

2002 regulatory review

For a decade ENHESA - Environmental Policy Centre has monitored environmental, health & safety regulatory and policy developments worldwide. During 2002 ENHESA identified some 865 regulatory and policy developments that will have an impact on industrial operations or product markets and the way in which companies are allowed to pursue their business. This represents a small increase (15) in developments identified compared with 2001.

For the 2002 regulatory review, the following countries were taken into consideration:

Europe-Africa: European Union, Austria, Belgium, Czech Republic, Germany, Denmark, Finland, France, Spain, Hungary, Italy, Ireland, Netherlands, Norway, Portugal, Poland, Russia, Sweden, United Kingdom and South Africa

Asia-Pacific: Australia, China, Hong Kong, Indonesia, India, Japan, Malaysia, New Zealand, Philippines, Singapore, South Korea, Thailand and Taiwan

North America: United States and Canada

South America: Argentina, Brazil, Chile, Colombia, Mexico, Venezuela and Peru

In Federal countries, where the bulk of the EHS legislation is at regional/state level, at least one region or state has been taken into consideration. This is the case for Belgium, Canada and Australia. The geographic scope did not change compared to the 2001 regulatory review, facilitating comparison between the results from 2002 and 2001. The change compared to the 2001 figures is provided between brackets after the 2002 figures.

An overview of the titles of EHS legislation adopted per country is available per quarter in the ENHESA Newsletter 'EPC-Flash' which is available free of charge at www.enhesa.com

Regulatory activity includes governmental policies, legislation and regulations. The overview tracks any initiative from the pre-proposal stage to its adoption and entry into force. Even if an initiative goes through the various steps from proposal to adoption during 2002, it is still only accounted for as one initiative. With regard to proposals, a distinction needs to be made between proposals that were initiated in 2002 and those that were initiated in the past, but were still outstanding in 2002.

Obtain a Forecast tailored to your business!

This 2004 Forecast is for business in general. The ENHESA team of experts is available to review the nature of your current or future business operations, to analyse how they are currently regulated from an EHS perspective in the countries where you operate or want to operate, and how they will be impacted by pending and future EHS regulatory developments. The results of the review can be provided to senior management or corporate directors to help them anticipate regulatory changes and prioritise corporate action. Contact us for further details.

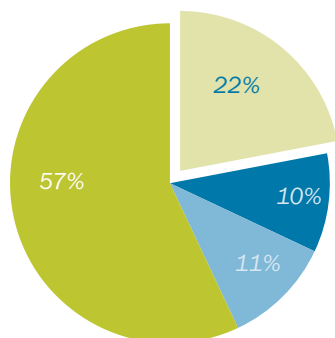
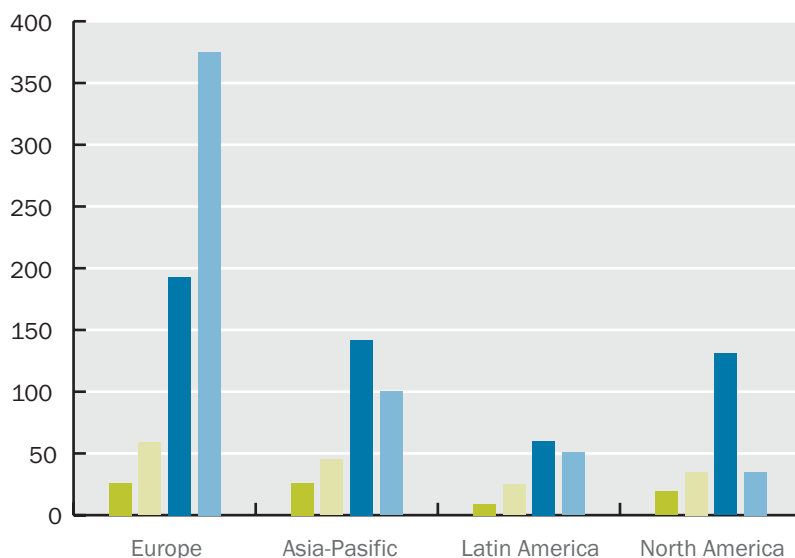


Fig. 1: 2002 Regulatory Activity by Region (Based on Total Number)

■ Europe
 ■ Asia-Pacific
 ■ Latin America
 ■ North America

How much regulatory activity takes place in a particular region is illustrated in Figure 1. The highest activity is noticed in the European region. During 2002, 57% of all regulatory initiatives analyzed occurred in the Europe-Africa region, followed by 22% (+2%) in the Asia Pacific Region, 10% (-2%) in South America and 11% in North America. Compared to 2001, the regulatory activity remained high, with a relative increase in Asia and a reduction in South America.



