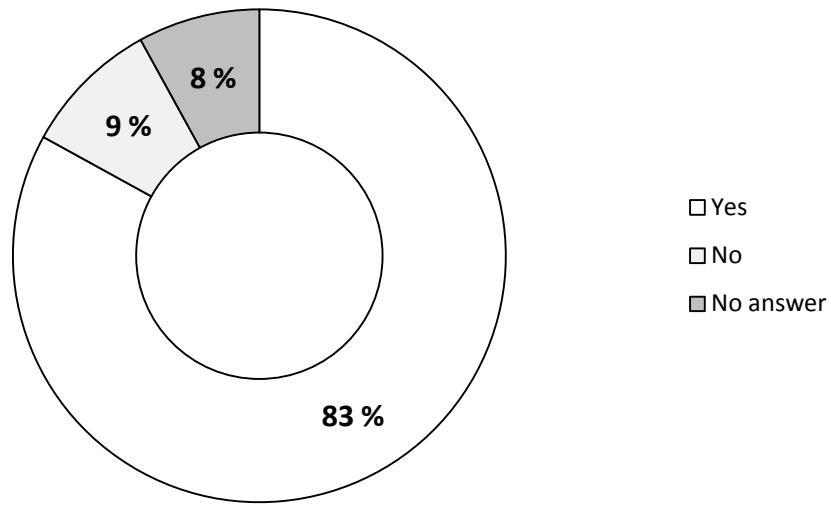


Figure 2-8. Responsibility of high-level officers on the overall CRiM portfolio.

Table 2-4 shows the variety of professional titles of the responsible persons. Without a surprise, many of the persons have the title “head of risk management organization”. In addition, “customs intelligence”-related titles stand out.

Table 2-4. Professional titles of CRiM responsible persons.

<b>Top6</b>	Chef du service Analyse des risqué
	Group Manager Intelligence Planning and Co-ordination (IPC)
<b>Medium12</b>	Head of Violation Prevention division of the Customs Department
	The Customs Intelligence Department.
	Head of Risk Analyses and Management Department
	Head of the Risk Management Division
	Executive Customs Risk Management
	Manager of Customs Intelligence in the Customs field
	Vice Minister of Customs

	Director of Risk Management Directorate
	Head of Customs Intelligent Department
<b>Low6</b>	Head of Risk Management Division, Customs Enforcement Department
	Head of the Risk Management Department
	Director heading the Customs Reform and Modernization Section

## 2.8 Human resources management

Regarding human resources and CRiM, questions were asked from two perspectives: first, in relation to the whole customs personnel (Figure 2-9); and second, in relation to the “specialized CRiM officers”, which were employed by 20 of the 24 administrations (Figure 2-10).

Firstly, the data with the whole personnel is analyzed. Information sharing and dissemination of risk management outcomes appears to take with the majority (71%) of the whole personnel. Regarding CRiM training, half of the administrations provide training for the whole personnel. Concrete allocation of man power towards high risk cargo and conveyances, including having flexible working time schemes in place to match the “high risk arrival times”, was exploited only by around 1/3 of the administrations in the study (Figure 2-9).

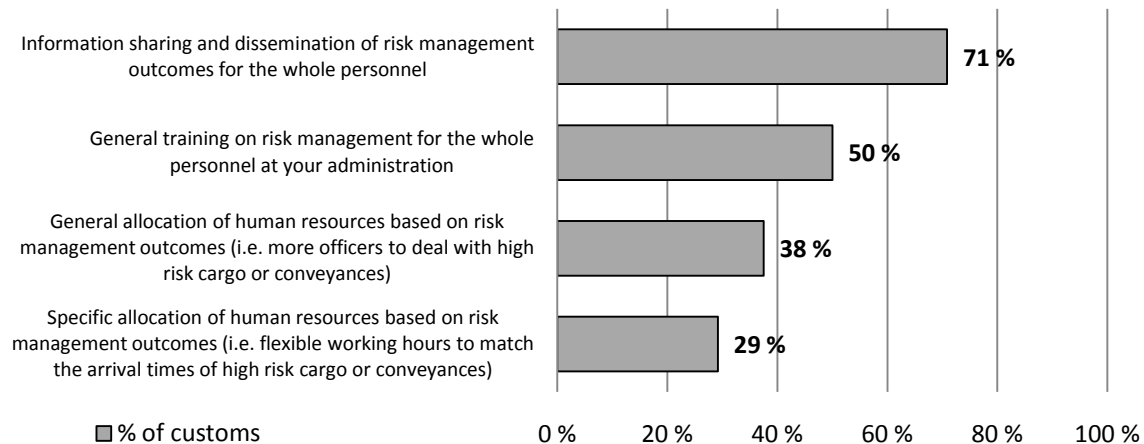


Figure 2-9. CRiM and human resource management issues for the whole personnel.

Secondly, the data about the specialized risk management officers is reviewed. Information sharing and dissemination of risk management outcomes is done at 75% these administrations, while specific CRiM training at 70% and generic training at 65% of these administrations. Specialized risk managers are rarely rewarded for outstanding results from risk management activities. Only 20% of the respondents who employ specialized CRiM officers stated that they have incentive systems for the risk managers in place (Figure 2-10). In addition, only 15% of these administrations have systematic career planning schemes for specialized risk managers in place.



Figure 2-10. Human resource management issues for specialized CRiM officers.

## 2.9 Risks regarding imports and exports

Most of the customs respondents prioritize imports over exports and exports over in-transit shipments in their risk management activities. However, no distinctive differences can be seen between exports and imports when it comes to priorities of 15 different risks (Figure 2-11). Both for imports and exports, misdeclaration of goods, i.e., fiscal fraud in terms of value, quantity, HS code, and country of origin are the most significant risks for the customs respondents, along with smuggling of narcotics. At the other end of the spectrum, smuggling of radioactive materials and weapons of mass destruction are ranked between low and medium in relevance. However, there was a large variation between the lowest and the highest GDP per capita countries, which will be explored in a later chapter of this report.

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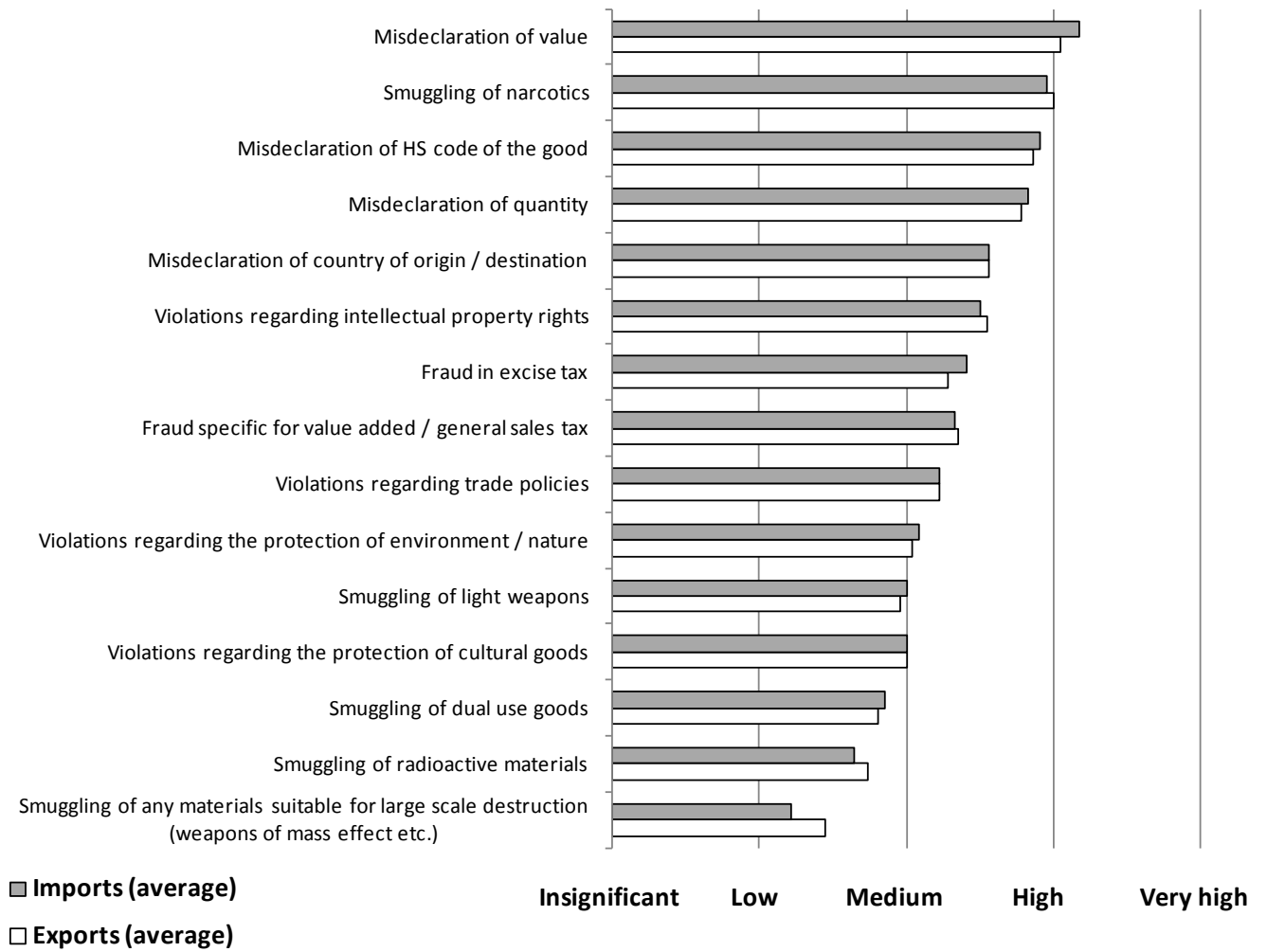


Figure 2-11. Threat ranking for imports and exports

## 2.10 Quantified CRiM techniques and CRiM tools

Quantification of crime and terrorism related risk likelihoods and consequences is an important but highly complicated CRiM task – especially when it comes to those “low likelihood, high consequence” –events, such as acts of terrorism could represent (see e.g. Hints et al 2010). Such challenges are reflected in the study results, as the “threat likelihood times consequence” type of quantification is carried out only by half of the administrations participating in the study (Figure 2-12). Regarding on another angel of risk quantification: accepted levels of risk are determined by 50% of the respondents on economic operator level, and by 42% of overall level (of economy). Finally, 1/3 of the respondents state they do not follow any formal risk management processes with quantified techniques.

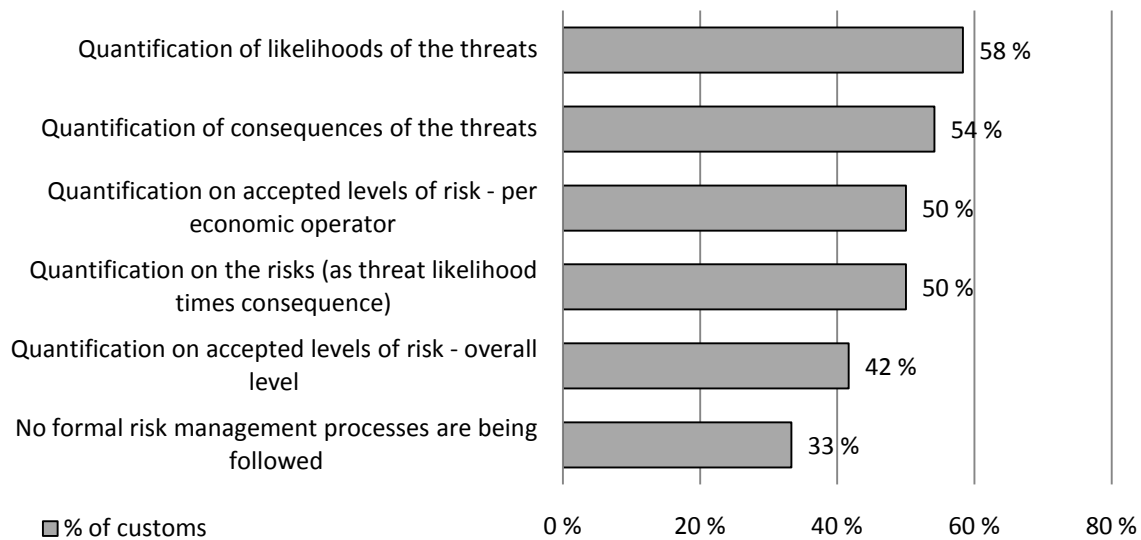


Figure 2-12. Exploitation of quantified methods with CRiM.

