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Australian Government
Australian Transport Safety Bureau

RESEARCH DISCUSSION PAPER

B2005/0388

ELABORAZIONE

com.te Giuliano Mansutti

02 luglio 2006

**Analysis of Fatality Trends involving Civil Aviation
Aircraft in Australian Airspace between 1990 and 2005**

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ELABORAZIONE DA ATSB



Australian Government
Australian Transport Safety Bureau

RESEARCH DISCUSSION PAPER

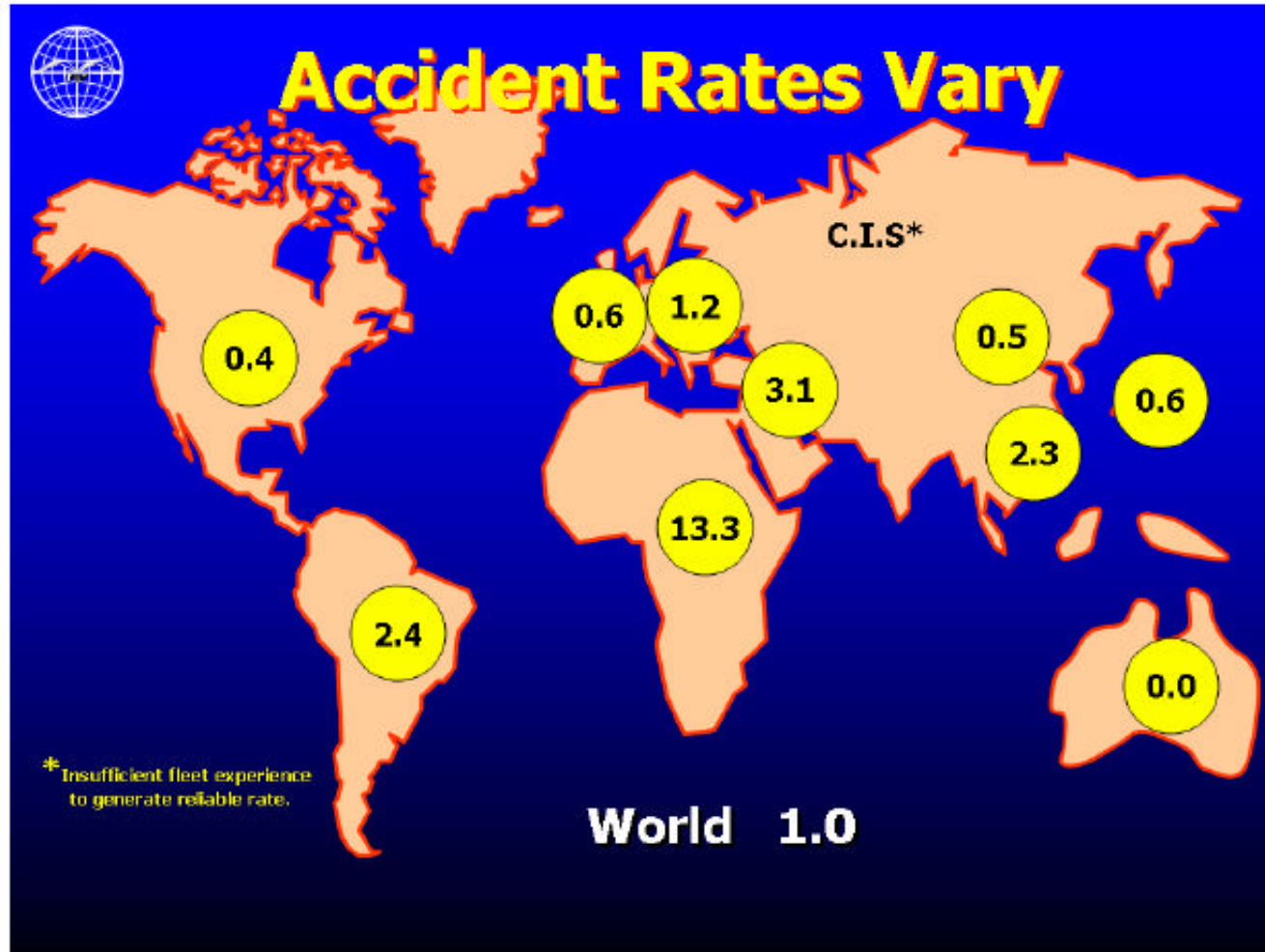
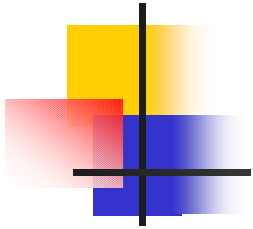
B2005/0388