■ Policy
 ■ New Proposals
 ■ Total Proposals
 ■ Legislation

Fig. 2: 2002 Regulatory Activity by Region (Total Number)

Figure 2 provides a break down per region between new policies issued in 2002, new proposals issued in 2002, total number of proposals outstanding during 2002 and new regulations and legislation adopted in 2002. It is worthwhile noticing that although Europe has the highest regulatory activity, public consultation is still weak compared to the other regions. Another related explanation, is that for many initiatives the regulatory process is relatively fast. Proposals issued beginning of 2002 are likely already to be on the statute book before the end of 2002, in which case they are only counted as legislation. In relative terms, North America is leading on public consultation. No regulation is likely to be adopted without having gone through some process of public consultation. This pattern is also present in the Asia-Pacific region and to a lesser extent in Latin America.

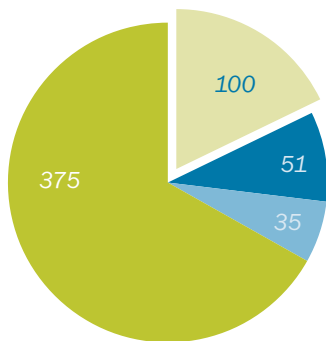


Fig. 3: 2002 New Legislation Adopted by Region (total number)

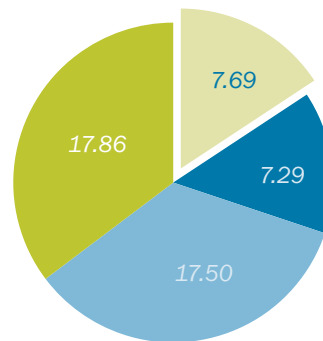


Fig. 4: 2002 New Legislation Adopted by Region (average per country)



Assuming that a multinational company operates in all countries concerned, in which region did it face most new legislation (including both Acts and implementing Regulations) in 2002? Figure 3 shows that the overwhelming majority of new legislation was adopted in Europe (375 pieces of legislation, or 67% (+2%) of the total). Asia-Pacific follows with approximately 18% (+3%) of all new legislation adopted and then Latin America with 11% (-4%). At the tail end comes the North America Region with 6% (+1%) of all new legislation. Compared to 2001, there was an increase in number of regulations in all regions, except South America where the total number of new EHS legislation adopted dropped from 78 to 51.