Next to the quantified CRiM techniques, many other tools and techniques are available to support the risk-management work of customs administrations, some being more commonly used than others. According to the survey, customs deploy a broad set of hands-on CRiM tools (Figure 2-13). Post-clearance audits were considered as the most commonly used approach for the overall risk management, followed by inspection reports on risk management outcomes (both negative and positive) and enforcement and seizure reports (*note: there can be different schools of thought, were post-clearance audits could be considered not to belong to the core set of CRiM techniques and tools; but, for the purpose of this report it has been included, following the understanding with the participating*

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customs administrations). At the other end of the spectrum, X-ray imaging and radiation detection equipments are among the least used risk management tools, possibly because of low threats and/or high costs associated with such tools. Differences between the high and low GDP per capita countries are reported later in this report.

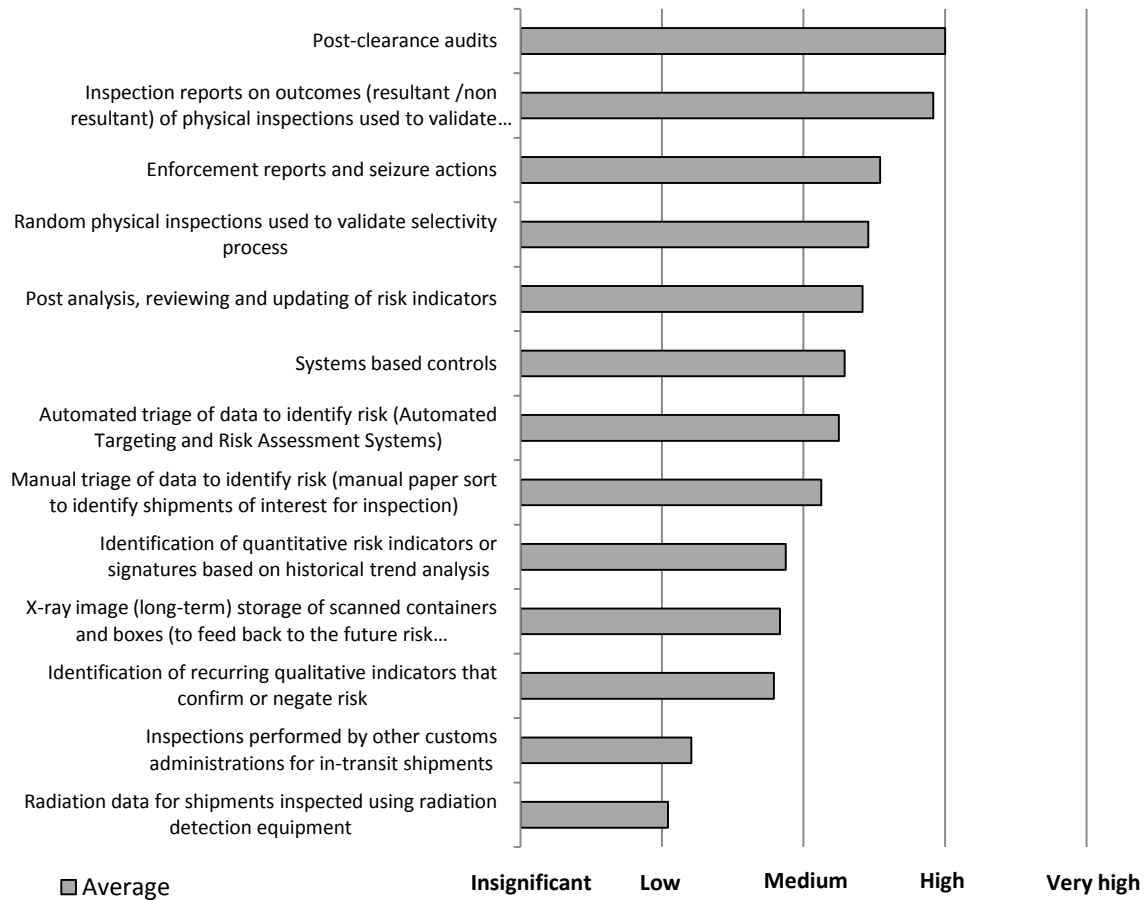


Figure 2-13. CRiM tools and techniques in use.

2.11 Data sets in use

Sources of reliable and timely information are normally considered to be prerequisites for functional CRiM processes. According the survey results the customs gather CRiM related intelligence from multiple sources - scarcity of information sources is not a bottleneck for CRiM. By utilizing multiple data sources, the customs avoid a pitfall of being dependent on sole, potentially biased information channel. On the other hand, effective exploitation of

numerous sources of intelligence calls for sophisticated data combination and analysis techniques.

Regarding the actual data used in CRiM processes (Figure 2-14), standard cargo declaration data sets are reported to be the most important source, followed by intelligence received internally from customs. Long term data storage on risk assessment and possible inspections are also considered an important source of information by the participating administrations. Collaborative information sharing with foreign customs administrations and other governmental agencies is a relevant but not one of top sources of information. Pre-departure and pre-arrival data sets have the lowest priority, next to data received from electronic seals.

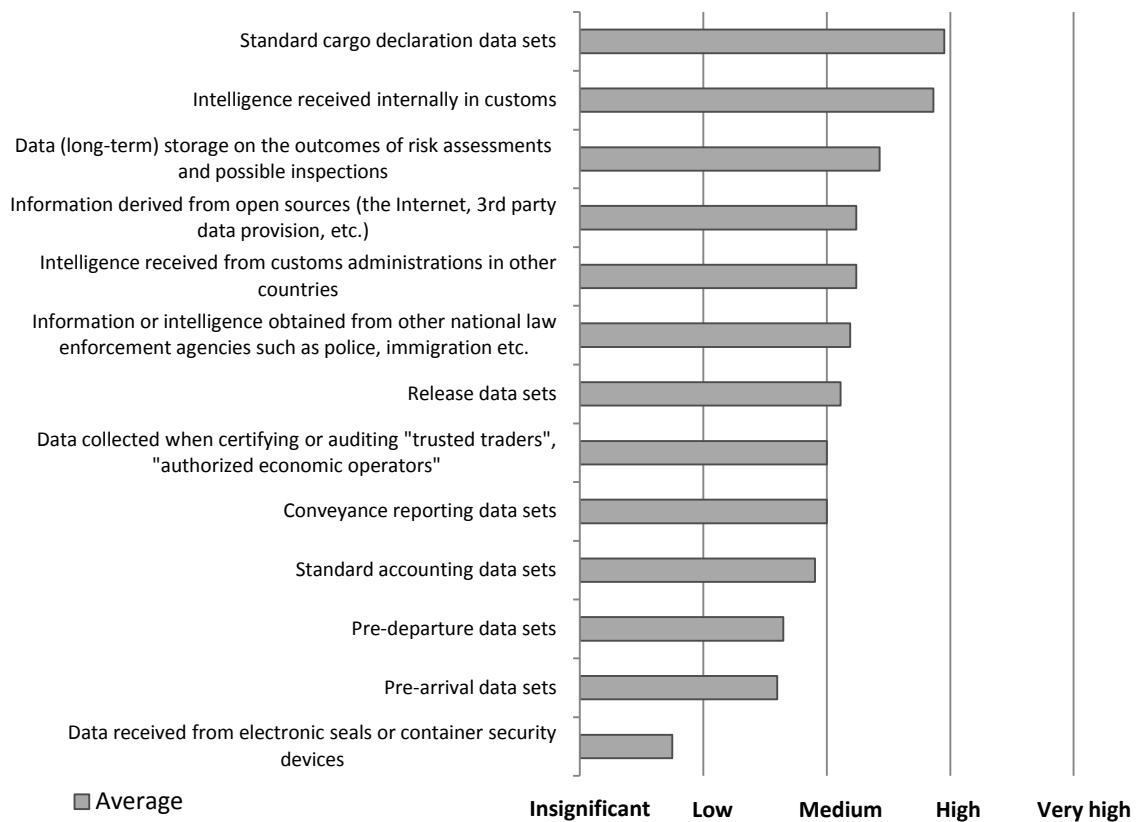


Figure 2-14. Data sets in use in CRiM processes.

## 2.12 Information sharing with partners

Literature across the risk management domains recommends a close information exchange between entities that have risk management related intelligence (Deloitte 2003, AON



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2009). Customs administrations were asked to assess their degree of collaboration, information sharing, and/or recognition on risk management matters with other parties both in their home country and abroad. The respondents are willing to collaborate with other authorities only to a limited extent (low to medium) (Figure 2-15). Information is shared mainly between customs administrations in neighbouring countries and with domestic police forces. In addition, various governmental agencies and private sector entities are exploited as information sources, but according to the survey, collaboration is neither intensive nor routine. The lowest degree of information sharing takes place with immigration, environment protection, and health agencies.

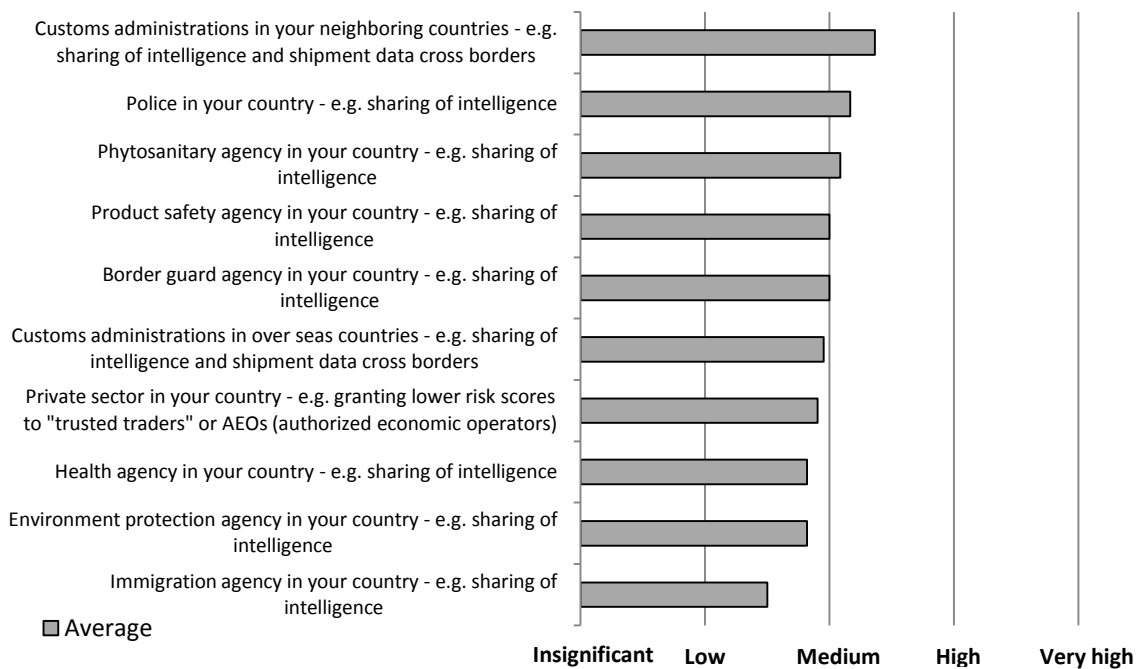


Figure 2-15. Inter-organization CRiM-related information sharing.