**Analysis of Fatality Trends involving Civil Aviation
Aircraft in Australian Airspace between 1990 and 2005**

- **ESTRATTI
DAL
DOCUMENTO
ATSB**

HULL LOSS ACCIDENT

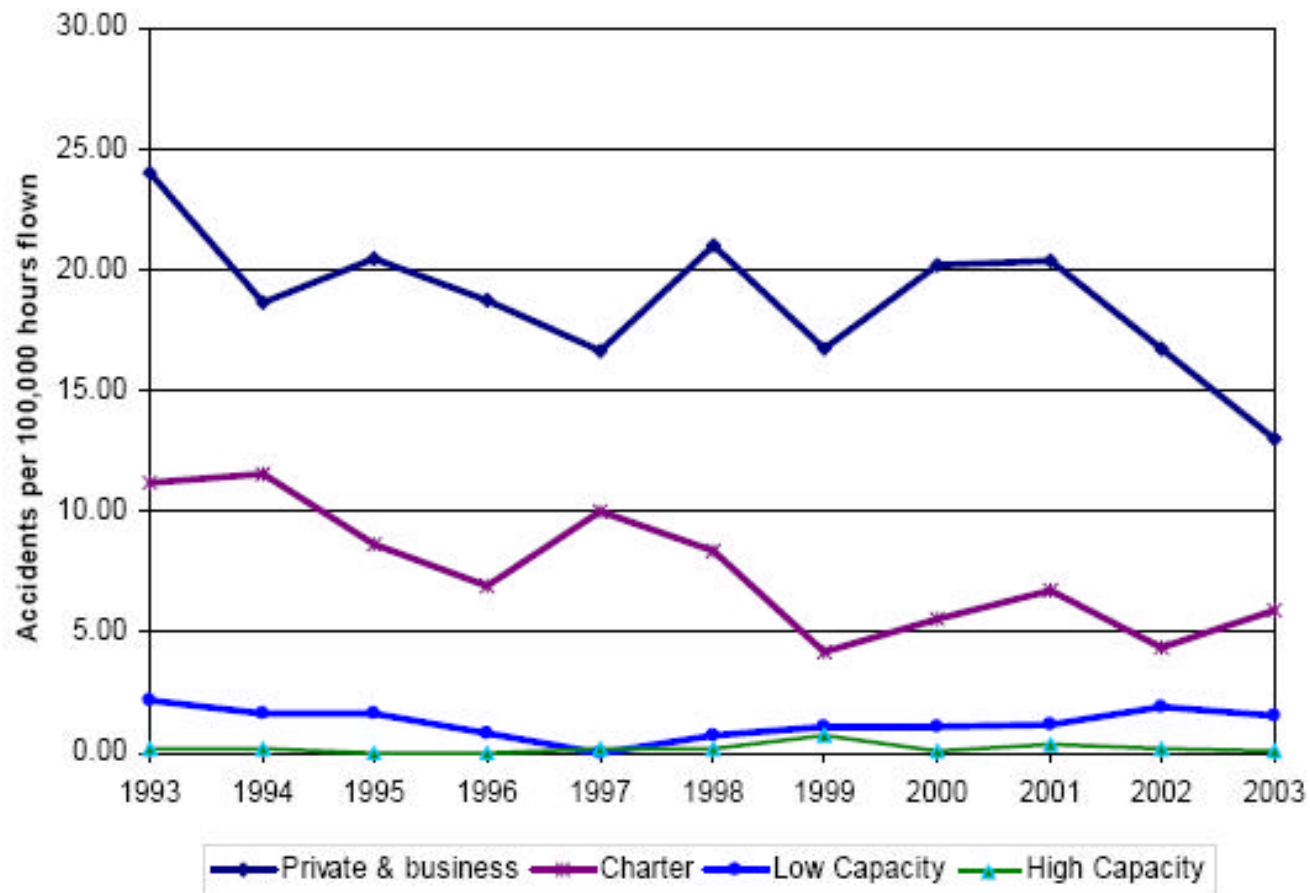