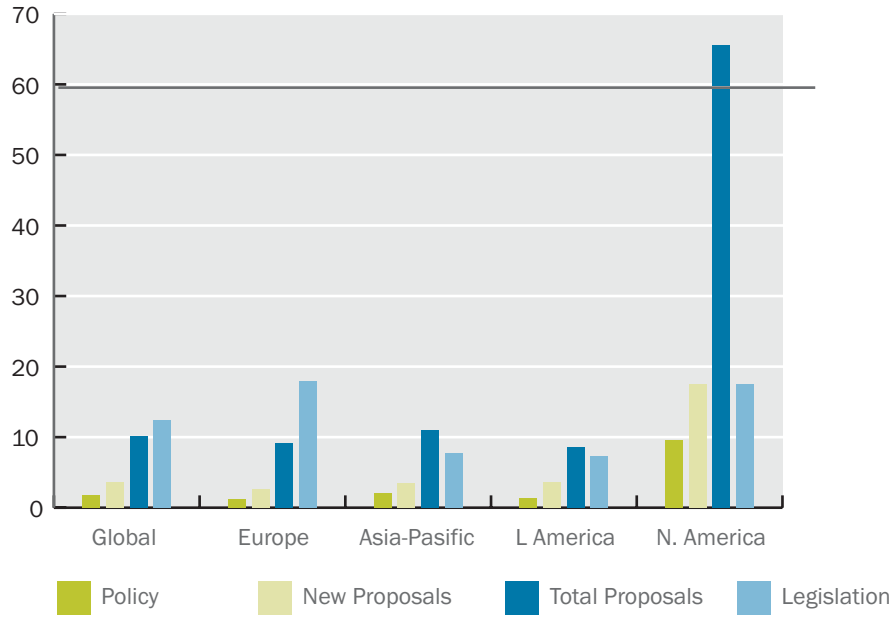


Fig.5: 2002 Regulatory Activity (on average per country)

If one looks at it from an industrial facility point of view (what does my factory face as legislative activity), the first three figures in this forecast provide a distorted picture, because they do not take into account the number of countries in each region. Figure 4 illustrates the number of new regulations adopted in average per country in each of the regions. Europe and North America lead with an average of 17, followed by Asia and South America with an average of 7 new EHS legislation per country. Compared to 2001, North America was more active, indicating that the Bush administration took control of the issue. Figure 5 provides the average activity per country per region. It immediately becomes clear that the highest level of regulatory activity per country is in North America.

When making a distinction between environment and occupational health & safety, the global regulatory activity on occupational health & safety in 2001 for the first time exceeded the environmental regulatory activity. This trend did not persist in 2002 as is illustrated in Figure 6. Worldwide some 55% of the regulatory initiatives had to do with environmental issues.

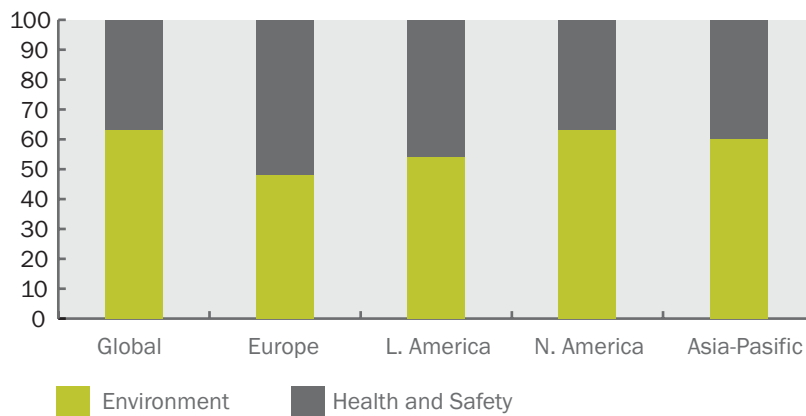


Fig.6: 2002 Regulatory Activity (% Environment versus Health and Safety)

ENHESA-Environmental Policy Centre also conducted an analysis per issue. Eleven separate issues were distinguished:

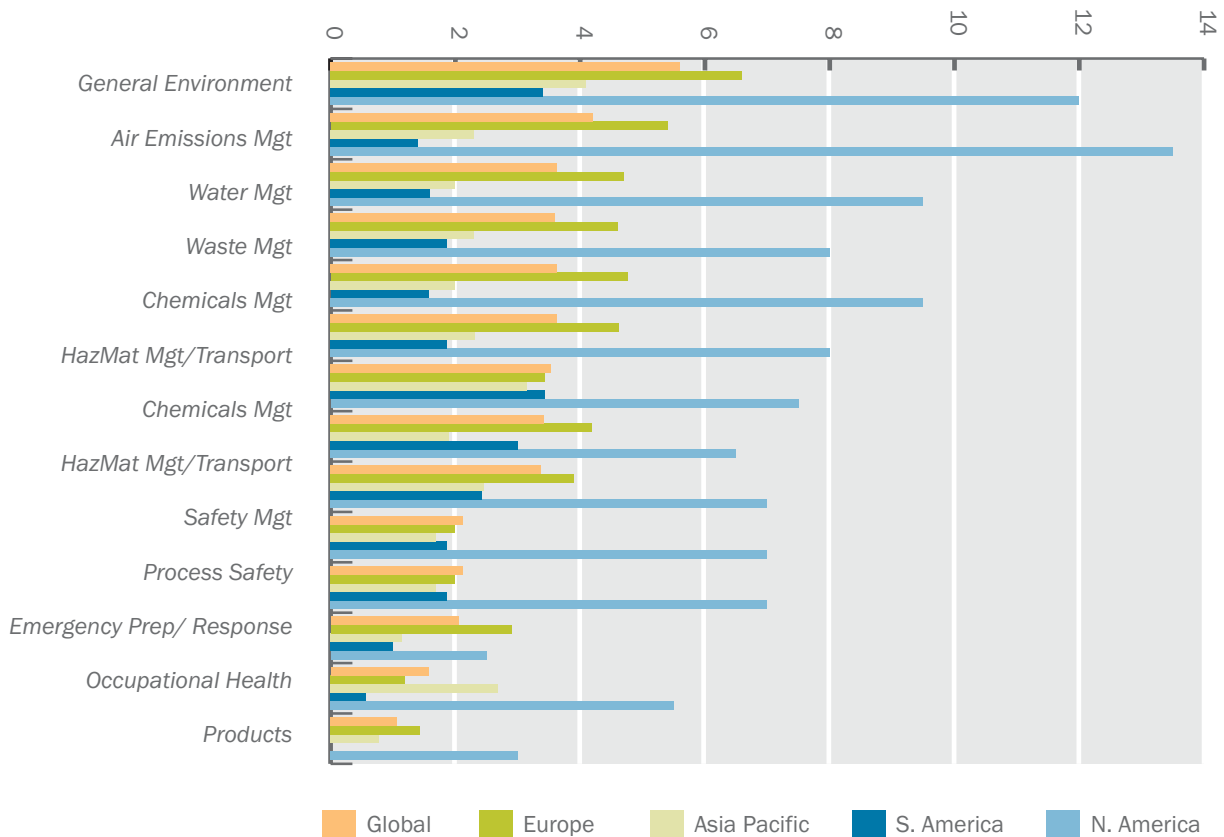


Fig.7: 2002 Regulatory Activity by Issue (on average per country)

- 1 General Environment: includes general permits and licenses, corporate requirements and public policies.
- 2 Air emission management: includes air emissions as such, as well as noise and odour emissions, climate change, and ozone depleting substances.
- 3 Water management: includes both water abstraction and use, as well as waste water discharge.
- 4 Chemicals management: includes notification and public registration of chemicals; classification, packaging and labeling; import, production and marketing of chemicals; and Material Safety Data Sheets.
- 5 Hazardous Materials: includes PCBs/PCTs, asbestos, carcinogenic substances, explosives, flammables,... with regard to transport, storage, handling, use and exposure.
- 6 Waste Management includes waste prevention, generation, recycling, handling transport, disposal, incineration.
- 7 Safety Management includes public policies, general safety management requirements, consultation with workers, etc.
- 8 Occupational Health includes exposure management, ergonomic requirements, specific requirements with regard to certain types of employees, medical examination, first aid, etc.
- 9 Process Safety includes requirements with regard to construction, equipment, installations, standard operating procedures, etc.
- 10 Emergency Preparedness and Response deals with fire prevention, detection and fighting, spill response, emergency response plans, major accident hazards, etc.
- 11 Products, includes product design, packaging, take-back, recycling and valorization. Figure 9 shows that product issues are also picking up in North America. Traditionally this has been mainly a European and Asia-Pacific issue.