Following additional agencies involved in information sharing were mentioned by the respondents:

- Europol
- General department of taxation
- Border Sector Collaboration Group

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- Foreign Exchange Inspectorate
- Anti Money Laundering Administration
- Ministry of Justice

Several respondents provided further descriptions on how they collaborate with other agencies and the private sector. Detailed descriptions are presented in Table 2-5 below, highlighting the importance of establishing Memorandum of Understanding (MOUs) with other public administrations and the relevance of implementing Authorized Economic Operator (AEO) programs with the private sector, as foundations for formal collaboration.

Table 2-5. Description of collaboration.

<b>Top6</b>	<p>National legislation provides for such collaboration or permits the signing of agreements with co-players with regard to information exchange and collaboration</p> <hr/> <p>Authorized Economic Operator status is under development</p> <hr/> <p>Mechanisms vary – with the majority we have MOUs (Memorandums of Understanding) and agreements in place that provide the framework for sharing information and intelligence (some of which is based on supporting legislation or international conventions, some of which on the agreement itself). With respect to intelligence sharing, this is primarily on a selected distribution basis (e.g., depending on the product we identify and what other parties and agencies may have an interest in), although we do have some joint units that incorporate staff from multiple agencies and some established forums and conferences that support this sharing. With respect to information sharing, these can either be automated through our system (in terms of transaction data) or on a by request basis.</p> <p>With respect to collaboration, this is again through specific agreements and by request, but we also have an established Border Sector Collaboration Group (which incorporates Customs, our bio-security, immigration, aviation security, food safety and internal affairs agencies).</p>
<b>Medium12</b>	<p>Cooperation with the police/border guard agency includes the share of information and notification about the emergence or development of different tendencies. Regarding foreign customs administrations, co-operation means mutual assistance and the share of information about presumed or identified risks, e.g., through the RIF (Rapid Inquiry Facility) system with EU Member States. Besides, we have agreements on the exchange of data regarded as customs information for control purposes with three individual states in the EU, plus one more under preparation.</p> <hr/> <p>Sharing of information is based on mutual assistance agreements and agreements on cooperation.</p>

	AEO program is in pilot plan
	Foreign Exchange Inspectorate, Anti Money Laundering Administration, Ministry of Justice
	Most agencies ticked above (question options) participate in the importation process, mainly regarding administrative control. Private sector cooperates specially with information on pricing and product identification. Since 2004, a kind of Authorized Economic Operator (AEO), has been in place. Firms that meet the requirements and enable it to operate voluntarily in this AEO program have their operations for import, export and transit customs targeted, preferably for the green channel for verification and express processing of customs clearance (fast track). The firms are considered 'low risk'.
	For instance, signing MOUs.
<b>Low6</b>	General Department of Taxation, The information sharing and mutual assistance with customs administrations in neighbouring countries or overseas countries are based on Co-operation Agreement or MOU; for example: Agreement on Co-operation and mutual assistance with two administrations; MOU with one administration. Several documents stipulate the co-ordination mechanism among law enforcement authorities.
	Pre-arrival information exchange with one administration, in place since 2008.
	Co-operation in terms of exchange of data seems to be in slow pace.

### 2.13 Bottlenecks in CRiM exploitation and development

Basically all risk management domains struggle with the same practical problems regarding the implementation of risk management programs: challenges to demonstrate (positive) return-on-investment (ROI) results; complex and costly risk management processes; insufficient resources; and lack of skills are perceived to be the most significant barriers in adopting more strategic risk management (RIMS 2009).

Within the CRiM survey, lack of training in risk management is ranked as the number one bottleneck hindering the further development of risk management programs. Other significant bottlenecks were lack of performance indicators and lack of concrete feedback loops from the risk management outcomes back to the planning stage (Figure 2-16). The respondents also ranked lack of incentives and rewards for risk management officers, complexities in risk quantifications, and lack of dedicated IT tools as salient bottlenecks. These three types of bottlenecks were not so common in the risk management literature, thus indicating them to be more CRiM-specific problems. The other two obstacles for CRiM, i.e. lack of CRiM budgets and lack of organizational support, account for most public and private sector management issues, thus making them quite generic in nature.

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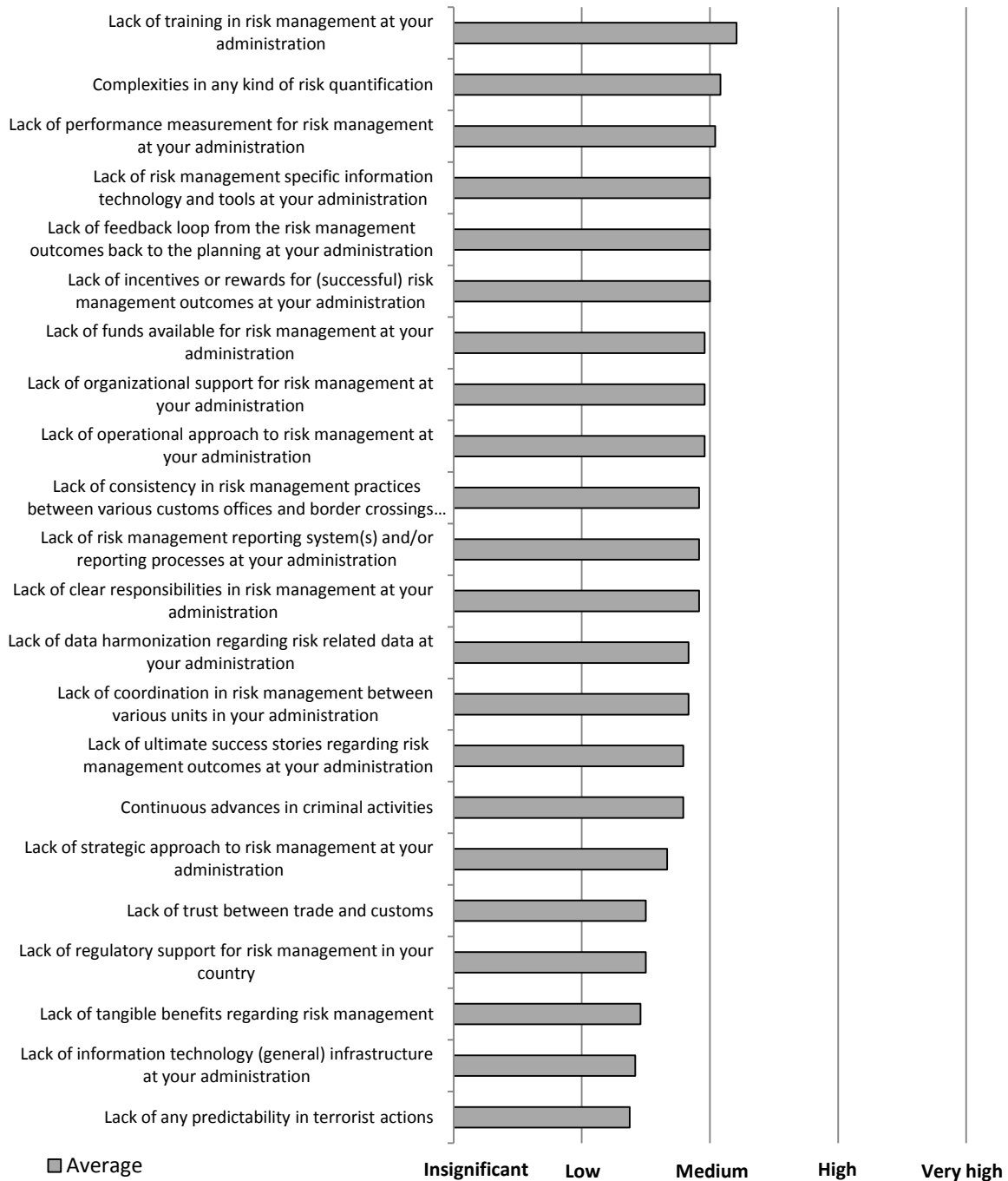


Figure 2-16. Ranking of perceived obstacles and bottlenecks with CrIM.

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Legal environment can also be a root cause for the inability to apply risk management principles. For example, if regulations oblige customs officers to inspect every shipment, the customs administration has abandoned the room for a risk-based approach in favour of a risk-adverse approach. The legal environment is a significant factor that can hinder many customs administrations from effectively applying the principles of risk management. Examples of such legislation are presented below, with a simplistic interpretation following in parentheses:

- “For the purpose of establishing the truthfulness of the declaration, Customs officers shall inspect the declared goods.” (This can imply 100% inspections.)
- “Customs will apply principles of risk management in examining the documents.” (This leaves out the physical examination, which may be compulsory.)
- “Using risk management techniques, Customs may only inspect part of a shipment.” (This can mean that every shipment still has to be opened.)
- “Customs apply principles of risk management when dealing with compliant traders” (One could argue that risk management should focus on non-compliant traders.)

The survey inquired with the customs administrations participating in this study whether the legal environment created any barriers to execute customs risk management activities. 29% of the customs reported that application of risk management processes is restrained by their legal environment (Figure 2-17). Restraining legislation may decree obligations to customs officers. For example, the law can oblige the officers to check every shipment/container to a certain extent.

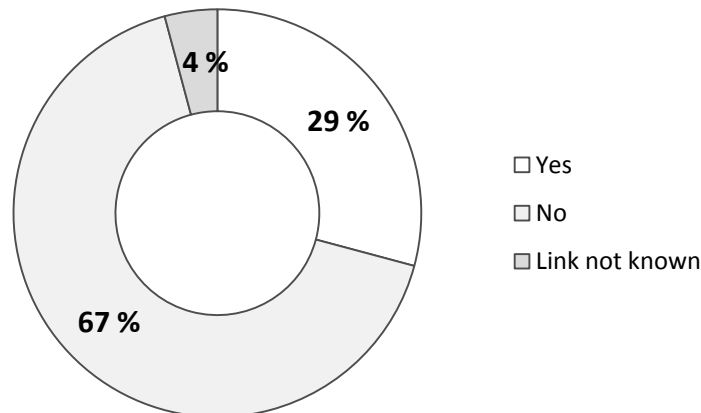


Figure 2-17. Legal barriers hindering full exploitation of CriM.

### **3 Comparison between Top6 versus Low6 in GDP per capita**

#### **3.1 CRiM benefits**

As briefly indicated in the previous chapter, several observations were made regarding the differences between the lowest six GDP per capita countries (Low6) and the highest six GDP per capita countries (Top6). Beginning with the benefits of CRiM (see Figure 3-1): as an overall observation, the benefit profiles were quite similar between the two groups, the Top6 GDP countries providing overall higher (qualitative) values to CRiM benefits than the Low6 GDP. ‘Coping better with increasing trade volumes and decreasing resources’ and ‘Improving the reputation of the administration in the eyes of both business community and general public’ are two examples that were perceived as having greater relative importance in Low6 GDP countries than in the Top6 GDP countries. And vice versa, ‘Providing more facilitation for trade in your country’ and ‘Fighting more efficiently against any form of smuggling or contraband’, were rated higher (both in relative and absolute terms) in the Top6 GDP countries.