MILLION DEPARTURES 1994 - 2003



Source: Matthews (2005) Flight Safety Foundation

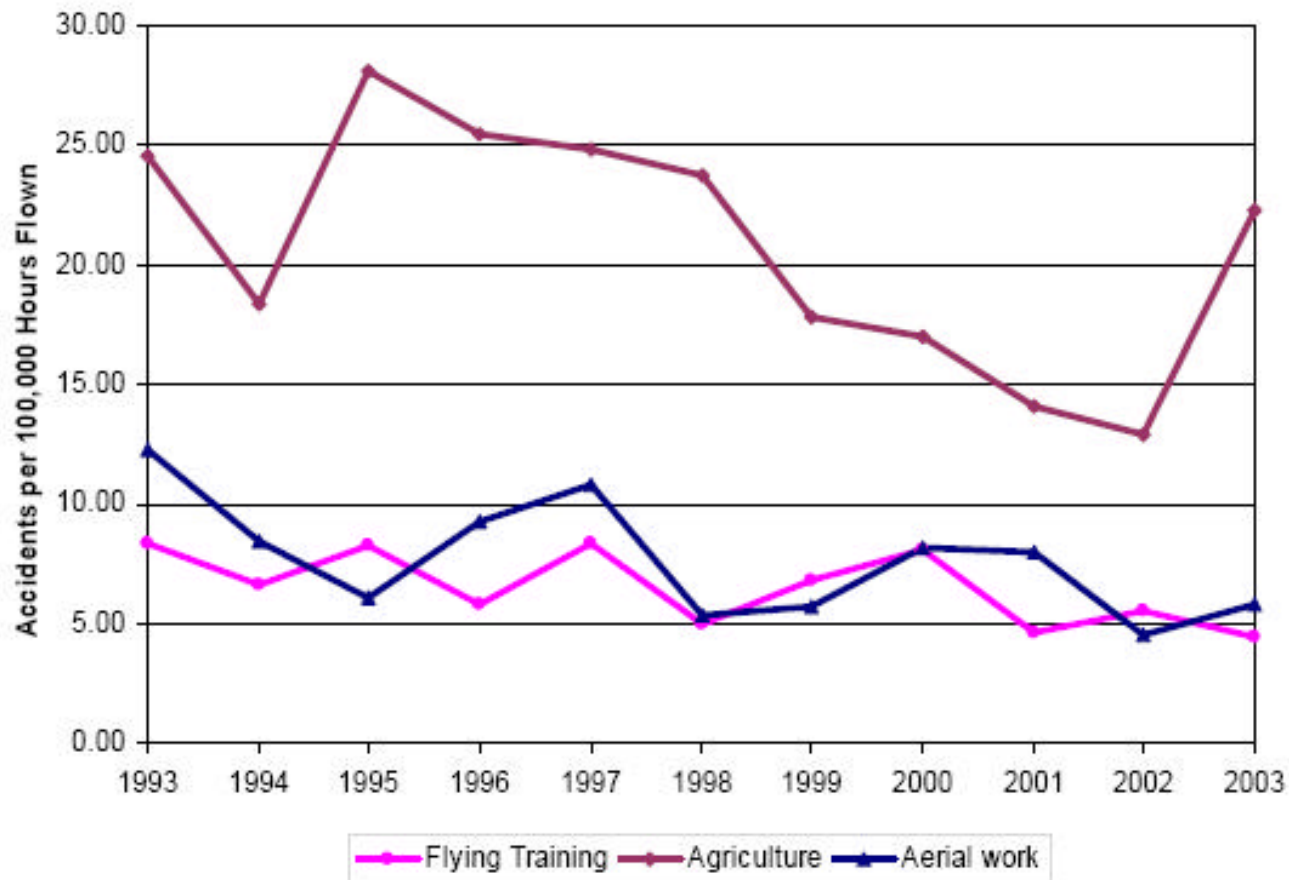
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ACCIDENTS per 100.000 ore volate per categoria 1993-2003