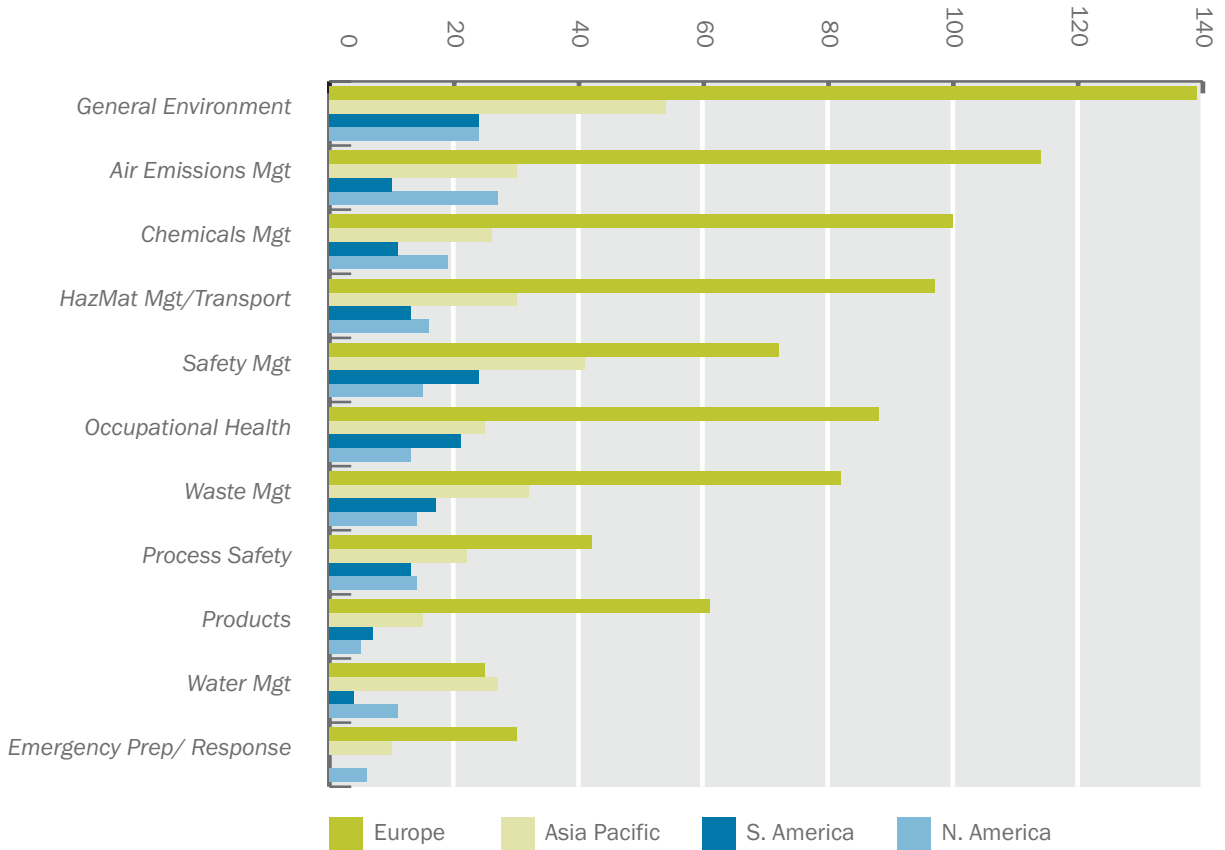


Fig.8: 2002 Regulatory Activity by Issue (Total Number)