## CUSTOMS RISK MANAGEMENT SURVEY – CBRA 2011

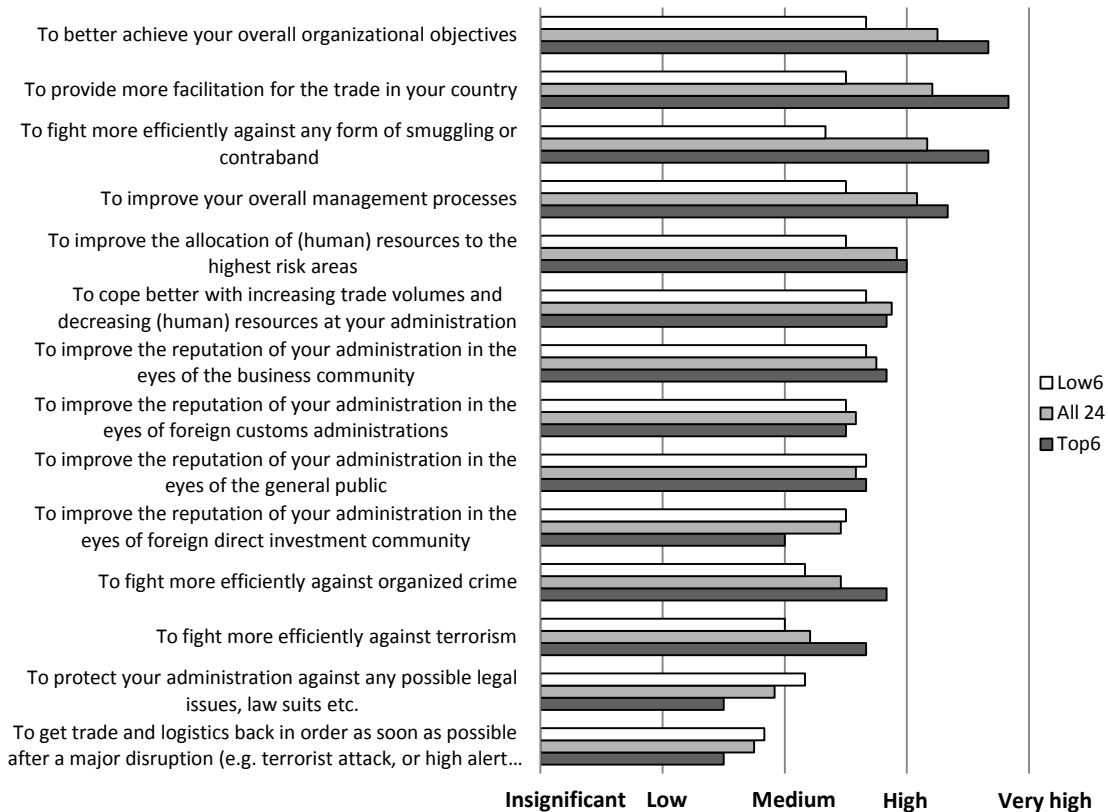


Figure 3-1. Anticipated benefits of CRiM.

### 3.2 Human resource management

Several questions in the survey focused on human resource management and CRiM. Specialized risk management officers, training, and selection of (future) CRiM officers were reported to be done more systematically in the Top6 GDP than in the Low6 GDP countries (see Figure 3-2). For example, ‘Sharing of risk management outcomes between the specialized CRiM officers’ and ‘Selection and assignment of specialized risk management officers’ are done in all of the Top6 GDP administrations, but the former only in one and the latter in three of the Low6 GDP administrations. At the same time, ‘Incentives on successful risk management outcomes’ and ‘Systematic career planning for specialized risk management officers’ were taken care of by only two (former) and one (latter) of the Top6 administrations, and none of the Low6 ones, thus making today’s situations quite similar between the two groups.

CUSTOMS RISK MANAGEMENT SURVEY – CBRA 2011

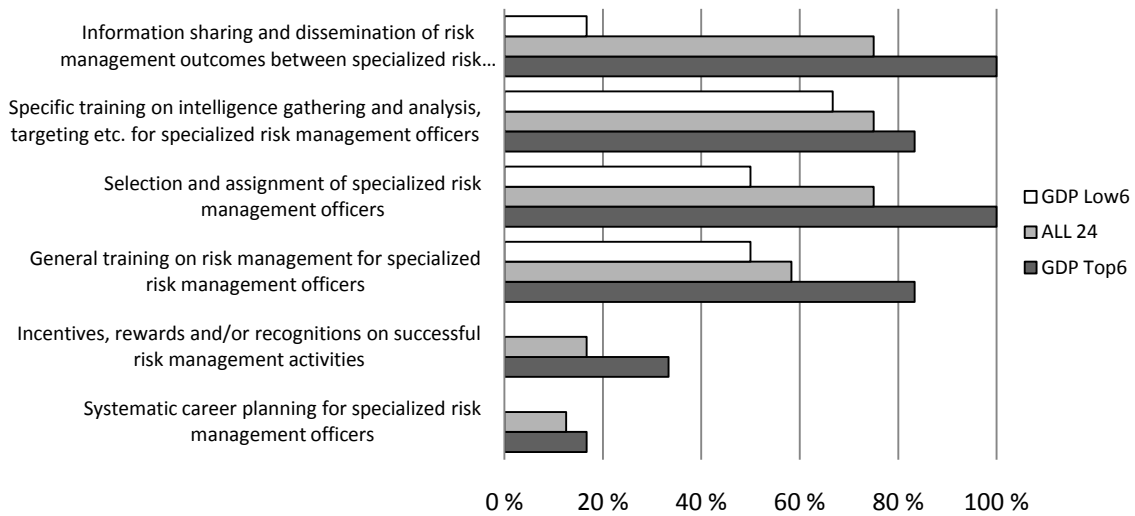


Figure 3-2. Human resource management relating to specialized CRiM officers

**3.3 Risk priorities for imports**

In reviewing the risk priorities between the two groups, not surprisingly aspects dealing with direct fiscal fraud – ‘Misdeclaration of value, quantity and HS code of the goods’ - were perceived to be of higher relative relevance by the Low6 administrations compared to Top6 administrations (see Figure 3-3). On the opposite side, the Top6 administrations were much more concerned with ‘Smuggling of narcotics’, ‘Violations regarding intellectual property rights’, ‘Misdeclarations of country-of-origin’, ‘Fraud in excise tax’, and ‘Smuggling weapons suitable for large scale destruction and radioactive materials’.



CUSTOMS RISK MANAGEMENT SURVEY – CBRA 2011

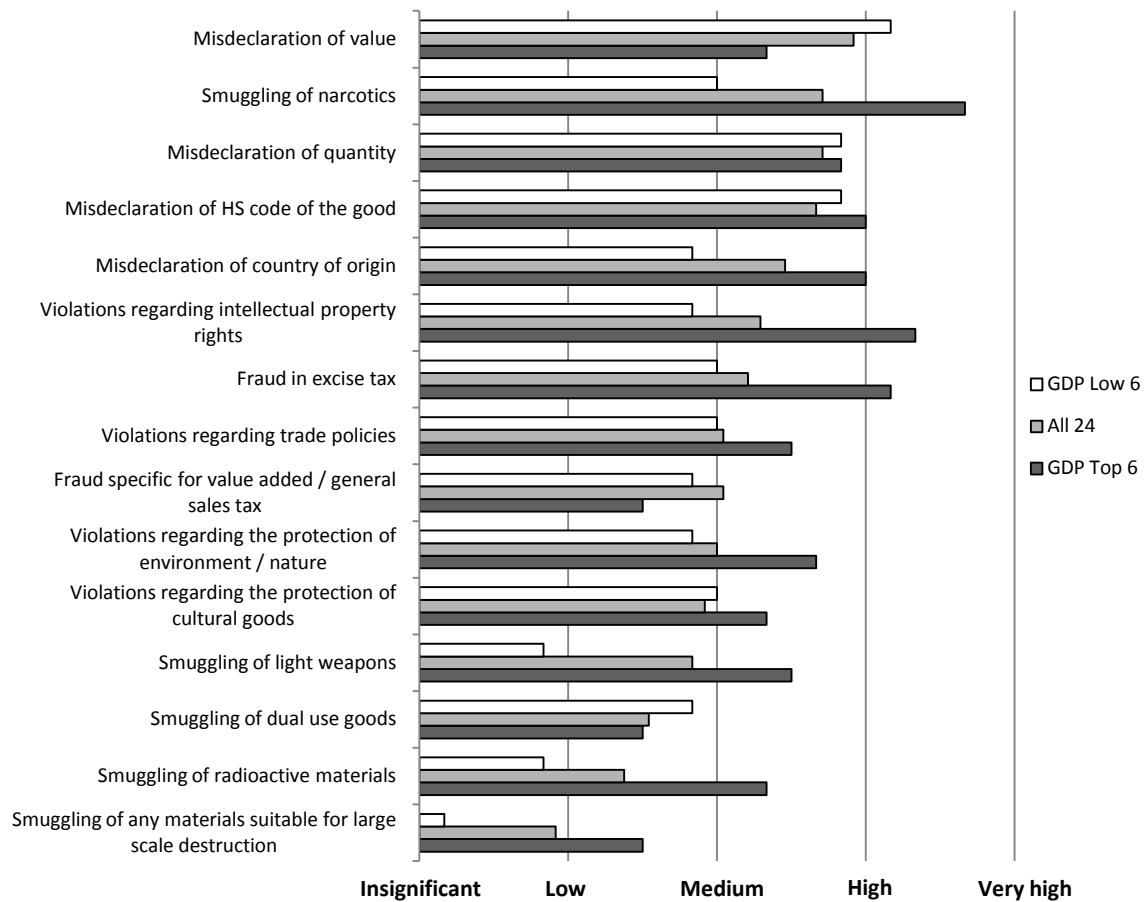


Figure 3-3. Threats regarding imports.

### 3.4 Data collection sets

For data collection sets used for CRiM, the relative rankings were again quite similar between the two groups (see Figure 3-4); both groups ranked ‘Intelligence received internally from customs’ and ‘Standard cargo declaration data sets’ at the top. The main difference, just as with the perceived benefits, was that the Top6 administrations indicated generally higher relevance on data exploitation than the Low6 administrations. As a more detailed observation, ‘Information or intelligence obtained from other national law enforcement agencies such as police and immigration’ and ‘Data collected when certifying or auditing trusted traders or authorized economic operators’ had relatively higher relevance for the Top6 administrations.

CUSTOMS RISK MANAGEMENT SURVEY – CBRA 2011

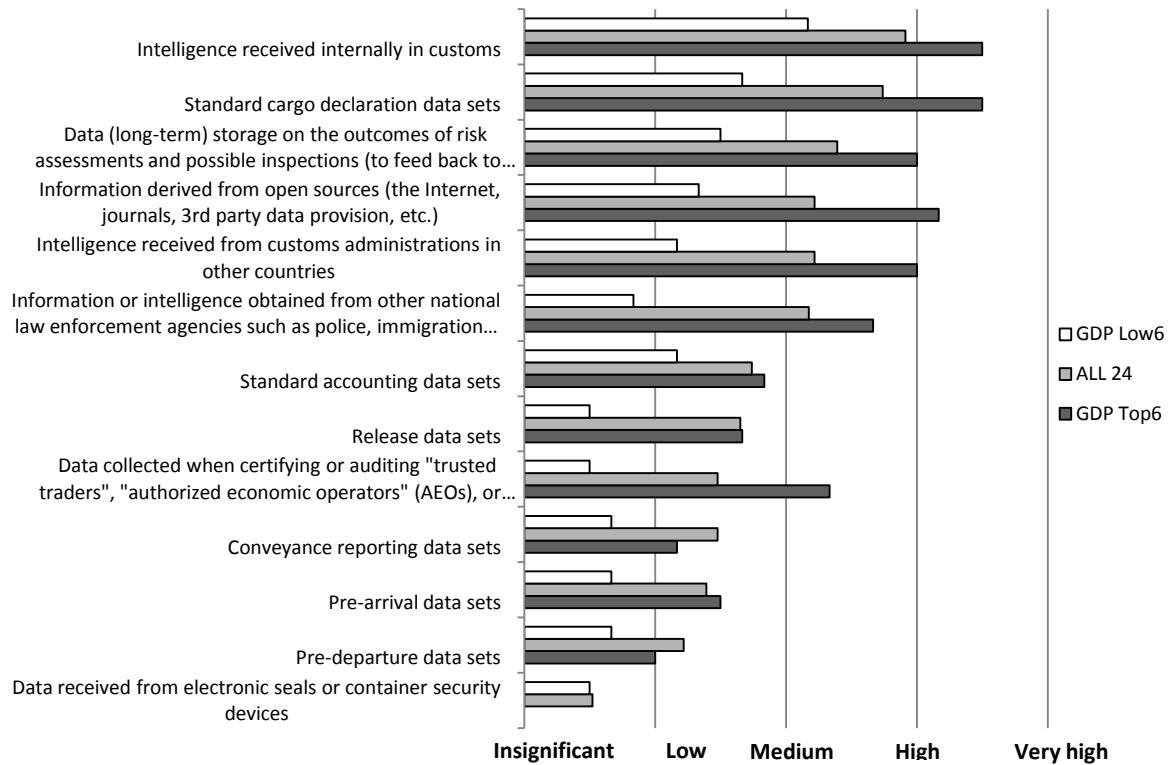


Figure 3-4. Data sets in use.