GENERAL AVIATION accidents

per 100.000 ore volate per categoria



GENERAL AVIATION: fatal accidents

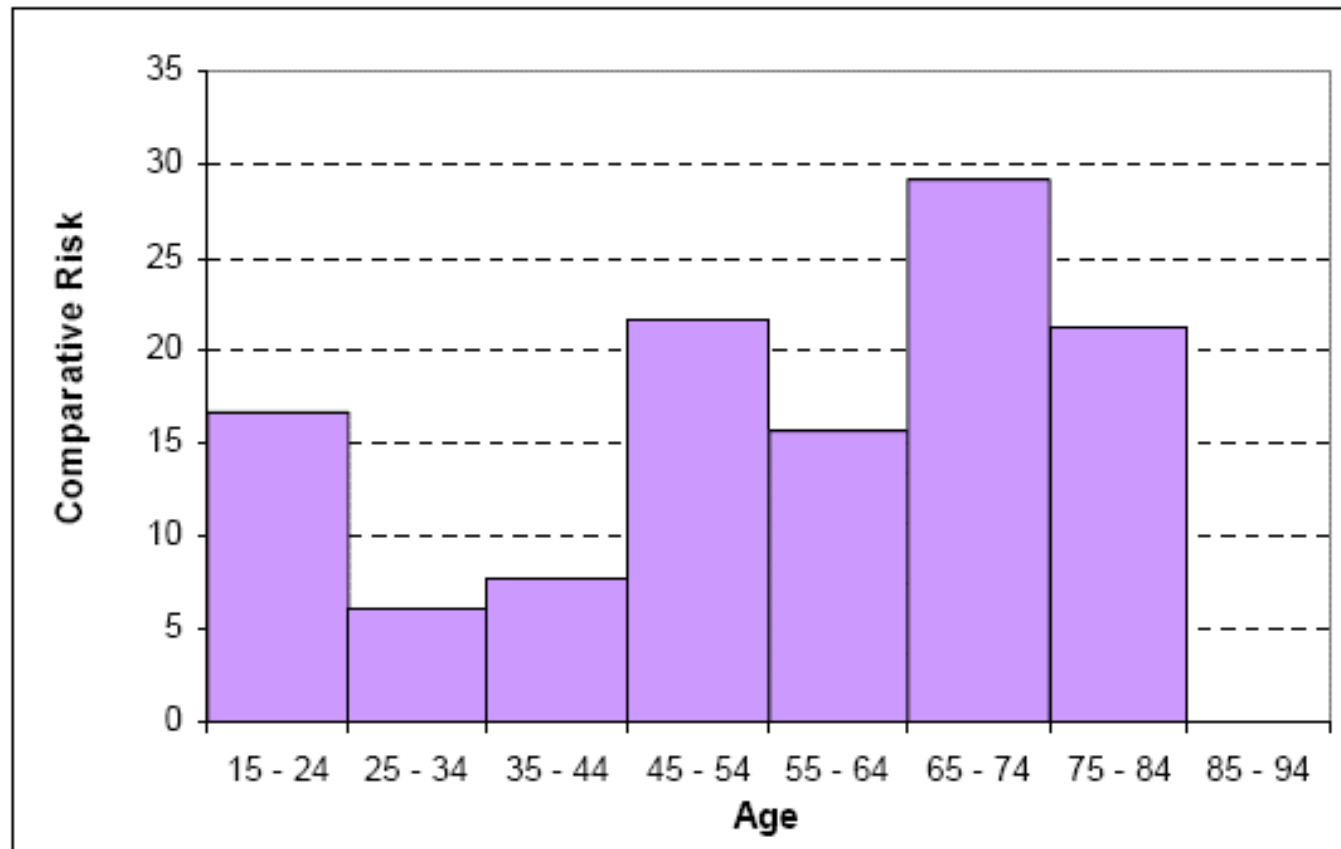
per 100.000 ore volate e n° vittime

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	1991-2000
Fatal Accidents	21	26	22	25	22	23	16	23	21	16	215
Rate	1.2	1.6	1.3	1.5	1.3	1.3	0.9	1.2	1.1	0.9	1.2

