



Indicator Information Sheet

Subject:	Air Transport Development
Kind of indicator:	Sustainable Development Indicator
Spatial objective:	Worldwide
Object:	Effects of Air Transport on the Social Development
Themes:	Safety Aspects of Air Transport Development

1. Purpose of the indicator category

The general purpose of the indicator category 5, “Effects of Air Transport on the Social Development” is to discuss the relation between the air transport sector and the external framework with regard to the social impacts of air transport activities. This refers to the underlying question which contribution the air transport sector offers with regard to mobility and general needs of society and includes such important aspects as safety, connectivity (travel time, network composition, etc.) and the comfort of passengers among other issues. As a result, the discussed topics which are summed up in the given category are very manifold and include perspectives of different stakeholders and different parts of society. This complexity makes it necessary that the chosen indicators – as far as they belong to different thematic dimensions as it is indicated in the headline of this sheet – will also be discussed in separate indicator information sheets. The beginning will in this context be marked by safety aspects and mobility issues. For each of these topics a single indicator information sheet was prepared. Nevertheless, it is thinkable that the presented indicator set will be extended in the near future according to changing society needs, although safety and mobility aspects are core elements of the topic discussed here.

Since the day the first air transport activities started, safe operations are still the most important requirement for performing flights. The background is that the protection of human life is given the highest importance in most regions worldwide and all modes of transport should guarantee a high degree of safety in order to avoid failures within the system. From a sustainable point of view, this holds especially for cases, when people are injured or killed as result of an accident. This targets especially the social dimension of sustainability, as the loss of life of a person does not only effect his/her one subjective position. It has also effects on the relatives and friends as well as on the contribution this person offered within the society. In this way, there is a linkage from the air transport internal system to the air transport external system, which justifies the allocation of safety indicators to the area of Sustainable Development Indicators (SDIs).

The importance of safety is furthermore reflected in the high number of regulations and control mechanisms which were introduced over the last decades to improve safe performances within the air transport system. Although declining numbers of fatal accidents over time show that this approach was successful a permanent monitoring of the development of air transport safety is still required. A rising complexity of flight operations due to increasing automatisations and hence more complicated interaction between machines and human beings could lead to problems of “over-organization”. Also, much higher traffic volumes with foreseeable growth rates in several world regions could increase the danger of human failure.

This all puts safety on top of the agenda in the context of a monitoring of the development of the global air transport system from a long-term point of view.



2. Description of the indicator development

Especially in the early days of flying, safety was a major issue in air transport and this mainly for technology reasons. Today this situation has improved. Nevertheless, fatal and non-fatal accidents continue to happen. Against this background, on an aggregated level four suitable indicators to measure the on-going safety performance within the world air transport system are:

1. The number of passengers killed per billion RPKs
2. The number of fatal accidents per million departures/flights
3. The number of accidents per million departures
4. The number of fatalities per million departures¹

