

# Warning and Alarm Plan Rhine Reported incidents 2007



Internationale  
Kommission zum  
Schutz des Rheins

Commission  
Internationale  
pour la Protection  
du Rhin

Internationale  
Commissie ter  
Bescherming  
van de Rijn

*Report No. 165*



**Imprint****Publisher:**

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ISBN-Nr 978-3-946755-30-2

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## WAP-reports 2007

### 1. Introduction

#### Objectives of the Warning and Alarm Plan (WAP)

The objective of the WAP is, to pass on reports on sudden pollutions with substances noxious to water in the Rhine watershed, if the amount and concentration may detrimentally impact water quality and/or biocoenosis of the Rhine and to warn the authorities in charge of fighting accidents.

The WAP distinguishes between warnings and information reports.

The International Main Alert Centres (IHWZ) issue **warnings** in cases of water pollution incidents implying substances noxious to water, if the amounts or concentrations concerned may detrimentally impact the water quality of the Rhine or drinking water supply along the Rhine and/or are liable to be of great public interest.

**Information** is issued in order to give the IHWZ objective, factual and reliable information without informing the media. Furthermore, the IHWZ inform all Rhine bordering countries in cases of excesses of guidance values. As a matter of precaution, information is also passed on to drinking water supply works.

### 2. Summary of the reports in 2007

In 2007 **the Rhine and drinking water supply were in danger at no moment:**

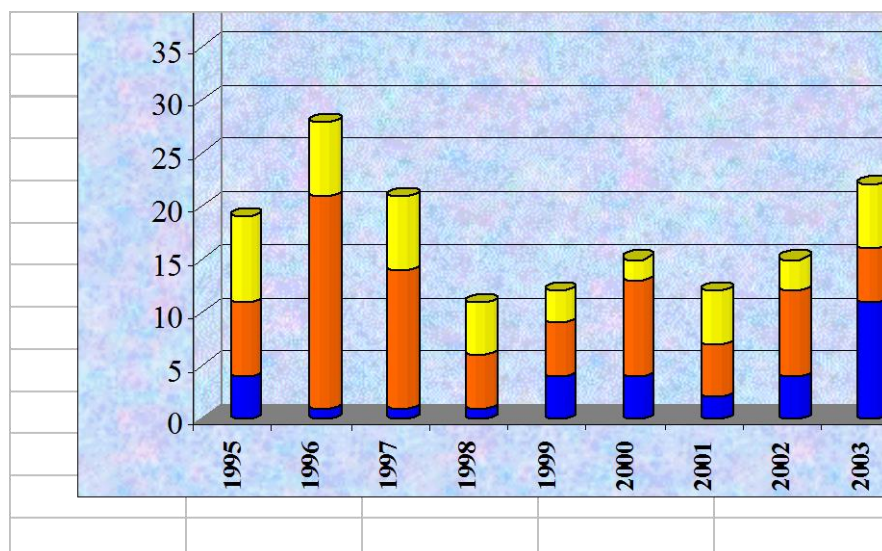
**Table 1: Survey of the WAP-reports 2007**

WAP-reports 2007				
Reports	Number	Kind of pollution		Number
<b>Warnings</b>	<b>0</b>	Oilfilms		6
Information	36	Chemical substances		29
		<i>thereof</i>	<i>MTBE/ETBE</i>	16
			<i>BTX</i>	3
			<i>Benzene</i>	
			<i>Toluene</i>	
			<i>Xylene</i>	
			<i>others</i>	10
		Container		1
<b>Total</b>	<b>36</b>			<b>36</b>

Nevertheless, the frequent **shock loads of MTBE/ETBE** and of other highly volatile substances are a matter of great concern. Due to intensive search of the polluters in the IPCR Member States, land-based inputs can largely be excluded. Thus it is to be assumed that the substances detected in the Rhine originate from navigation, are e.g. due to degassing or cleaning of tanks. In spite of the great involvement of the river police and of navigation associations, the **possibilities of determining the polluters are limited**. Among others, it will be possible to improve this situation by increasing the information in the navigation sector. Additionally, the ICPR urges to have the Convention on Waste ratified.

Adding the oil films (6) which are mostly caused by navigation and the waves of MTBE/ETBE (16) which are most likely due to navigation, as well as the waves of BTX (benzene, toluene, xylene) (3) results in the conclusion that, in 2007, about 66 % of the reports (36) were caused by navigation.