### 3.5 CRiM tools and techniques

With regard to the use of inspection tools and techniques, major variations exist between the two groups (see Figure 3-5). In general, the Top6 GDP countries are more active here, having graded most tools between medium to high in their importance; for Low6, the scale between low to medium was the most common, across the various CRiM tools and techniques. For the Low6 GDP group, ‘Random physical inspections used to validate selectivity process’ had more relative importance than for the Top6 GDP countries. For the Top6 countries, both ‘Automatic and Manual triage of data to identify risk’ were ranked much higher than for the Low6 countries, as well as ‘Identification of quantitative risk indicators or signatures based on historical trend analysis’ and ‘Post analysis, reviewing and updating of risk indicators’.

## CUSTOMS RISK MANAGEMENT SURVEY – CBRA 2011

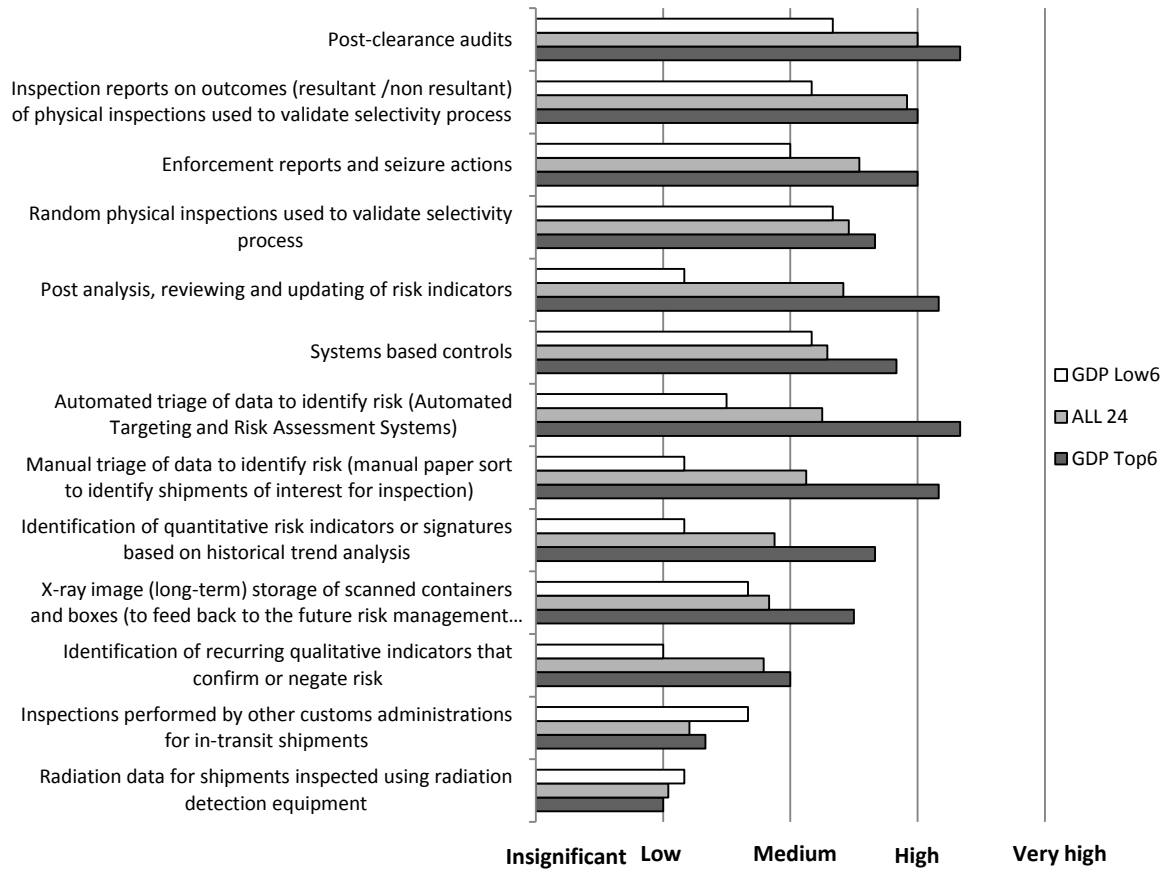


Figure 3-5. CRiM inspection techniques and tools in use.

### 3.6 Bottlenecks with CRiM implementations

As the last item of comparison between the two groups, hurdles and bottlenecks were ranked generally higher by the Low6 GDP countries than by the Top6 GDP countries (see Figure 3-6). There is a clear indication that the Low6 GDP countries are struggling with implementing consistent CRiM processes and procedures as most of the 22 bottleneck aspects provided in the survey, were perceived as having a medium to high impact. The biggest variation between the Low6 and Top6 administrations comes with the following four bottleneck items: ‘Lack of incentives and rewards with CRiM success’, ‘Lack of risk management training’, ‘Lack of operational approach to risk management’, and ‘Lack of data harmonization regarding risk related data’.

## CUSTOMS RISK MANAGEMENT SURVEY – CBRA 2011

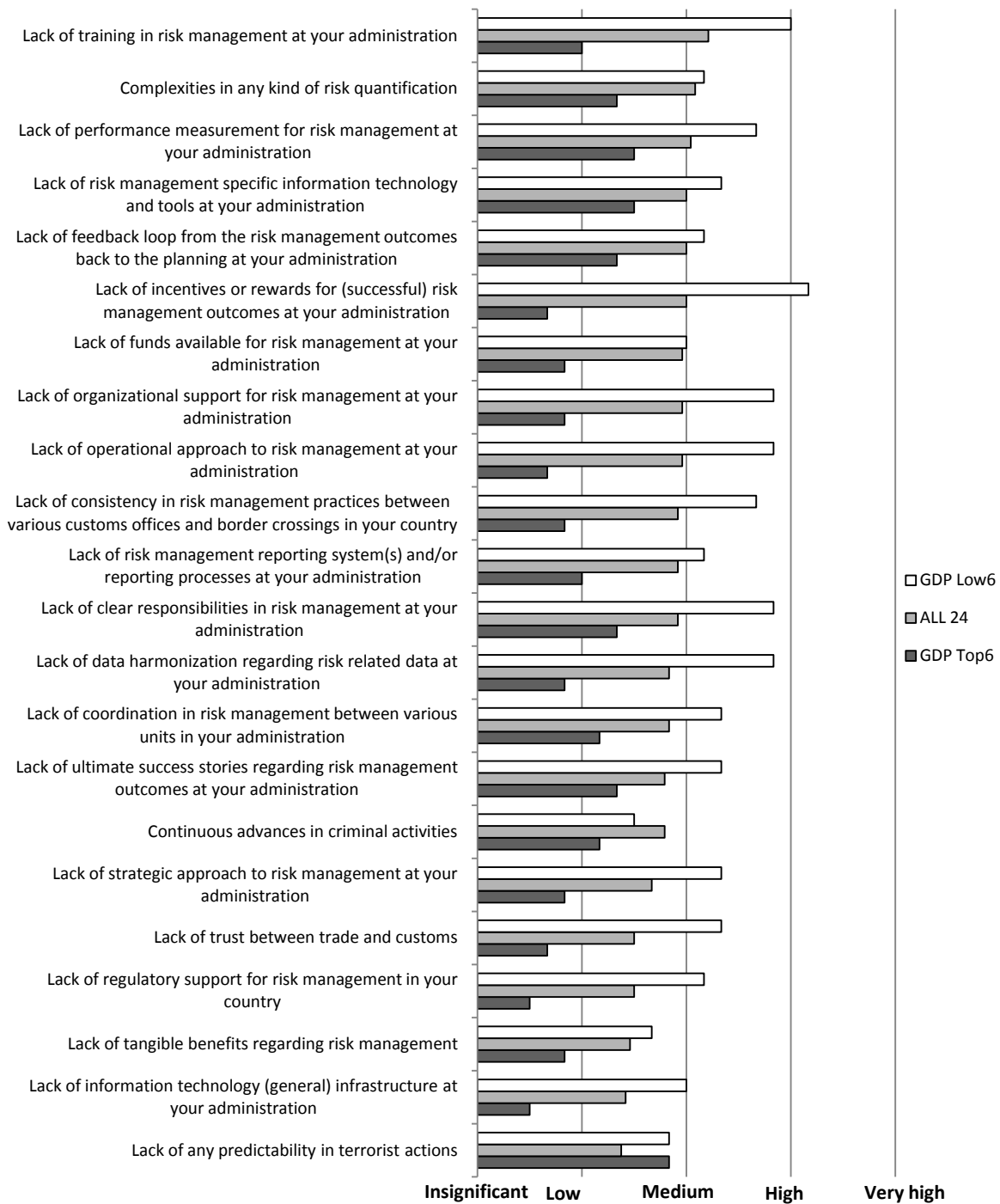


Figure 3-6. Bottlenecks in implementation of CRiM programs.

## 4 Summary, conclusions and recommendations

This paper has presented the results of the first global survey on customs risk management (CRiM). The goal of this study was to explore the current usage and future potential of CRiM programs amongst World Customs Organization (WCO) member administrations, based on these three research questions:

1. What are the essential components and what is the state-of-play like regarding CRiM today, on global scale?
2. Which aspects of CRiM differentiate administrations located in high GDP per capita versus low GDP per capita regions / countries?
3. What can be done and how to improve CRiM on both strategic and operational levels, at various WCO member administrations?

This last chapter of the report presents a brief summary and conclusions regarding research questions 1 and 2, as well as a comprehensive list of recommendations, as the response to research question 3.

### **Research question 1. What are the essential components and what is the state-of-play like regarding CRiM today, on global scale?**

Regarding **the first research question** results from this study show that the majority (83%) of the participating administrations have **formal definitions for CRiM** in place, most of them calling for systematic risk management procedures, including identification, assessment, and constant monitoring of risks in order to more efficiently and effectively detect and prevent non-compliance with the customs law. When observing **perceived CRiM benefits**, “achieving better overall organizational objectives” ranks above all other potential benefits. CRiM is also seen key methodology to simultaneously improve customs control and security on the one hand and trade facilitation on the other.

A clear majority (88%) of the respondents stated that CRiM is **somehow included in customs strategic plans**, but only around half (46%) claim that they follow pre-defined strategic risk management processes. On **operational level**, a majority (79%) of the administrations do follow **pre-defined CRiM processes**.

Most of the participating administrations (70%) replied that they have permanent or regular **monitoring and reviewing** of risk management practices in place, while the rest do updates in a reactive mode, or, do no updates at all. Customs law is considered as the main **reference document** when the CRiM programs are being set up, followed by WCO SAFE Framework of Standards, Revised Kyoto Convention and WCO Risk Management Guide.