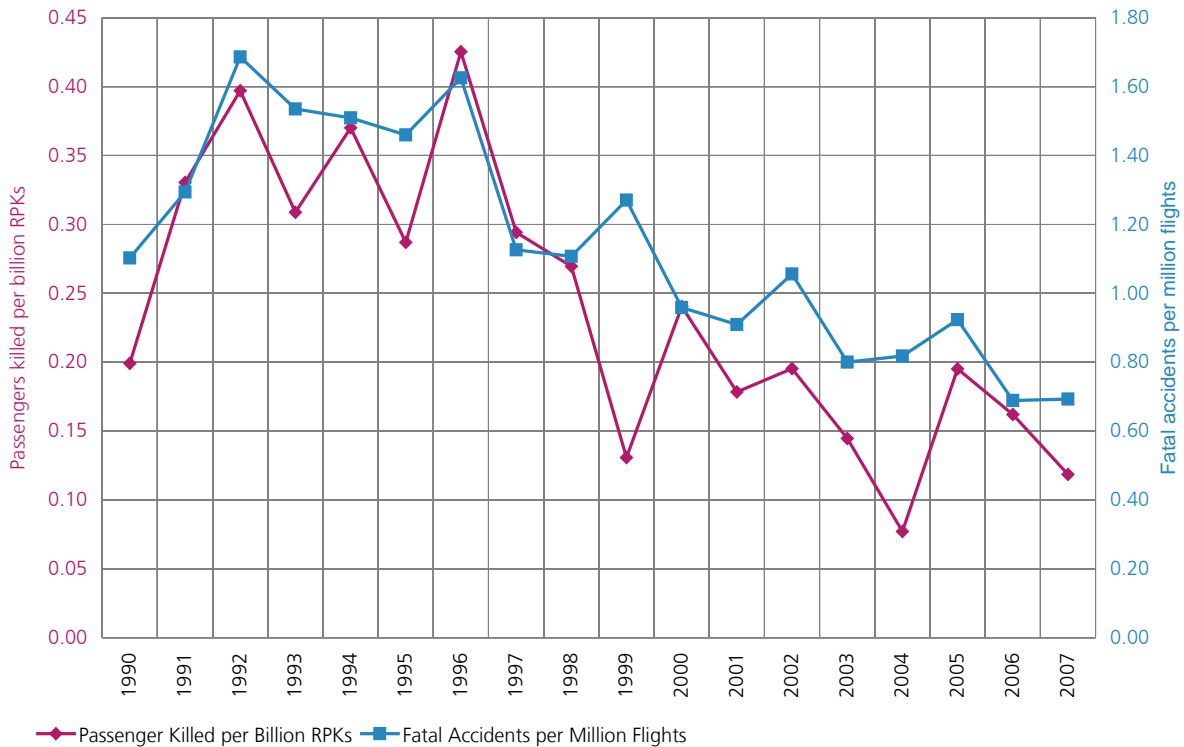
All of those four indicators allow putting the key measures in the area of safety (number of passengers killed and number of (fatal) accidents) in the context of traffic figures, measured in billion RPKs and millions of departures/flights. Taking this approach into account, this relative safety performance is directly linked to the development of air traffic and reflects if air transport has become safer although the volume of air traffic has increased or decreased over the long-term. The question, if there is a correlation between safety performance and the amount of traffic can be investigated this way. However, in consideration of the unpredictable character of incidents and accidents, it has to be kept in mind that the presented indicators in this sheet are signified by volatility and conclusions on this basis cannot be regarded as universally valid.

¹ Incidents which resulted not in concrete accidents with a significant damage of an aircraft and/or fatalities are not analysed in this sheet, as they have a lower impact on the performance of air transport operations and are therefore regarded as safety indicators with minor importance.



Indicator 1 and 2: Number of passengers killed per billion RPKs; Fatal accidents per million flights

Source: ASCEND.



The indicators 1 and 2 which are presented in the graph above are based on a special analysis of aggregated data from the data provider ASCEND. The concrete figures were not available completely. Therefore, only the numbers for the indicators included in the graphs 3-5 are published in the annex of this sheet.

However, some first results can be gained from the time period from 1990 to 2007² which is illustrated in the diagram from ASCEND. One indicator in this graph reflects the number of passengers killed per billion RPKs while the other indicator describes the number of fatal accidents per million flights. The presented long-term time horizon is in this case very important as it helps to balance potential strong deviations which are possible when such unpredictable events as accidents are regarded.

Thus, in general a positive development with regard to both indicators is observable as both curves show a decline over the regarded years. On global level, the number of fatal accidents per million flights amounted to 0.69 in 2007, which means that one fatal accident occurred roughly every 1.5 million flights in this year. Looking at a longer time range, this is a positive value as the average number of fatal accidents per million flights amounted rather to 1.0 on average within the time span before.

A similar positive tendency is also expressed by the other indicator, which is marked in pink. Following the corresponding curve in 2007, about 0.12 passengers were killed per billion RPKs. Besides 2004, this was the lowest value in the regarded time period, followed by the year 1999 when 0.13 passengers per billion RPKs lost their lives. The average value

² Although the first days of aviation are mentioned on the second page of this sheet, the main time frame which is regarded in the following with the help of indicators will concentrate on the time starting from 1990 onwards. This approach had to be chosen in order to be compatible with the other indicators in the MONITOR indicator set. In addition, as at least seven or even more years are still regarded in all presented data sets in this sheet, the analysis can still be classified as a long-term one such as it is needed to identify general tendencies.



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concerning all regarded years amounted to 0.24 passengers, which is twice as much as in 2007. Thus, also when this SDI is regarded, a better safety performance becomes visible.

The whole development described here must be evaluated even more positive as the long-term perspective starting from 1990 shows a clear growth rate of the traffic volume. The number of flights increased from 25.4 million to 36.1 million (+ 42.1%) between 1990 and 2007 according to figures from ASCEND, while correspondingly the number of revenue passenger kilometres grew from 2,612 billion to 5,324 billion. Although these figures rose what normally should lead to an increased risk of accidents, the trend developed vice versa. This tendency is also expressed by the following indicators which include data from ICAO and IATA.