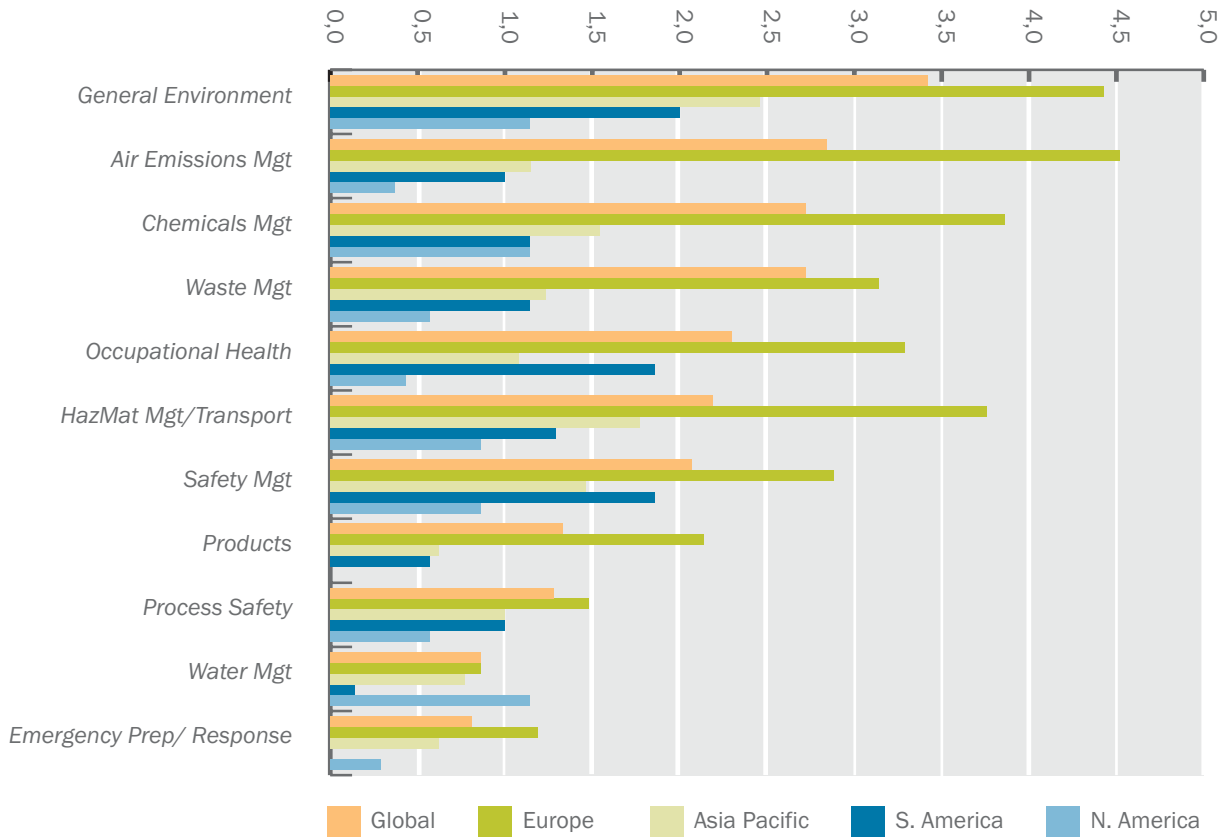


Fig.9: 2002 New Legislation by Issue (on Average per Country)

Figures 7, 8 and 9 illustrate the analysis per issue. Figure 7 looks at the total number of EHS regulatory and policy developments per region, indicating the dominance of Europe on most issues, except for water, where the Asia-Pacific region takes the lead.

When looking at the average number of regulatory and policy developments per country (see Fig. 8), North America takes the lead on all issues except emergency response (most in Europe).

When looking at new legislation adopted in average per country (Fig. 9), Europe takes the lead on most issues, except for water management. Given that the average number of new legislation per country is the same in Europe and North America, Figure 9 illustrates that legislation in Europe often covers multiple media or aspects (integrated approach), as opposed to North America where legislation is much more focussed on single issues.

The issues in Figure 9 have been sorted by decreasing number of regulatory/policy developments in average per country.