From **organizational perspective**, CRiM planning is commonly done (66%) in a centralized organization and day-to-day risk management activities are carried out in a decentralized manner. The rest of the administrations either go with a fully centralized approach, or, without a formal CRiM organization in place. Regarding **human resource management**, CRiM training and information dissemination is done by the majority (between 70 to 75%) of the administrations. 20 out of the 24 administrations employ “specialized CRiM officers”, who lack both systematic career planning (only 15% have it) as well as reward and incentive systems (only 20% have it in place).

No distinctive differences can be seen between exports and imports when it comes to **priorities of 15 different risks**: both for imports and exports, misdeclaration of goods, i.e., fiscal fraud in terms of value, quantity, HS code, and country of origin are the most significant risks for the customs respondents, along with smuggling of narcotics. **Quantification of risk likelihoods and consequences** is carried out by half of the administrations participating in the study. Standard cargo declaration data sets are reported to be the most important **data source** feeding into CRiM processes, followed by intelligence received internally from customs. Long term data storage on risk assessment and possible inspections are also considered an important source of information by the participating administrations.

The respondents are willing to **collaborate with other authorities** only to a limited extent. Information is shared mainly between customs administrations in neighbouring countries and with domestic police forces. Regarding **bottlenecks in CRiM implementation**: lack of training in risk management is ranked as the number one bottleneck hindering the further development of risk management programs, followed by lack of performance indicators and lack of concrete feedback loops from the risk management outcomes back to the planning stage.

Finally, drawing a conclusion related to the first research question:

**Conclusion 1: CRiM as a management system should consist of a balanced combination of policies and strategies; processes and procedures; human resources; tools and techniques; and data and intelligence. All the 24 administrations in the survey had at least some of these elements understood and implemented. But, no administration appears to have CRiM as a masterpiece of their management systems,**

**neither on strategic nor on operational level.**

**Research question 2: Which aspects of CRiM differentiate administrations located in high GDP per capita versus low GDP per capita regions / countries?**

As for the **second research question** results from this study show that there are many similarities as well differences between Top6 and Low6 GDP administrations.

The **CRiM- benefit profiles** were quite similar between the two groups, the Top6 countries providing overall higher grades to CRiM benefits than the Low6 countries. ‘Coping better with increasing trade volumes and decreasing resources’ and ‘Improving the reputation of the administration in the eyes of both business community and general public’ were perceived of higher relative importance in Low6 countries; while ‘Providing more facilitation for trade in your country’ and ‘Fighting more efficiently against any form of smuggling or contraband’, were rated higher in the Top6 countries. Regarding **human resource management**, training, information sharing, and selection of (future) CRiM officers were reported to be done more systematically in the Top6 countries, including ‘Sharing of risk management outcomes between the specialized CRiM officers’ and ‘Selection and assignment of specialized risk management officers’. At the same time, ‘Incentives on successful risk management outcomes’ and ‘Systematic career planning for specialized risk management officers’ were not considered by either of the two groups.

When assessing **risk priorities for imports**, dealing with direct fiscal fraud – ‘Misdeclaration of value, quantity and HS code of the goods’ - was of higher relative relevance for the Low6 administrations. The Top6 administrations were on the other hand more concerned with ‘Smuggling of narcotics’, ‘Violations regarding intellectual property rights’ and ‘Smuggling weapons suitable for large scale destruction and radioactive materials’, as the Low6 administrations. For **data collection sets feeding into CRiM processes**, the relative rankings were again quite similar between the two groups; the main difference was that the Top6 administrations indicated generally higher relevance on data exploitation than the Low6 administrations. ‘Information or intelligence obtained from other national law enforcement agencies such as police and immigration’ and ‘Data collected when certifying or auditing trusted traders or authorized economic operators’ had relatively higher relevance for the Top6 administrations.

With regard to the use of **CRiM tools and techniques**, major variations exist between the two groups. In general, the Top6 countries are more active here. Specifically, both

‘Automatic and Manual triage of data to identify risk’ were ranked much higher than for the Low6 countries, as well as ‘Identification of quantitative risk indicators or signatures based on historical trend analysis’ and ‘Post analysis, reviewing and updating of risk indicators’. For the Low6 administrations, ‘Random physical inspections used to validate selectivity process’ had more relative importance than for the Top6 administrations. As the last item of comparison between the two groups, **CRiM hurdles and bottlenecks** were ranked generally higher by the Low6 administrations. The biggest variation between the Low6 and Top6 administrations comes with the following four bottleneck items: ‘Lack of incentives and rewards with CRiM success’, ‘Lack of risk management training’, ‘Lack of operational approach to risk management’, and ‘Lack of data harmonization regarding risk related data’, which were all perceived as major obstacles by the Low6 administrations.

Finally, drawing a conclusion related to the second research question:

**Conclusion 2: Customs operating in less developed economies (Low6 administrations with GDP per capita under 4.000 USD) perceive the benefit potential as lower and obstacles as higher than their counterparts in the wealthier nations (Top6 administrations with GDP per capita over 20.000 USD). Limited efforts to manage human resources, and lack of CRiM tools and data feeding into CRiM processes are key examples where Low6 administrations are falling behind today.**

**Research question 3: What can be done and how to improve CRiM on both strategic and operational levels, at various WCO member administrations?**

Based on the study findings, **the third research question** is answered by recommending that the management of every customs administration globally consider enhancing their risk management functions, in one or more ways, as listed below. (*Note: this list has been previously published in the WCO Newsletter, June 2010; minor updates were done for Recommendation 10*):

1. **Review the current overall CRiM regime**, including definitions, core processes, alignment with overall customs strategic plans, and risk management cycles, etc. If gaps or inconsistencies exist, consider refinement. Try to establish formal CRiM strategic and operational processes as part of an established risk management cycle, with regular updates, based on the changing operational, criminal, and legal environment. Ensure CRiM is embedded in the core of your business and is not just “lip service” or another “paper tiger” within your administration.



2. **Review and update the current CRiM organizational structure** within your administration with a focus on internal governance. Clearly determine and articulate which functions and responsibilities are centralized and which are decentralized, and how these functions and sections of the organization interoperate and collaborate. Consider establishing independent risk management (targeting, analysis, or risk assessment) units as a complimentary operational layer, with an emphasis on providing a clear mandate, governance, and interoperability with other enforcement or intelligence sections.
3. **Consider updating recruitment and career planning, training programs, and recognition and rewards** for your specialized risk management officers, as this often appears to be the weak spot in human resource management. Make CRiM an appreciated and recognized job within your administration.
4. **Analyze and prioritize the fiscal and non-fiscal hazards and risks** for your administration and country, looking at both strategic and operational implications of discovered risks. Take a look at how decisions are made on other customs procedures in your administration, including basic import and export processes, and find solutions to promote and support risk-based decision-making.
5. **Take a close look at a broad set of available qualitative and quantitative risk management tools, techniques, and standards**, and consider upgrades in your current CRiM toolbox, based on your overall priorities. Seek a balance between qualitative and quantitative approaches and methodologies without relying entirely on one or the other.
6. **Have an open mind to improve the breadth, depth, quality, and timing aspects of the commercial data and other supporting contextual data** fed into your CRiM processes. In particular, consider exploiting more pre-departure and/or pre-arrival data, as currently this has very low priority globally. Collaborate pro-actively with your trading community to seek data solutions that help improve end-to-end supply chain visibility.
7. **Check which type of intelligence and other information is shared with other agencies in your country and abroad**, and try to identify and solve any

information timing, quality, trust, legal, or other hurdles to managing risks through proactive information sharing. Within your own organization, work closely with your enforcement and intelligence divisions so they may feed key information to your risk management units to influence, support, and drive priorities on the strategic and tactical levels.

8. **Verify if any types of legal restrictions or policy barriers exist** that may be negating CRiM. If these exist, consider finding solutions to upgrade national legislation and regulations, local or regional business practices, or any other root causes behind such hurdles.
9. **Study and apply lessons learned from existing risk management literature** (including supply chain and enterprise risk management), risk management standards (including AS/NZS 4360 and ISO31000), and WCO materials such as the WCO Risk Management Guide, Global Information and Intelligence Strategy, Standardized Risk Assessments, Global High Risk Indicator Document, and WCO e-learning materials.
10. **Establish a systematic framework to assess and drive benefits of CRiM**, with concrete key performance indicators. Actively seek out the most cost-efficient CRiM enhancements, and quantitatively measure the success of your risk-based decisions at the border.
11. **Collaborate and work closely with the private sector in your country.** It is important to be open and transparent about CRiM (without revealing security sensitive details, of course) and make them aware of your plans for exploiting CRiM in the future to facilitate low-risk compliant trade, and (if feasible) provide tangible benefits for well secured and highly compliant companies and supply chains via the various CRiM mechanisms you have in place, now and in the future.
12. Last but not least, **remind your administration that when moving towards actual CRiM implementations, every region or country looks at risk differently, thus requiring a tailored approach.** However, your approach to CRiM should factor in the necessary alignment with regional or global partners to promote the secure flow of trade, including interoperability and harmonization with electronic single-window initiatives, international security standards and principles, and collaboration

with other government partners, customs administrations, and the trading community.

### **Future research**

As a follow-up to this study report, the CBRA research team intends to launch approximately 12 case studies, focusing on detailed enhancements in CRiM in customs administrations globally. Case study topics may include CRiM as part of strategic planning, human resource management for CRiM officers, new tools and techniques for CRiM, establishment of multi-agency collaboration to enhance CRiM, and any other topics that may be relevant or of interest to the participating administrations. Case studies will also analyze how new trade-customs visibility platforms, such as “FP7-LOGSEC” <http://www.logsec.org/>, “FP7-INTEGRITY” <http://www.integrity-supplychain.eu/>, “FP7-CASSANDRA” and other systematic approaches could facilitate CRiM in the future. As the last stage of this multi-year CRiM research program, the CBRA team has preliminary plans to develop a “CRiM Good Practices” guidebook, consisting of short examples on how CRiM aspects have been developed, deployed, and improved over time.

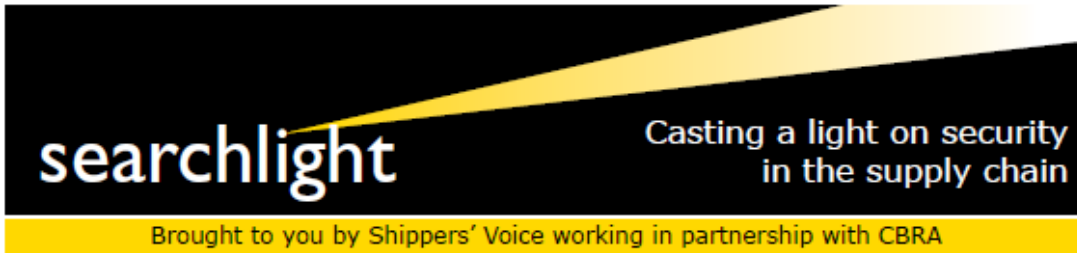
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Annex A. Shippers Voice SCS Searchlight on WCO CRiM Forum, June 2010



ISSUE 2 JULY 2010

**'Searchlight' – the new Supply Chain Security newsletter looks at risk management in the Customs industry**

Intelligence-driven risk management is one of the cornerstones of the "Customs in the 21st Century" strategy forming the basis of WCO's forward thinking. It affects us all. Therefore it is useful to gain an insight into this 'forward thinking' as this might help us understand what might be coming next. Indeed, as this article explains, there are very good reasons and benefits for shippers in giving more support to risk management approaches to the provision of security.

**In this second issue of Searchlight we cast a light on how risk based operating models enable Customs administrations to allocate resources effectively**

A glimpse is offered into the mindset of customs courtesy of The World Customs Organization, WCO, 2-day Risk Management Forum held in Brussels on 28-29.6.2010. CBRA researchers Mr. Toni Männistö and Mr. Juha Hintsa followed closely the presentations during the two days and report the main observations below, for the benefit of Shippers' Voice Supply chain security Searchlight readers (all the presentations of the 2-day forum, including "Customs risk management – results of a global survey", given by CBRA, can be downloaded at the WCO web-site).