Indicator 3: Accident rate

Source: DLR, own calculations based on ICAO.

Accidents per million departures



Indicator 3 presents figures which were retrieved from ICAO's Accident Statistics which is available online and provides safety data for the years from 2005 to 2011. The data set contains accidents which were recorded according to the definition of Annex 13 of the Chicago Convention about "Aircraft Accident and Incident Investigation" and were put in relation to the number of departures per year. Those include all scheduled commercial flights in the field of passenger and cargo traffic. An additional advantage of the ICAO database is in this context that the data is given for six world regions. Thus, a more detailed insight in the safety performance over the long-term is possible.

At first view it can be observed that the global trend line for accidents per million departures (pink curve) seems to show a rather stable tendency. It clearly oscillates around 4.3 accidents per million departures which is the average value over the regarded time span. However, it has to be kept in mind that the time period under investigation is with seven years too short to conclude that this tendency is a clear trend. Nevertheless, due to the amount of air traffic which grew by more than 10% at the same time from 27.3 million departures worldwide in 2005 to 30.1 million departures in 2011, the described development can carefully be classified as improvement.

More different is the development with regard to the separate world regions. Accidents were counted in this case in dependence from the geographic region where they occurred, not in dependence from the country of origin of the aircraft operator.

At first view, the development in Africa catches attraction as the number of accidents per million departures oscillates around 13.5 for the period from 2005 to 2011 and is clearly above the overall average. Similar on a higher level is also the curve for the Latin America and Caribbean region with a 7-years average value of 7.3 and a peak of 11.5 accidents per million departures in 2008. Both regions also show the highest volatility with regard to the



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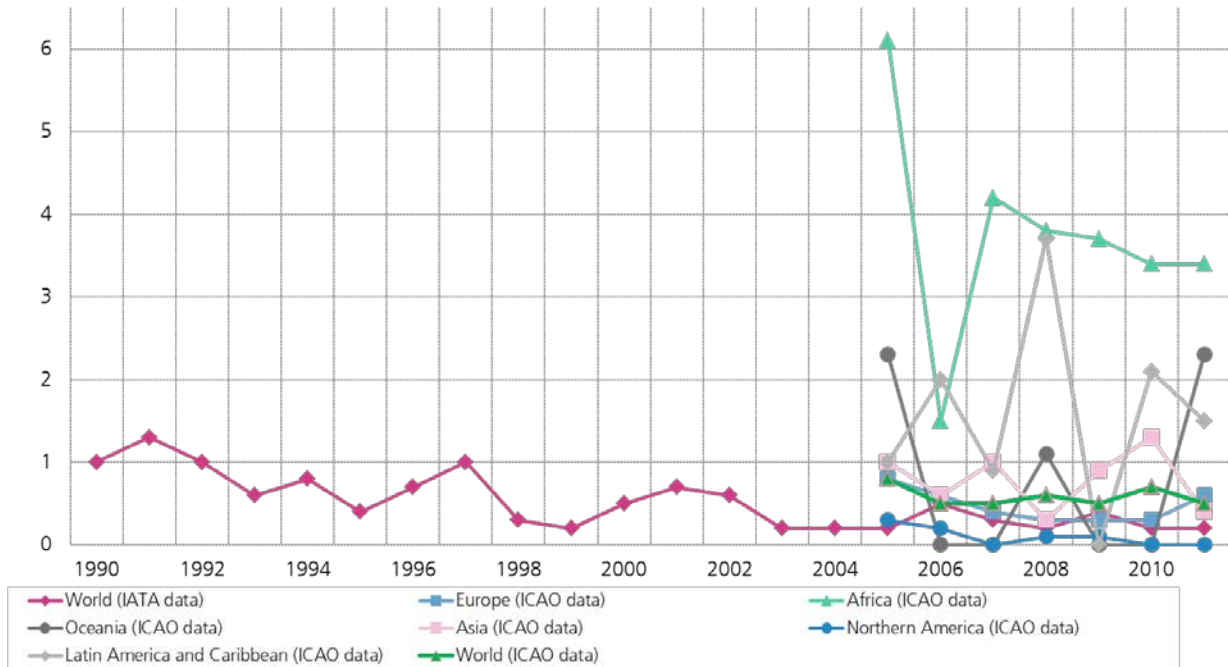
presented indicator, while the development in Asia, Europe, Oceania and Northern America is relatively stable. Given this situation, it has however to be kept in mind, that all accidents represent an unpredictable event and the investigated regions differ with regard to the size of the regarded territory. Therefore, the statements in this sheet can only provide a rough description of reported developments and cannot be seen as universally valid. It is also difficult to foresee how the present curves will develop in the future.