**Graph 1:** : Proportion of reports of oil and chemical substance spills



Contrary to the years 2005/2006 characterized by several reports of diglyme, there was only one report of diglyme in the year under report. This success is due to the fact that one of the main sources of diglyme pollution has been eliminated. The diglyme load of the land Hessen was dramatically reduced by developing a wastewater treatment plant.

#### **WAP and the media interest**

In 2007, the the container ship accident at Cologne-Porz with 31 container falling into the Rhine, 3 of which carried substances noxious to water met great media interest. Since the Rhine was completely closed for traffic at the site of the accident, about 600 cargo vessels were immobilised. The specialized vessels managed to recover the containers. The situation was not dangerous. Nevertheless, a potential for improvement was made out, since the list of contents of the containers of noxious substances was incomplete and could only be completed comparatively late.

**Photo 1:** Container accident at Cologne-Porz in March 2007



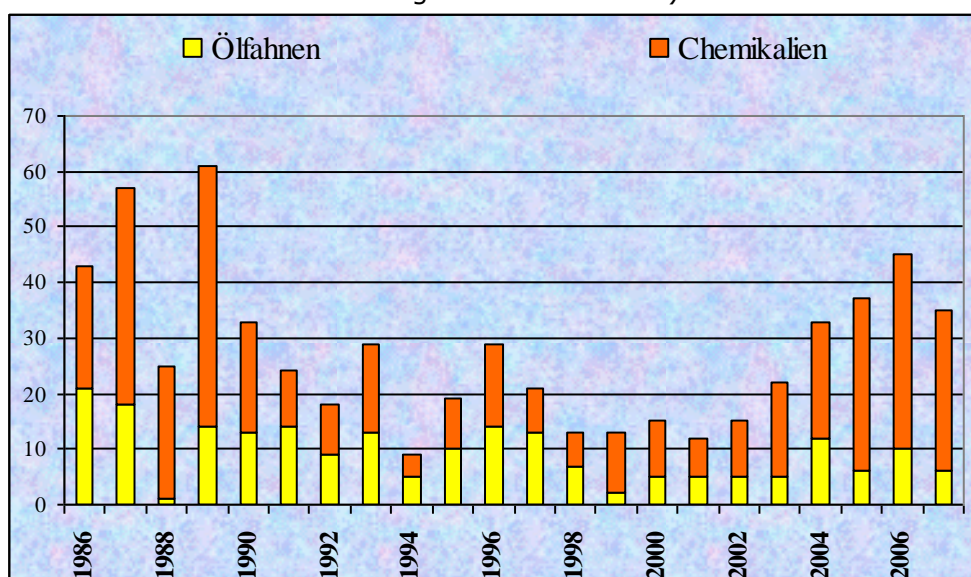
### Organisational changes in the year under report

In 2007, the passing on of reports of the international main alert centre (IHWZ) R6 (Düsseldorf) was transferred from the "central police station Martha" which has been closed down to the "regional administration Düsseldorf".

## 3. Long-term development of WAP reports

The overall **number of WAP-reports** (information and warnings; diagram 1) has sunk from the **end of the 80s to the end of the 90s**. Until 2002, its number was **constant: 12 reports** (annually one warning). Since 2003, the number of reports, particularly of reports concerning chemical substances, is again increasing and has, so far, reached its **peak with 45 reports in 2006**. This is, above all, due to improved possibilities of analysis at the monitoring stations Bad Honnef and Bimmen/Lobith. As in the past, almost all reports issued in 2007 originate from IHWZ R6 responsible for the above mentioned monitoring stations. Compared to 4 warnings in 2006 and to an average of one warning per year in the years before, **2007** is characterized by **no warnings**.

**Graph 2:** Development of the number of WAP reports (divided into reports concerning chemicals and oil) from 1986 to 2007.