**Risk Management Forum objectives**

Risk based operating models enable Customs administrations to allocate resources effectively and efficiently to their business operations while enabling the focus on areas posing highest risk to customs compliance. Therefore, risk management allows Customs administrations to better achieve the dual goal of enhanced compliance and security whilst maximizing facilitation benefits and opportunities. In the era of declining resources, risk management is one of the key enablers for Customs administrations to meet the continuously growing governmental and societal expectations placed on them. (source: [http://www.wcoomd.org/event\\_eriskmagtforum.htm](http://www.wcoomd.org/event_eriskmagtforum.htm) )



**Preaching to the converted?**

Over the past two decades, risk management in various contexts – including enterprise, supply chain, public administration and customs – has been reaching a basic level of maturity, while very few parties (if any) still question the overall relevance or the basic underlying principles of it.

This leads often to a situation where speakers at such conferences are at risk of 'preaching to the converted', i.e. repeating fairly obvious statements, facts and view points about risk management objectives, principles, obstacles and other aspects.

For this Risk Management Forum, few statements of such nature were repeated during the two days. Customs representatives explained to the audience things like: "...with large trade volumes, it is not possible to control every transaction..."; "...goods are not doing the fraud, but it's the people..."; "...here you see a matrix to quantify the risk likelihood versus consequence..." – yes, we all agree to such starting points.

From the trade side, we heard statements such as "...removal of risk will never be 100%..."; "...bad guys act often as supply chain insiders..."; "... we want to know from customs what the real threats are..."; "... we want tangible benefits with the AEO-programs..." – usual rhetoric, also some standard lobbying, and everyone nods their heads in agreement.

**Sharing highly relevant insights**

This Risk Management Forum went further than many such events in that the insights shared were more revealing about the world of customs risk management.

- Mr. Dunne, Chairman of the WCO, gave a comprehensive introduction to the topic, highlighting objectivity and integrity issues, "...those who assess the risks, should not manage them..."
- Mr. Reeder, US Customs and Border Protection, gave the most informative lecture on the role of intelligence in customs risk management, highlighting the "need to collaborate with your neighbors – both those you share a physical border with and those with whom you share a trade border".
- Mr. Sellar from CITES Secretariat explained five good reasons why seizures and interceptions are not enough to break the end-to-end illicit supply chain in endangered species.
- Mr. Trelawny from the IMO, shared his views on the relevance of multi-agency collaboration when fighting against sea piracy, smuggling and illicit fishing, along the West and East African coast lines.



On the more technical level, the audience learned dozens of details related to various facets of operational risk assessment, prioritizing, targeting and profiling functions. Mr. Perez from the Tax and Customs Administration Service in Mexico explained the importance of the advance electronic information transmitted to target goods. Analytical models and the experience of customs officers involved in the risk analysis, were considered the two main issues for successful determination of risk indicators regarding shipments.

- Mr. V. Shridhar from the Central Board of Excise and Customs in India, shared his experience on using trade journals such as Metal Bulletin in the fight against valuation fraud.
- Mr. Fethallah from the Moroccan Customs administration, briefed the audience about exploiting artificial intelligence based approaches to detect abnormal behavior in the supply chain.

**Facebook and other social network theory in the fight against crime**

All these presentations are worth specific scrutiny in their own right, yet the list of great insights goes on and on; however, for this Searchlight article, the last note is about two speakers making references to a "Facebook-style of approach" in customs risk management in their respective countries and regions: the first reference was about creating a thorough understanding of the social links between various supply chain actors in their country, while the second reference compared risk management and Facebook from IT-architectural view points. (Note: no-one claimed using the actual Facebook itself for risk profiling etc.)

**Why shippers should be more proactive**

Why should shippers care about improvements in customs risk management, and what could they do to help to advance it? Several speakers hinted on good reasons, and even practical actions to be taken, to help to achieve common goals between trade and customs.



**Ending the US 100% scanning initiative is possible**

In his opening speech, Secretary General of the WCO, Mr. Mikuriya, explained about the contradiction between the US initiative on 100% scanning of containers versus proper risk management at customs administrations at a global level. He shared his hope and belief that if WCO member administrations were able to demonstrate good practices in managing risks then the US initiative could possibly be further post-poned or even cancelled.

If ever there was a defining motivation for shippers to help customs to improve their risk management efforts and success rates, this would surely be it.

Mr. Dunne, Chairman of the WCO, stated that industry compliance is the key here: "improving industry compliance rates allows customs to focus on real problems" – definitely something for shippers to take home with them.

**Less border control not more**

Mr. Dunne also shared his visions on the synergy between coordinated border management, risk management and the credibility of customs to take the lead. For shippers, this could mean in the future less cross-border administrative costs and delays when dealing with multiple governmental agencies.

The link between risk management and private sector cooperation was further expanded upon by the speaker from US Customs and Border Protection (US CBP) and by the joint presentation of UK Border Agency (UKBA) and HM Revenue and Customs (HMRC). They argued that 'the trade' could help customs to achieve better risk based results.



**Share business data with customs and reap rewards**

Mr. Reeder (US CBP) reminded the audience that "the private sector has naturally lots of intelligence about the supply chain itself", of which some would be of use for customs in their overall intelligence gathering function. Mr. Lee (UKBA) suggested "linking the level of trade facilitation offered to industry to the quality of the data provided by them". Finally, a couple of customs-representative speakers also referred to an "anti-smuggling engine" used by some of the largest express carriers, as an example of a tool for "pre-screening to detect contraband" moving in their logistics networks.

**Pushing security further back up the supply chain**

Speakers from the private sector highlighted also the relevance of trade-customs partnerships. Mr. Brown from TNT said that "AEO-programs represent an opportunity for independent checks (on how our company and supply chain works)", and that "(we have) a simple mantra: we must know what we are carrying, and who we are carrying it for", setting the bar of expectations high for the whole sector. Mr. Brown also called for a focusing on 'origin' in risk management, and intercepting way before the first border, not the last one: "the virtual first border for us is the injection into our integrated network so to a degree it is even earlier than the the first customs border". He also suggested "building collaboration into a trader's security risk management principles". Certainly food for thought for Shippers Voice SCS Searchlight readers to consider the opportunities and challenges as we move along the risk management agenda: assisting customs to do their job more effectively and efficiently, is a win-win approach.

**Excuses in the way of success**

Most good things in life do not come easily – this is also very true in the case of risk management. Several speakers shared some anecdotes regarding risk management bottlenecks at their administrations, while representatives of the World Bank and of the European Commission dedicated several minutes to provide their overviews on this crucial issue.

Mr. Enrique Fanta of the World Bank shared some of the frequent arguments used by customs administrations for not implementing risk management systems and practices:

- A lack of information technology and other proper tools available
- The feasibility of post-release controls is sometimes questioned
- They blame the problems or in-effectiveness of risk management control on others – “we understand the key principles but the other agencies don’t”
- “The private sector in our country demands inspections, for protectionist reasons”

Fiscal concerns, both from the national economy (valuation fraud) and from the customs point of view (inspection fees), sometimes lay behind opposition by administrations to wider exploitation of risk management strategies.

Approaching this same question as to why some administrations are reluctant to pursue full risk management strategies, Mr.Theunissen of DG TAXUD at the European Commission indicated that “risk management is extremely complex, as information technology is everywhere”.According to Mr Theunissen, some challenges, while automating risk analysis, are being driven or coordinated by several different departments within customs, with other national agencies, with customs in other EU countries and within third countries.Also, bringing together and making sense of the mass of different data and intelligence from multiple sources, much of which can be time critical and highly sensitive, creates headaches and a barrier in the further evolution of risk management strategies.

Finally, high deployment costs and long deployment lead-times have also turned out to cause difficulties for successful risk management improvements, at least in the European Union.

**CBRA research team to develop and publish actual case studies for WCO**

CBRA research team has been active in customs risk management research since 2007. Research work has been supported by financial and expert resources from the Swiss Science Foundation, World Customs Organization and GreenlineSystems. Thanks to their support, we are now in the process of finalizing a 50-page report on “Customs risk management, CriM – results of a global survey with 24 WCO member administrations”.

The Secretary General of WCO, Mr. Mikuriya, said in his opening speech of the Forum that “Customs (of the world) know enough risk management theory – now we need examples and case studies”.As the next step in the research, reflecting Mr. Mikuriya’s opening statement and other statements and conclusions at the Risk Management Forum, CBRA is launching 12 case studies in order to explore specific details in depth, on how human resource, legal, collaborative, technology, data management, performance measurement and other critical CriM aspects are being improved and bottlenecks are being opened, world wide.

**Conclusions**

*For the shipper community, the key message from the forum was that they should explore different ways to help customs to do their jobs better in the future. They help customs better exploit efficient risk management systems, processes, tools and data and achieve better results. From the research and development perspective, CBRA is a partner in two existing and one soon-to-start European Framework Program 7 projects focusing on how industry can do this. The projects are: LOGSEC; INTEGRITY; and CASSANDRA. We will keep Searchlight readers posted on relevant outcomes of these leading edge research projects.*

Shippers Voice readers are invited to submit their ideas as to how to make the most of these case studies, please contact us by email: [crim@cross-border.org](mailto:crim@cross-border.org)

## Annex B. Study questionnaire

Please return the filled questionnaire by 30.6.2009, by email to:

[crm@cross-border.org](mailto:crm@cross-border.org) and [juha@cross-border.org](mailto:juha@cross-border.org)

**THANK YOU FOR YOUR PARTICIPATION!!!**

*(if you decided to fill in the questionnaire by handwriting, it is also possible to return it by fax or by letter mail; however, electronic filing and email return is highly appreciated by the research team!)*

**0a) Please provide the details of the main person(s) answering this survey**

Person name:

Person title:

Who does the person report to:

**0b) If several persons participated in the survey, please list them below**

Person2 name:

Person2 title:

Who does Person2 report to:

Which questions did Person2 answer:

*(Please add Person3, etc., below, as needed):*

**1. In case you have strategic planning in place for your administration, does it make any references to risk management?**

*Tick all that apply*

YES, risk management forms part of the administration's strategic plan	
YES, a specific risk management strategic plan is in place	
YES, risk management has references in multiple customs strategy/policy/vision documents	
NO, there is no risk management related strategic plan in place	

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*If you chose YES, and if possible, please send us sample file(s) or text about this, by email; you may use your national language.*

**2. Does your administration have a definition for risk management in place?**

*Tick one*

YES, a definition for risk management is in place	
NO, there is no definition for risk management in place	

*If you chose YES, please share the risk management definition text and its source*

*(please type here)*

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**3. Does the legal environment create any barriers to execute risk management for your administration?**

*Tick one*

YES, the legal environment sets barriers regarding risk management	
NO, the legal environment does not set any barriers regarding risk management	
The link between the regulatory/legal system and risk management at customs is not known	

*If you chose YES, please share some details on this; e.g. does the law dictate that your administration must (physically) control every declaration:*

*(please type here)*

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**4. Please characterize the degree of collaboration, information sharing, and/or recognition of risk management matters with other parties in your country and abroad?**

	<i>Very high</i>	<i>High</i>	<i>Medium</i>	<i>Low</i>	<i>None</i>	<i>Not apply</i>
Immigration agency in your country - e.g., sharing of intelligence						
Border guard agency in your country - e.g., sharing of intelligence						