Indicator 4: Number of fatal accidents per million departures

Source: DLR, own calculations based on ICAO and IATA.

Fatal accidents per million departures



Indicator 4 looks at the development of fatal accidents in cases where at least one or more persons (passengers, crew members or third parties) were killed as result of an accident. Two data sources were combined regarding this issue in order to gain a more significant data set. First, data from ICAO's Accident Statistics database was retrieved as these figures allow differentiating between separate world regions. As second step, IATA data was retrieved from the IATA WATS report 2012 and former editions as this allowed to build a longer time series. However, it has to be considered in this context that the IATA time series covers only fatal accidents reported by IATA member airlines, while the global curve of ICAO data covers global air traffic to a much higher extent. Another difference between both data sources is that ICAO allows relating the number of fatal accidents to commercial scheduled flights in the field of passenger and cargo services, while IATA only collects safety data with regard to scheduled and charter passenger flights and excludes cargo flights. However, this difference is negligible due to the number of the affected flights.

Taking the IATA figures as first step into account, the long-term curve provides an additional hint at the conclusion which could be drawn in connection with the indicators 1 and 2: air transport operations have become safer over the years. While in 1991 a peak of fatal accidents per million departures of the IATA member airlines was reached, a declining tendency for the further years is visible and this holds especially for the last ten years in the regarded time span. The average value for all years which are included in the IATA data set is 0.5 fatal accidents per million departures but after 2002 this value oscillates around 0.2/0.3. Again, it has in this context to be considered, that in the same time (2002-2011) the number of flights operated by IATA airlines grew by 15.9% from 15 to 17.4 million and in the overall time span, which is presented here, even from 12.4 to 17.4 million departures (+39.7%). Thus, while air traffic rose, the number of fatal accidents declined over the long-term.



A similar tendency can also be observed with regard to the ICAO curve for the global development. Even though only figures from 2005 to 2011 are included here, there is a small downward trend visible. In 2005, the indicator value starts with 0.8 fatal accidents per million departures and ends up with 0.5 in 2011. During the same time, global air traffic – measured in departures grew from 27.3 to 30.1 million what corresponds to an increase of 10.2%.

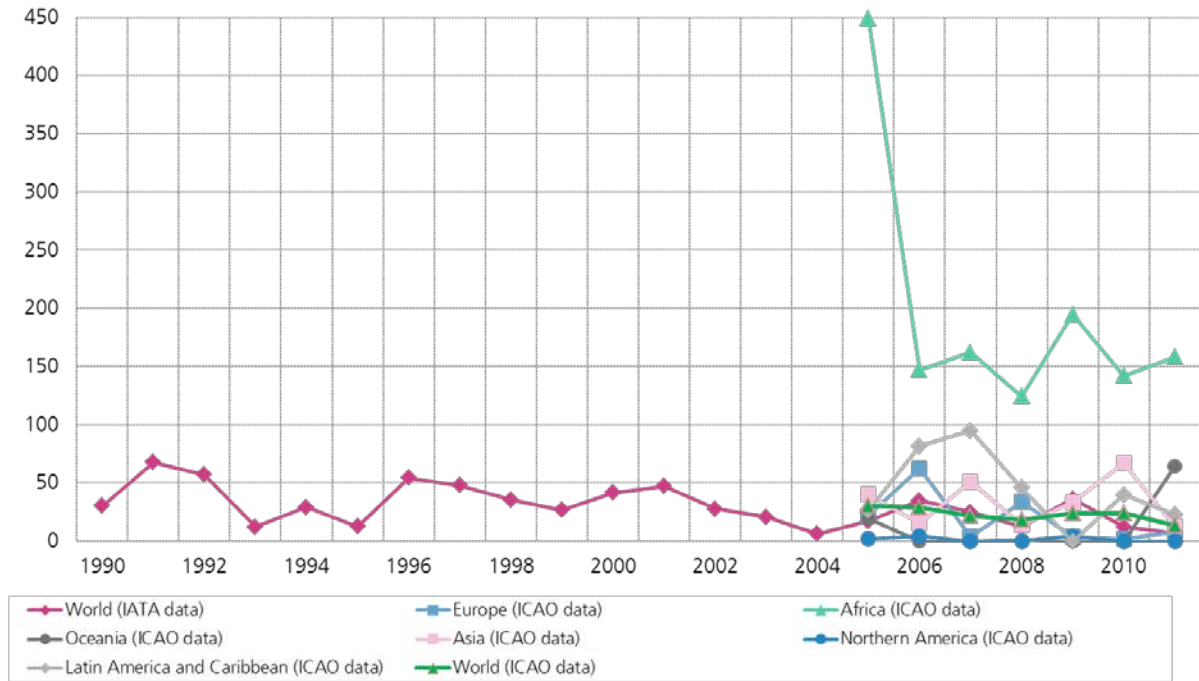
Less consistent are the figures for the different world regions. Again Africa shows an above-average development of fatal accidents per million departures. Over the years, this number amounted to 3.7 on average, for Asia 0.8, for Europe 0.5, for the Latin America and Caribbean region 1.6, for Northern America 0.1 and for Oceania 0.8. It has however again to be considered that the regional territories which are regarded here are not equal in their size and the figures are therefore not valid enough to draw some general conclusions on this basis.