<b>Warning</b>	<b>Information</b>	<b>Search report</b>	<b>IHWZ</b>	<b>Date of report</b>	<b>River km</b>	<b>Location:</b>	<b>Substance</b>	<b>Concentration peaks in µg/l</b>	<b>Length of film in km</b>	<b>Content of report</b>
	1		R6	03.01.07 05.01.07 05.01.07	865 735	Bad Honnef Düsseldorf-Flehe Bad Honnef Bad Godesberg  Bimmen	ETBE	15  20 22  4,5		900 to 950 kg flowed into the Rhine during 4 hours
	2		R1	08.01.07  15.01.07	168.3	Basel	1,2-Dibrom-3,3-dimethyl-butane	195		When producing a substance treating athlete's foot, 80 to 100 kg of an intermediate product seem to have flown into the industrial wastewater treatment plant. Accidentally, the polluter led 1.2-dibrom3.3-dimethyl-butane into the industrial wastewater treatment plant. All in all 4.2 kg were drained into the Rhine, passing by the wastewater treatment plant. There was no acute danger for the environment.
	3	1	R6 R6 R3 R2 R1	19.01.07  19.01.07 22.01.07 22.01.07	790 792 362,3	Bimmen-Lobith Orsoy  Karlsruhe-Maxau  Weil am Rhein	MTBE	3,5 2,9		Presumably unauthorized drain  Same report as above as search report A drain upstream of Karlsruhe cannot be excluded. No transgression of monitored values between Rhine km 171.5 und 352.0 The location of the drain must be downstream of Rhine kilometer 171.1.
	4		R6	18.02.07	865	Bimmen-Lobith	Aniline			

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	5		R6	18.03.07	865	Bimmen	MTBE Toluene Styrene	8,1 5,2		<i>This column gives additional information to that already indicated in the columns „Concentration peaks“ or „Length of film“</i>
	6		R6	25.03.07  26.03.07  29.03.07	677	Cologne-Porz	<p>Due to a container vessel accident, barrels filled with noxious substances fell into the Rhine. Two of the 3 containers loaded with substances noxious to water could be recovered. Media reports. One of the containers ist loaded with isophorondiamine.</p> <p>The containers do not contain any isophorondiamine. Research concerning the contents of the containers continues.</p> <p>Two of the containers with noxious substances could be moved to an area between to groynes to avoid them drifting off. The recovered containers probably contain the products „Sikafloor“ and „Sika Deutschland“. No copy of the list of goods which the fire brigade in Cologne promised has been received. The crane vessels required for the recovery are on their way to the location of the accident. One more container is lacking. Publication of the assumed contents of the lacking container.</p> <p>At the monitoring station Düsseldorf-Flehe nothing conspicuous is observed concerning glutaraldehyde.</p> <p>When recovering the third container, 17 t of the noxious substance probably drained into the Rhine. The river police in Cologne publishes the updated list of goods which reveals that, among others, the container also contained the highly noxious substances glutaraldehyde.</p>			
	7		R6	24.04.07	851	Emmerich	Oil film			Presumably bilge oil
	8		R6	06.05.07	865 and 732	Bimmen Düsseldorf-Flehe	MTBE	6,7		Presumably illegal emptying of a vessel
	9		R4	27.05.07	525 to 529	Mainz	Product containing mineral oil		4	

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	10		R6	01.06.07	865 823	Bimmen	ETBE Diesel oil	19,4		<i>This column gives additional information to that already indicated in the columns „Concentration peaks“ or „Length of film“</i>
		2	R7  R6  R2  R6  S	13.06.07						<p>A Belgian tanker (Palestil 29) loaded with diesel oil has touched an assembly of lighters. During about half an hour, diesel oil poured from a 5 cm long breach (some 14 to 16 m<sup>3</sup>)</p> <p><i>Due to a search report issued by R7, a test alarm was triggered by mistake.</i></p> <p><i>R7 has issued a search report, as dead daphnia were found in 2 chambers of the monitoring station.</i></p> <p><i>Reply to search report.</i></p> <p><i>No accident in the R2 sector.</i></p> <p><i>Reporting of the TOX-values and of the number of dead daphnia.</i></p> <p><i>Telephone call from the secretariat stopping the erroneous test alarm.</i></p>
	11		R6	29.06.07	865	Bimmen	MTBE	30		
	12		R6	27.07.07	865	Bimmen	Benzene Toluene o-Xylol-/p-Xylol Styrene Cyclohexane ETBE 1,2,4- Trimethylbenzene	30 (Sum.)		
		3	R3	12.01.07	360	Karlsruhe	ETBE MTBE	17 3,1		



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			R2 R1							Results of the retain samples taken in Iffezheim and Worms No pollution within the scope of the CARING monitoring stations. Monitoring values at the monitoring station Weil am Rhein below the limit of determination.
	13		R6	30.07.07	640	Bad-Honnef	ETBE MTBE Toluene	0,765 10,59 0,737		
	14		R6	09.08.07	755	Mouth of Kittelbach	Kerosene			Due to overfill damages at the Düsseldorf airport during heavy rainfall 0.2t of kerosene drained into the Rhine via the Kittelbach.
	15		R6	22.08.07	865	Bimmen Lobith	ETBE	10,10 5,61		In all, some 400 kg were drained into the Rhine.
		4	R6 R2 R3 R1 R5 R6	22.08.07   23.08.07 24.08.07 24.08.07	767	Krefeld Uerdingen	Chloroform	40		No pollution in the area of responsibility of R2. No conspicuous contents of chloroform at the Karlsruhe monitoring station. The drainage location is downstream the Weil am Rhein monitoring station. No chloroform in the composite sample taken that day. Nothing conspicuous at the site of an industrial direct discharger. Samples were presumably contaminated by accident.