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Police in your country - e.g., sharing of intelligence						
Environment protection agency in your country - e.g., sharing of intelligence						
Phytosanitary agency in your country - e.g., sharing of intelligence						
Health agency in your country - e.g., sharing of intelligence						
Product safety agency in your country - e.g., sharing of intelligence						
Customs administrations in your neighbouring countries - e.g., sharing of intelligence and shipment data cross borders						
Customs administrations in overseas countries - e.g., sharing of intelligence and shipment data cross borders						
Private sector in your country - e.g., granting lower risk scores to "trusted traders" or AEOs (authorized economic operators)						
<i>Any other party you might collaborate with regarding risk management - please write the details below</i>						

*In case you chose Very high or High on any of the above, please share some details on the collaboration mechanisms; e.g., AEO-program based, international convention based, etc.*

*(please write here)*

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**5. Which of the following risk management documents (or electronic content) have had an impact on the setting up of risk management at your administration, and to which degree?**

	<i>Very high</i>	<i>High</i>	<i>Medium</i>	<i>Low</i>	<i>None</i>	<i>Unknown document</i>
ISO (International Standards Organization) materials on risk management						
National standards on risk management (e.g., AS/NZS 4360)						
Any risk management educational materials						
Any literature specific on Enterprise Risk Management (ERM)						
Customs law in your country						
Other (non-customs) regulations in your country						
The Revised Kyoto Convention						

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WCO SAFE Framework of Standards						
WCO Risk Management Guide						
WCO Standardized Risk Assessment (SRA) document						
WCO General High-Risk Indicator document						
WCO Customs risk management e-learning materials						
<i>Any other document(s) that have had an impact on the setting up of risk management practices at your administration - please write the names of all such files below:</i>						

**6. Do you review and update your risk management approach in order to keep up with the changing environment?**

*Tick one*

YES, a permanent integral monitoring and review process is in place to improve and update risk management practices	
YES, regular reviews on your risk management practices are carried out; the focus is agreed upon on a case-by-case basis	
YES, such reviews are carried out occasionally	
NO, there is no review or updates to our risk management approaches	

*If you chose YES above (any of the three options), please share some details on how you do this, and how often (please write here)*

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**7. How is the risk management function organized at your administration?**

*Tick one*

Risk management has a centralized organization, and risk management tasks are carried out in a centralized manner	
Risk management has a centralized organization, and risk management tasks are carried out in a decentralized manner	
Risk management has a de-centralized organization, and risk management tasks are carried out in a decentralized manner	
There are risk management activities spread all over your administration. but the formal organization is not fixed today	

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There is NO risk management organization in place at your administration	
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**8. Does your administration have a strategic management or board-level responsible person to look after the overall risk management portfolio?**

*Tick one*

YES, the main responsible person for risk management exists in your administration	
NO, there is no main responsible person for risk management nominated at your administration	

*If you chose YES, can you please share the title and the name of the person in charge:*

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**9. How are the human resource management aspects to support risk management covered at your administration - assuming that there are specialized "risk management officers" in place?**

*(if no specialized risk management officers exist, please tick DOES NOT APPLY below, and move to the next question)*

*Tick all that apply*

Selection and assignment of specialized risk management officers	
General training on risk management for specialized risk management officers	
Specific training on intelligence gathering and analysis, targeting, etc., for specialized risk management officers	
Information sharing and dissemination of risk management outcomes between specialized risk management officers	
Systematic career planning for specialized risk management officers	
Incentives, rewards, and/or recognitions for successful risk management activities	
DOES NOT APPLY (there are no specialized risk management officers in place)	
<i>Any other human resource management activities with specialized risk management officers carried out at your administration - please list below:</i>	

*If you have one or more full-time specialized risk management officers, please share the number here:*

**10. How are the human resource management aspects to support risk management covered at your administration - regarding the whole personnel?**

*Tick all that apply*

General training on risk management for the whole personnel at your administration	
Information sharing and dissemination of risk management outcomes for the whole personnel	
General allocation of human resources based on risk management outcomes (i.e., more officers to	

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deal with high--risk cargo or conveyances)	
Specific allocation of human resources based on risk management outcomes (i.e., flexible working hours to match the arrival times of high risk cargo or conveyances)	
<i>Any other human resource management activities carried out at your administration to support risk management - please list below:</i>	

*Please share the total number of people in your administration having something to do with risk management*

**11. Please rank the overall relevance of each type of threat that your administration has to deal with regarding imports to your country?**

	<i>Very high</i>	<i>High</i>	<i>Medium</i>	<i>Low</i>	<i>None</i>	<i>Not apply</i>
Misdeclaration of HS code of the good						
Misdeclaration of country of origin						
Misdeclaration of quantity						
Misdeclaration of value						
Fraud specific for value-added/general sales tax						
Fraud in excise tax						
Violations regarding trade policies						
Violations regarding intellectual property rights						
Violations regarding the protection of environment/nature						
Violations regarding the protection of cultural goods						
Smuggling of narcotics						
Smuggling of dual-use goods						
Smuggling of light weapons						
Smuggling of radioactive materials						
Smuggling of any materials suitable for large-scale destruction (weapons of mass effect, etc.)						
<i>Any other import related threats you consider relevant for your administration (or country) - please list them below</i>						



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**12. Please rank the overall relevance of each type of threat that your administration has to deal with regarding exports from your country?**

	<i>Very high</i>	<i>High</i>	<i>Medium</i>	<i>Low</i>	<i>None</i>	<i>Not apply</i>
Misdeclaration of HS code of the good						
Misdeclaration of country of destination						
Misdeclaration of quantity						
Misdeclaration of value						
Fraud specific for value-added/general sales tax						
Fraud in excise tax						
Violations regarding trade policies						
Violations regarding intellectual property rights						
Violations regarding the protection of environment/nature						
Violations regarding the protection of cultural goods						
Smuggling of narcotics						
Smuggling of dual use goods						
Smuggling of light weapons						
Smuggling of radioactive materials						
Smuggling of any materials suitable for large-scale destruction (weapons of mass effect, etc.)						
<i>Any other export related threats you consider relevant for your administration (or country) - please list them below</i>						

**13. Does your administration follow systematically pre-defined risk management processes (or cycle models or other formal approaches)?**

*Tick all that apply*

YES, on strategic level risk management ("strategic" as understood by your administration)	
YES, on operational level risk management ("operational" as understood by your administration)	
NO, your administration does not follow pre-defined processes regarding risk management	

*If you chose YES in any of the two levels, can you please explain the main process steps (the strategic and/or operational processes, based on your situation)*

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**14. As part of the risk management processes, does your administration carry out quantified analyses, like threat likelihoods and consequences, and apply compliance management, for accepted levels of risk, etc.?**

*(in case your administration does not follow formal risk management processes, please tick DOES NOT APPLY, and move to the next question)*

*Tick all that apply*

YES, quantification of likelihoods of the threats	
YES, quantification of consequences of the threats	
YES, quantification on the risks (as threat likelihood times consequence)	
YES, quantification on accepted levels of risk - overall level	
YES, quantification on accepted levels of risk - per economic operator	
DOES NOT APPLY, as no formal risk management processes are being followed	
<i>Any other quantitative methods for compliance management and risk assessment - please list them below</i>	

**15. How would you characterize the application of risk management processes, techniques, etc., with various customs procedures?**

	<i>Very high</i>	<i>High</i>	<i>Medium</i>	<i>Low</i>	<i>None</i>	<i>Not apply</i>
Import procedures						
Export procedures						
Transit procedures						
<i>Any other customs procedures relevant for risk management - please list them below</i>						

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**16. Please rank the relevance of various data collection sets, regarding the risk management approaches at your administration**

	<i>Very high</i>	<i>High</i>	<i>Medium</i>	<i>Low</i>	<i>None</i>	<i>Unknown scheme</i>
Standard cargo declaration data sets						
Standard accounting data sets						
Release data sets						
Conveyance reporting data sets						
Pre-departure data sets						
Pre-arrival data sets						
Data received from electronic seals or container security devices						
Data collected when certifying or auditing "trusted traders", "authorized economic operators" (AEOs), or similar programs						
Data (long-term) storage on the outcomes of risk assessments and possible inspections (to feed back to the future risk management processes)						
Intelligence received internally in customs						
Information or intelligence obtained from other national law enforcement agencies such as police, immigration, etc.						
Intelligence received from customs administrations in other countries						
Information derived from open sources (the Internet, journals, third-party data provision, etc.)						
<i>Any other data sets which your administration finds relevant to support risk management processes - please list them below:</i>						

**17. Please rank the relevance of various inspection tools and techniques regarding risk management approaches at your administration**

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	<i>Very high</i>	<i>High</i>	<i>Medium</i>	<i>Low</i>	<i>None</i>	<i>Unknown scheme</i>
Inspection reports on outcomes (resultant/non-resultant) of physical inspections used to validate the selectivity process						
X-ray image (long-term) storage of scanned containers and boxes (to feed back to the future risk management processes)						
Radiation data for shipments inspected using radiation detection equipment						
Random physical inspections used to validate selectivity process						
Post-clearance audits						
Systems-based controls						
Inspections performed by other customs administrations for in-transit shipments.						
Enforcement reports and seizure actions						
Identification of recurring qualitative indicators that confirm or negate risk						
Identification of quantitative risk indicators or signatures based on historical trend analysis						
Post analysis, reviewing, and updating of risk indicators						
Automated triage of data to identify risk (Automated Targeting and Risk Assessment Systems)						
Manual triage of data to identify risk (manual paper sort to identify shipments of interest for inspection)						
<i>Any other inspection tools and techniques your administration finds relevant to support risk management processes - please list them below</i>						

**18. Please rank the relevance (or benefit potential) of each argument when considering priorities for risk management enhancements at your administration**

	<i>Very high</i>	<i>High</i>	<i>Medium</i>	<i>Low</i>	<i>None</i>
To better achieve your overall organizational objectives					
To improve your overall management processes					
To provide more facilitation for the trade in your country					

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To improve the allocation of (human) resources to the highest risk areas					
To cope better with increasing trade volumes and decreasing (human) resources at our administration					
To get trade and logistics back in order as soon as possible after a major disruption (e.g., terrorist attack or high-alert situation)					
To fight more efficiently against any form of smuggling or contraband					
To fight more efficiently against organized crime					
To fight more efficiently against terrorism					
To protect our administration against any possible legal issues, lawsuits, etc.					
To improve the reputation of our administration in the eyes of the business community					
To improve the reputation of our administration in the eyes of the general public					
To improve the reputation of our administration in the eyes of foreign customs administrations					
To improve the reputation of our administration in the eyes of foreign direct investment community					
<i>Any other motivation to enhance risk management your administration might have identified - please write below</i>					

**19. Please rank the main obstacles, barriers, and bottlenecks that may hinder the further developments of risk management at your administration**

	<i>Very high</i>	<i>High</i>	<i>Medium</i>	<i>Low</i>	<i>None</i>
Lack of strategic approach to risk management at your administration					
Lack of operational approach to risk management at your administration					
Lack of regulatory support for risk management in your country					
Lack of organizational support for risk management at your administration					
Lack of training in risk management at your administration					
Lack of clear responsibilities in risk management at your administration					
Lack of performance measurement for risk management at your					

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administration					
Lack of incentives or rewards for (successful) risk management outcomes at your administration					
Lack of risk management reporting system(s) and/or reporting processes at your administration					
Lack of a feedback loop from the risk management outcomes back to the planning at your administration					
Lack of an information technology (general) infrastructure at your administration					
Lack of risk management specific information technology and tools at your administration					
Lack of consistency in risk management practices between various customs offices and border crossings in your country					
Lack of coordination in risk management between various units in your administration					
Lack of data harmonization regarding risk-related data at your administration					
Complexities in any kind of risk quantification					
Continuous advances in criminal activities					
Lack of any predictability in terrorist actions					
Lack of trust between trade and customs					
Lack of tangible benefits regarding risk management					
Lack of funds available for risk management at your administration					
Lack of ultimate success stories regarding risk management outcomes at your administration					
<i>Any other barriers with risk management your administration might have identified - please write below:</i>					