Indicator 5: Number of fatalities per million departures

Source: DLR, own calculations based on ICAO and IATA.

Fatalities per million departures



The figures in the graph above consider furthermore the time span between 2005 and 2011 for ICAO data and 1990-2011 for IATA data. Concerning the IATA curve the fatalities among passengers, crew and third parties were recorded for all scheduled and charter passenger services of the IATA member airlines in the specific year. The datasets of ICAO include all fatalities in global air traffic which resulted from scheduled commercial flights in the field of passenger and cargo traffic.

Taking the IATA curve foremost into account, a similar picture as the one represented by the ASCEND data with regard to Indicator 1 can be observed. For the number of fatalities per regarded traffic unit – may it be billion RPKs in the case of ASCEND data or million departures – a declining trend becomes clear over the long-term. Comparing the number of fatalities per 1 million departures in consideration of ICAO and IATA data in the next step, this tendency is also visible as the lowest value for this indicator between 2005 and 2011 can be assigned to the year 2011 for both ICAO and IATA figures. IATA reported 6.5 fatalities per 1 million departures for this year and ICAO 13.8 fatalities. This historical peak made 2011 in the view of both organisations to one of the safest years ever.³

Regarding the separate world regions, a declining trend for fatalities per million departures is also remarkable and this especially for Africa. While in 2005 a significant peak with 448.7 fatalities per million departures was reported, this indicator shrunk towards 158.2 fatalities per million departures in 2011. During the same time span the number of departures grew by 36.4% from 653,000 to 891,000. A similar tendency can also be observed for the Latin America and Caribbean region which recorded the second highest number of fatalities per million departures with 43.6 on average for the seven years under consideration. Peaks were reported for 2006 and 2007 with 81.4 and 94.9 fatalities per million departures respectively, whereas 2011 this value decreased towards 22.9. Besides the other world regions a last curve which attracts attention is reflected by the development in Northern America. With an

³ cf. IATA (2012), p. 4; ICAO (2012), p. 6.



average value of 1.6 fatalities per million departures the degree of safety is relatively high there. However, it has to be considered that Northern America is next to Oceania also the only region in the data set, which has lost traffic in parallel as the number of departures sunk from 12.6 million to 11 million between 2005 and 2011.

Summing up the overall conclusions which could be drawn from all indicators in this sheet, it can finally be stated that air transport operations have become safer over the last 10-20 years and this with regard to all three safety dimensions which have been investigated: the number of accidents, the number of fatal accidents and the number of fatalities. This development is even more positive against the background that air traffic (measured in departures) grew considerably in the regarded time span. Nevertheless, the analysis also showed that the degree of safety is not spatially distributed in the same manner. Independent from the concrete reasons, especially Africa and the Latin America and Caribbean region deviate negatively from the global average. In addition, in spite of all conclusions which could be drawn in this sheet, it has to be kept in mind that all indicators show a kind of volatility due to the unpredictable nature of incidents and accidents and valid statements for future developments are not possible on this basis. Therefore, a permanent monitoring of the safety performance in air transport and especially concrete initiatives to improve safety are indispensable in order to make air transport operations as safe as possible.