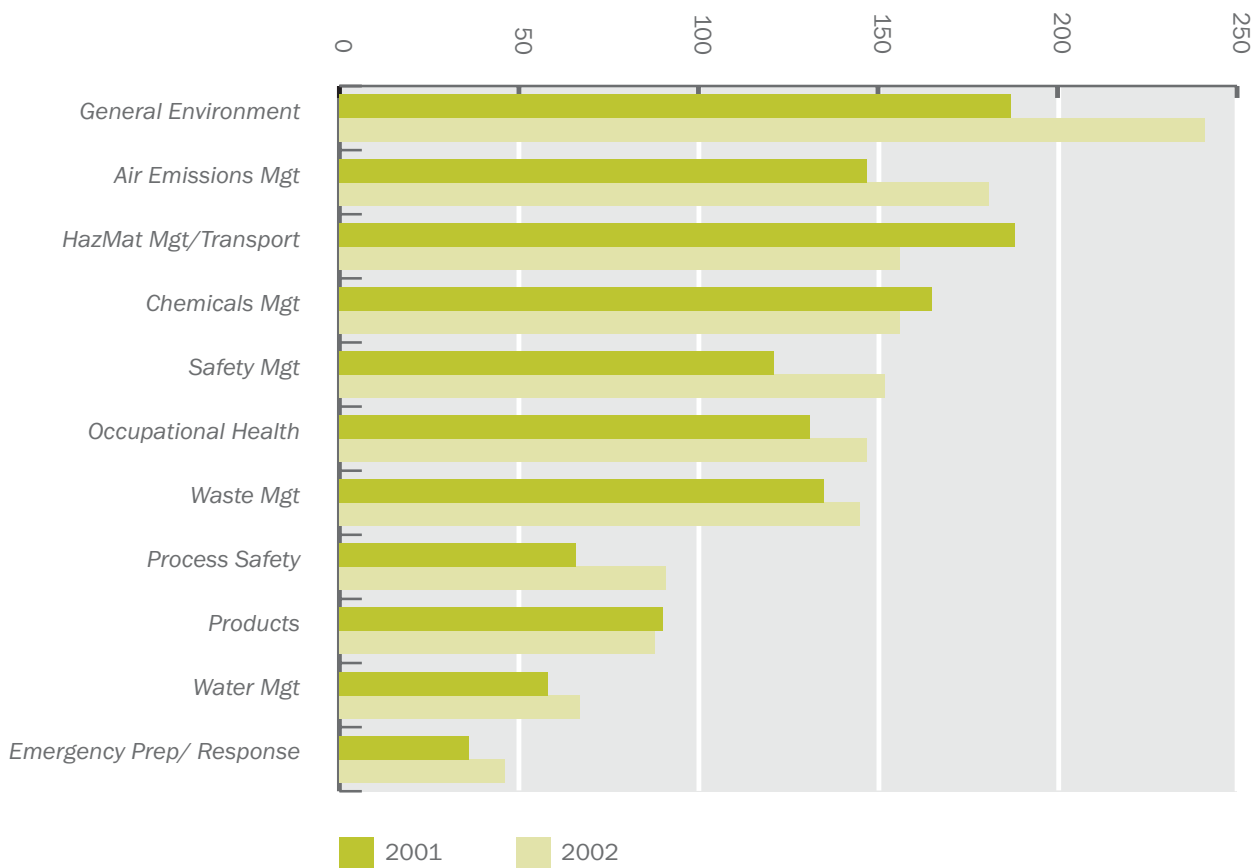


Fig.10: Thematical Comparison 2001/2002 (of global regulatory activity)

Figure 10 illustrates that there was a substantial increase compared to 2001 in the number of regulatory developments with regard to general environment, air emissions, safety management and process safety. There was a decrease in regulatory developments regarding hazardous materials.

It should be noted that the top of the list does not correspond with the global EHS priorities for 2004 identified by ENHESA-EPC (see Table 1 in the Executive Summary

or the following chapters). This is due to multiple factors. The first being the delay between the adoption of a Regulation and the entry into force of its requirements. As a result some of the requirements with which industry will have to comply were adopted prior to 2002. In general, the better the legislation is enforced, the more transition periods are likely to have been foreseen, followed by increasing sanctions in case of non compliance. A typical example of this is the European Union IPPC-Directive, of which some requirements will only apply to certain existing installations in 2007.

A second factor which explains the difference between the statistical order in Figure 8 and the ENHESA-EPC priorities for industry for 2004, is due to the difference in impact on industry between the various regulatory and policy developments that occurred during 2002. Due to its in-depth analysis of all EHS regulations and how they apply to companies, ENHESA-EPC has been able to identify the 10 top priorities for industry for 2004 and thereafter.

Companies that want to take benefit of environmental, health & safety policy and regulatory developments are encouraged to review the trends and developments in detail in order to be able to anticipate them and to take the right business strategy decisions.

Difficulties in keeping track of the new requirements you have to comply with?

ENHESA-EPC as leader in global EHS regulatory and policy support to industry can help you in multiple ways:

- Register for our Newsletter "EPC-Flash" on www.enhesa.com It's for free and it will give you a quarterly overview of the titles of new EHS legislation adopted worldwide.
- Subscribe to the EPC-Update for USD 1000 / year and you will receive monthly abstracts of new EHS regulatory and policy developments worldwide, with an option to get further detail and analysis.
- Contact us for the EPC Monitoring service which reviews all EHS regulatory and policy developments of interest to your operations in the countries of interest to you.
- A unique service that brings the information on EHS regulatory change to the people who need to know about it, and makes it available around the clock to anyone who needs to know something.