<b>Warning</b>	<b>Information</b>	<b>Search report</b>	<b>IHWZ</b>	<b>Date of report</b>	<b>River km</b>	<b>Location:</b>	<b>Substance</b>	<b>Concentration peaks in µg/l</b>	<b>Length of film in km</b>	<b>Content of report</b>
	16		R6	30.08.07	865	Bimmen	MTBE	6,2		<i>This column gives additional information to that already indicated in the columns „Concentration peaks“ or „Length of film“</i>
		5	R6 R1 R2 R6 R3 R4	31.08.07    07.09.07  10.09.07	640	Bad Honnef	Diglyme Triglyme	9,38 2,02		Location of discharge downstream Weil am Rhein. No drains in the area of responsibility of R2. New monitoring values. No conspicuous monitoring values in the period concerned. According to indications based on self-control of the operating company the load of diglyme was at all times below 100 kg/d. Contrary to the indications of the operating company, daily loads of 500 kg/d were measured in retain samples.
	17		R6	18.09.07	865	Bimmen Lobith	MTBE ETBE Benzene o-Xylol			Further monitoring values concerning the 4 substances.
	18		R6	22.09.07			Benzene			Presumably illegal waste discharge by a vessel.
	19		R4	11.10.07	Main Km 57	Hanau	Product from a tank containing fire fighting substances			On the long term, the substances may have noxious effects in waters.

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	20		R6	16.10.07	811,3	Büderich	Xylol	9,3		
	21		R6	17.10.07 18.10.07	865	Bimmen Lobith	ETBE  o-Xylene	12  12		Further monitoring values completing the report of 17 October 2007
	22		R6	22.10.07 23.10.07	865	Bimmen Lobith	1,2-Dichlorethane	7,1 10,7		Further monitoring values Further monitoring values
	23		R6	31.10.07	865	Bimmen Lobith	Aniline	11		The developmet of the amount of noxious substances indicates a tank vessel as possible polluter.
	24		R6	06.11.07	865	Bimmen Lobith	ETBE	13 14		According to navigation experts, amounts of ETBE/MTBE exceeding 300 kg are most likely to originate from illegal pumping of slop tanks (tanks containing cargo residues).
	25		R6	24.10.07	640	Bad-Honnef	m-/p-Xylene	9		
	26		R6	31.10.07	865	Bimmen Lobith	Aniline	11		
	27		R6	05.11.07 06.11.07	865 865	Bimmen  Bimmen Lobith	ETBE	13  14		175 kg are presumed to have been drained  The estimate is corrected to 400 to 450 kg
	28		R6	07.11.07	837,5	Rees	Benzene	5,3		
	29		R6	18.11.07	639	Remagen- Rolandseck	Diesel	8		The polluting multiple barge convoi set was identified. The diesel oil was pumped into the lighter of the convoi.

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	30		R6	27.11.07		Bimmen	ETBE o-Xylene m-Xylene p-Xylene Toluene			<i>This column gives additional information to that already indicated in the columns „Concentration peaks“ or „Length of film“</i>
	31		R6	22.12.07	765	Krefeld-Urdingen	Gas oil			Collision of 3 vessels. The Rhine was completely blocked for traffic. One of the vessels had loaded kerosene. From one of the damaged vessels gas oil drains in swells from a tank below the water line.
	32		R6	27.12.07			Diesel oil			Through a 10 cm flaw in the side of the vessel 2 m <sup>3</sup> diesel oil drained into the Wesel-Datteln-Kanal during merger. The flaw was temporarily repaired and the vessel was brought to the Wesel petrol port.

Apart from issuing warnings and information, the IHWZ also issue **search reports** within the Warning and Alarm Plan. **Search reports** are issued, in order find the polluter of the Rhine in cases not located within the area of responsibility of an IHWZ.

During the year under report, 5 search reports were issued, one of them was an information and a search report at the same time. When determining the total sum of reports (36), this double report (information and search) was only counted once. For the text part of the report aimed at the general public, the search reports were counted as information in order to simplify the overall representation.