3. Main sources of the discussed indicators

- Ascend: Online Fleets Database ([Metadata description](#))
- IATA (2012): World Air Transport Statistics ([Metadata description](#))
- ICAO (2012): Online Accident Statistics

4. Alternative sources to build similar indicators in the given indicator field

- EASA: Safety Database
- ICAO: Integrated Statistical Database
- Aviation Safety Network Database ([Metadata description](#))
- JACDEC Database

5. References

ICAO (2012): Safety Report

IATA (2012): World Air Transport Statistics ([Metadata description](#))

**Annex****Indicator 3: Accident rate**

Year	Africa			Asia		
	Accidents	Departures (thousands)	Indicator: Accidents per million departures	Accidents	Departures (thousands)	Indicator: Accidents per million departures
2005	8	653	12.3	22	4,790	4.6
2006	10	654	15.3	22	5,281	4.2
2007	10	722	13.9	26	5,745	4.5
2008	10	789	12.7	27	5,974	4.5
2009	11	802	13.7	35	6,340	5.5
2010	17	880	19.3	24	7,011	3.4
2011	7	891	7.9	22	7,561	2.9
2005-2011: Average value	10	770	13.5	25	6,100	4.2

Year	Europe			Latin America and Caribbean		
	Accidents	Departures (thousands)	Indicator: Accidents per million departures	Accidents	Departures (thousands)	Indicator: Accidents per million departures
2005	20	6,338	3.2	15	2,003	7.5
2006	27	6,545	4.1	14	2,039	6.9
2007	33	7,070	4.7	15	2,129	7.0
2008	31	7,138	4.3	25	2,167	11.5
2009	19	6,659	2.9	14	2,144	6.5
2010	24	6,831	3.5	16	2,424	6.6
2011	39	7,143	5.5	15	2,625	5.7
2005-2011: Average value	28	6,818	4.0	16	2,219	7.3



Year	Northern America			Oceania		
	Accidents	Departures (thousands)	Indicator: Accidents per million departures	Accidents	Departures (thousands)	Indicator: Accidents per million departures
2005	45	12,614	3.6	5	880	5.7
2006	36	12,074	3.0	3	889	3.4
2007	33	12,354	2.7	4	891	4.5
2008	36	11,898	3.0	4	894	4.5
2009	28	11,076	2.5	3	848	3.5
2010	35	11,008	3.2	6	869	6.9
2011	38	10,979	3.5	4	855	4.7
2005-2011: Average value	36	11,715	3.1	4	875	4.7

Year	World		
	Accidents	Departures (thousands)	Indicator: Accidents per million departures
2005	119	27,278	4.4
2006	112	27,482	4.1
2007	122	28,911	4.2
2008	138	28,859	4.8
2009	113	27,870	4.1
2010	121	29,023	4.2
2011	126	30,053	4.2
2005-2011: Average value	122	28,497	4.3

Source: ICAO: Online Accident Statistics 2012

Remarks:

Accidents are defined on base of the definition which is included in Annex 13 to the Chicago Convention - "Aircraft Accident and Incident Investigation". The number of departures includes scheduled commercial flights (passenger and cargo traffic).

The world regional view, which is presented here, is part of ICAO's regular safety statistics. The country regional groupings correspond to the United Nations official country groupings. All data was retrieved from the ICAO ADREP database:

<http://www2.icao.int/en/ism/iStars/Pages2/Accident%20statistics.aspx>.

Due to the time frame of this database which lists data only from the year 2005 onwards, indicators and figures could only be given for the years 2005-2011, while the time lines for other indicators in this sheet is longer (cf. the indicators built on data from IATA and ASCEND).

**Indicator 4: Number of fatal accidents per million departures**

Year	Africa			Asia		
	Fatal accidents	Departures (thousands)	Indicator: Fatal accidents per million departures	Fatal accidents	Departures (thousands)	Indicator: Fatal accidents per million departures
2005	4	653	6.1	5	4,790	1.0
2006	1	654	1.5	3	5,281	0.6
2007	3	722	4.2	6	5,745	1.0
2008	3	789	3.8	2	5,974	0.3
2009	3	802	3.7	6	6,340	0.9
2010	3	880	3.4	9	7,011	1.3
2011	3	891	3.4	3	7,561	0.4
2005-2011: Average value	3	770	3.7	5	6,100	0.8

Year	Europe			Latin America and Caribbean		
	Fatal accidents	Departures (thousands)	Indicator: Fatal accidents per million departures	Fatal accidents	Departures (thousands)	Indicator: Fatal accidents per million departures
2005	5	6,338	0.8	2	2,003	1.0
2006	4	6,545	0.6	4	2,039	2.0
2007	3	7,070	0.4	2	2,129	0.9
2008	2	7,138	0.3	8	2,167	3.7
2009	2	6,659	0.3	0	2,144	0.0
2010	2	6,831	0.3	5	2,424	2.1
2011	4	7,143	0.6	4	2,625	1.5
2005-2011: Average value	3	6,818	0.5	4	2,219	1.6



Year	Northern America			Oceania		
	Fatal accidents	Departures (thousands)	Indicator: Fatal accidents per million departures	Fatal accidents	Departures (thousands)	Indicator: Fatal accidents per million departures
2005	4	12,614	0.3	2	880	2.3
2006	3	12,074	0.2	0	889	0.0
2007	0	12,354	0.0	0	891	0.0
2008	1	11,898	0.1	1	894	1.1
2009	1	11,076	0.1	0	848	0.0
2010	0	11,008	0.0	0	869	0.0
2011	0	10,979	0.0	2	855	2.3
2005-2011: Average value	1	11,715	0.1	1	875	0.8



Year	World (ICAO data)			World (IATA data)		
	Fatal accidents	Departures (thousands)	Indicator: Fatal accidents per million departures	Fatal accidents	Departures (thousands)	Indicator: Fatal accidents per million departures
1990	n.a.	n.a.	n.a.	12	12,427	1.0
1991	n.a.	n.a.	n.a.	15	11,802	1.3
1992	n.a.	n.a.	n.a.	12	12,409	1.0
1993	n.a.	n.a.	n.a.	8	12,639	0.6
1994	n.a.	n.a.	n.a.	10	13,017	0.8
1995	n.a.	n.a.	n.a.	5	13,365	0.4
1996	n.a.	n.a.	n.a.	10	13,877	0.7
1997	n.a.	n.a.	n.a.	15	14,700	1.0
1998	n.a.	n.a.	n.a.	5	15,016	0.3
1999	n.a.	n.a.	n.a.	3	15,489	0.2
2000	n.a.	n.a.	n.a.	8	16,054	0.5
2001	n.a.	n.a.	n.a.	11	15,875	0.7
2002	n.a.	n.a.	n.a.	9	14,972	0.6
2003	n.a.	n.a.	n.a.	3	14,034	0.2
2004	n.a.	n.a.	n.a.	3	15,048	0.2
2005	23	27,278	0.8	3	15,172	0.2
2006	15	27,482	0.5	8	15,306	0.5
2007	15	28,911	0.5	5	15,396	0.3
2008	17	28,859	0.6	3	15,597	0.2
2009	13	27,870	0.5	6	15,375	0.4
2010	19	29,023	0.7	4	16,470	0.2
2011	16	30,053	0.5	3	17,355	0.2
2005-2011: Average value	17	28,497	0.6	7	14,609	0.5

Sources: ICAO: Online Accident Statistics 2012, IATA: World Air Transport Statistics 2012 and former editions

Remarks ICAO data:

The world regional view, which is presented here, is part of ICAO's regular safety statistics. The country regional groupings correspond to the United Nations official country groupings. All data was retrieved from the ICAO ADREP database:

<http://www2.icao.int/en/ism/iStars/Pages2/Accident%20statistics.aspx>. Only fatal accidents were considered in this table and the number of departures includes scheduled commercial flights (passenger and cargo traffic). Due to the time frame of the ICAO Safety database only data from the year 2005 onwards was available and therefore, the time series for ICAO data are shorter than the one for IATA data.

Remarks IATA Data:

Figures for the last-mentioned year are preliminary and the years 1990-2001 include Aeroflot's international operations. Accidents were counted with regard to scheduled and charter passenger services of IATA member airlines and were considered if they resulted in fatalities as a direct result of operation of an aircraft. Accordingly, only scheduled and charter passenger flights of IATA member airlines in the specific year were considered for the calculation of the departures.

**Indicator 5: Number of fatalities per million departures**

Year	Africa			Asia		
	Fatalities	Departures (thousands)	Indicator: Fatalities per million departures	Fatalities	Departures (thousands)	Indicator: Fatalities per million departures
2005	293	653	448.7	193	4,790	40.3
2006	96	654	146.8	82	5,281	15.5
2007	117	722	162.0	293	5,745	51.0
2008	98	789	124.2	83	5,974	13.9
2009	156	802	194.5	211	6,340	33.3
2010	125	880	142.0	471	7,011	67.2
2011	141	891	158.2	98	7,561	13.0
2005-2011: Average value	147	770	190.3	204	6,100	33.5

Year	Europe			Latin America and Caribbean		
	Fatalities	Departures (thousands)	Fatalities per million departures	Fatalities	Departures (thousands)	Indicator: Fatalities per million departures
2005	140	6,338	22.1	53	2,003	26.5
2006	409	6,545	62.5	166	2,039	81.4
2007	27	7,070	3.8	202	2,129	94.9
2008	242	7,138	33.9	99	2,167	45.7
2009	25	6,659	3.8	0	2,144	0.0
2010	14	6,831	2.0	97	2,424	40.0
2011	60	7,143	8.4	60	2,625	22.9
2005-2011: Average value	131	6,818	19.2	97	2,219	43.6



Year	Northern America			Oceania		
	Fatalities	Departures (thousands)	Indicator: Fatalities per million departures	Fatalities	Departures (thousands)	Indicator: Fatalities per million departures
2005	24	12,614	1.9	17	880	19.3
2006	53	12,074	4.4	0	889	0.0
2007	0	12,354	0.0	0	891	0.0
2008	1	11,898	0.1	1	894	1.1
2009	50	11,076	4.5	0	848	0.0
2010	0	11,008	0.0	0	869	0.0
2011	0	10,979	0.0	55	855	64.3
2005-2011: Average value	18	11,715	1.6	10	875	11.9



Year	World (ICAO data)			World (IATA data)		
	Fatalities	Departures (thousands)	Indicator: Fatalities per million departures	Fatalities	Departures (thousands)	Indicator: Fatalities per million departures
1990	n.a.	n.a.	n.a.	378	12,427	30.4
1991	n.a.	n.a.	n.a.	798	11,802	67.6
1992	n.a.	n.a.	n.a.	707	12,409	57.0
1993	n.a.	n.a.	n.a.	156	12,639	12.3
1994	n.a.	n.a.	n.a.	379	13,017	29.1
1995	n.a.	n.a.	n.a.	168	13,365	12.6
1996	n.a.	n.a.	n.a.	756	13,877	54.5
1997	n.a.	n.a.	n.a.	706	14,700	48.0
1998	n.a.	n.a.	n.a.	534	15,016	35.6
1999	n.a.	n.a.	n.a.	416	15,489	26.9
2000	n.a.	n.a.	n.a.	667	16,054	41.5
2001	n.a.	n.a.	n.a.	748	15,875	47.1
2002	n.a.	n.a.	n.a.	416	14,972	27.8
2003	n.a.	n.a.	n.a.	294	14,034	20.9
2004	n.a.	n.a.	n.a.	97	15,048	6.4
2005	824	27,278	30.2	261	15,172	17.2
2006	806	27,482	29.3	533	15,306	34.8
2007	645	28,911	22.3	384	15,396	24.9
2008	524	28,859	18.2	190	15,597	12.2
2009	670	27,870	24.0	560	15,375	36.4
2010	707	29,023	24.4	203	16,470	12.3
2011	414	30,053	13.8	112	17,355	6.5
2005-2011: Average value	656	28,497	23.0	430	14,609	29.4

Sources: ICAO: Online Accident Statistics 2012, IATA: World Air Transport Statistics 2012 and former editions

Remarks ICAO data:

The world regional view, which is presented here, is part of ICAO's regular safety statistics. The country regional groupings correspond to the United Nations official country groupings. All data was retrieved from the ICAO ADREP database: <http://www2.icao.int/en/ism/iStars/Pages2/Accident%20statistics.aspx>. Only fatalities were considered in this table and the number of departures includes scheduled commercial flights (passenger and cargo traffic). Due to the time frame of the ICAO Safety database only data from the year 2005 onwards was available and therefore, the time series for ICAO data are shorter than the one for IATA data.

Remarks IATA Data:

Figures for the last-mentioned year are preliminary and the years 1990-2001 include Aeroflot's international operations. Fatalities were counted with regard to scheduled and charter passenger services of IATA member airlines and include fatalities in reference to passengers, crew and third parties. For the calculation of the departures only scheduled and charter passenger flights of IATA member airlines in the specific year were considered.



MONITOR

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