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	1991-2000
Crew	22	23	20	26	23	21	14	22	20	17	208
Passenger	23	26	25	25	14	22	12	24	20	12	203
Third Party	0	1	1	0	0	0	0	0	0	0	2
Total	45	50	46	51	37	43	26	46	40	29	413

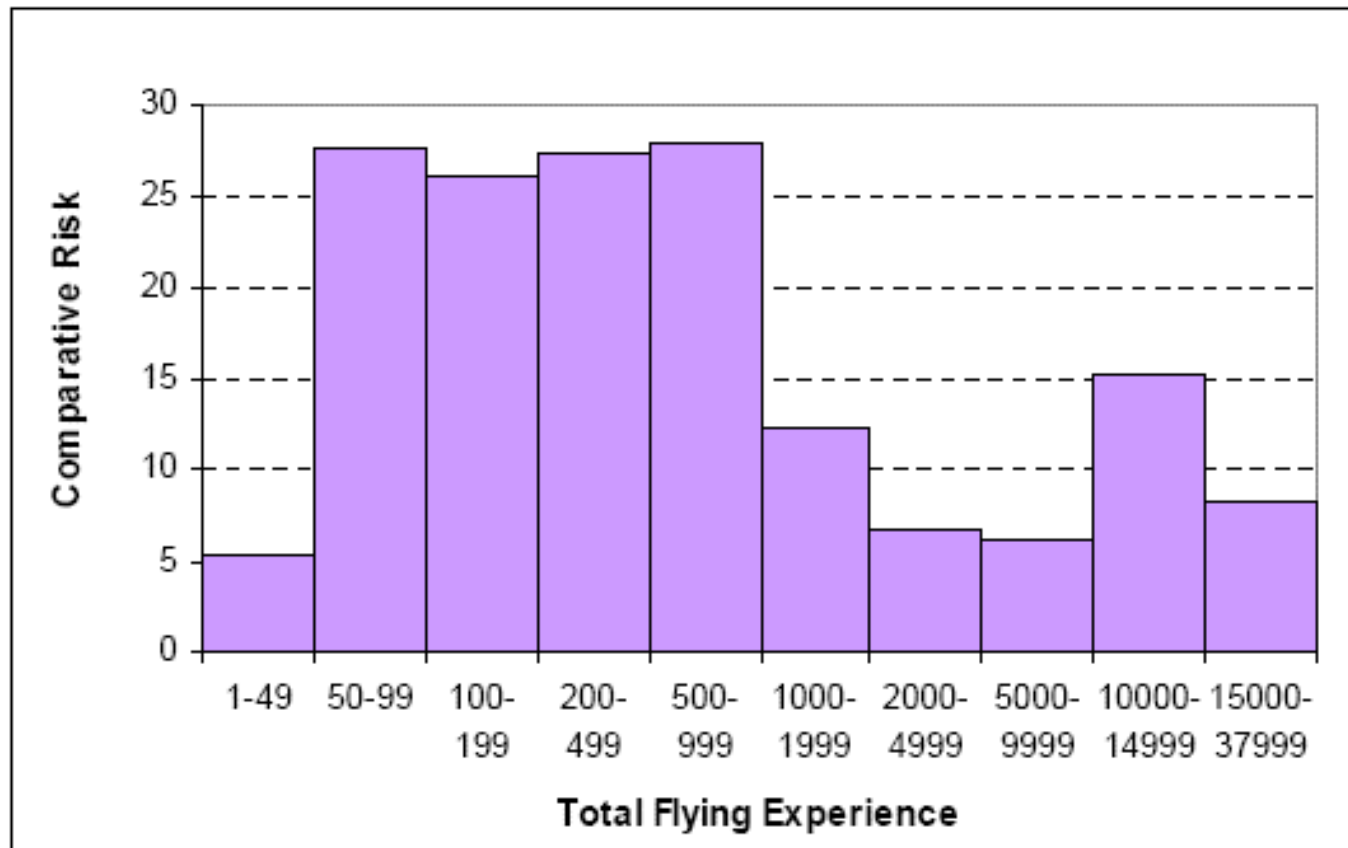
RISCHIO COMPARATO:

vittime per ore volate in rapporto all'età



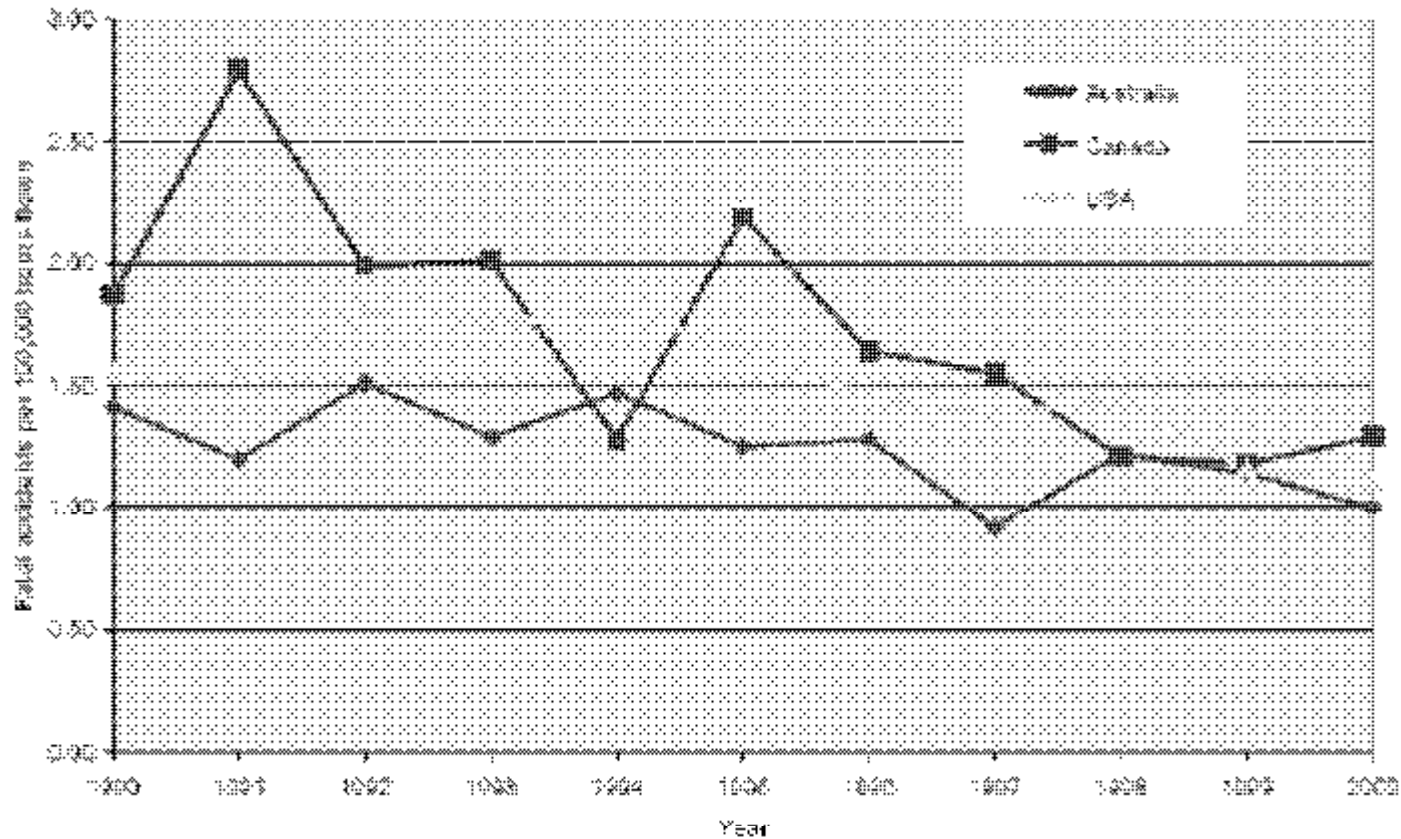
RISCHIO COMPARATO:

vittime per ore volate ed ore/volo del pilota



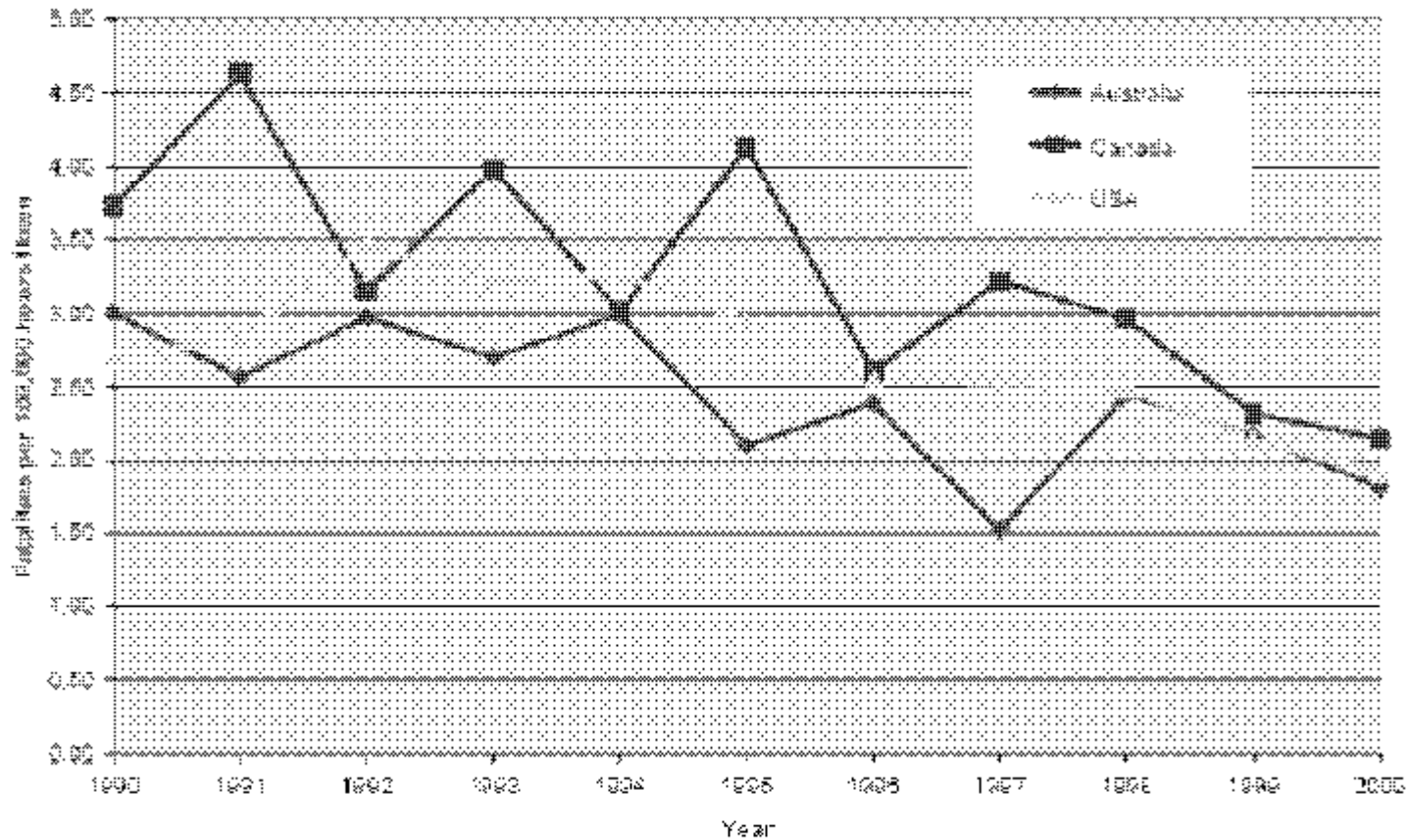
GENERAL AVIATION:

vittime/accidents per 100.000 ore di volo 1990 - 2003

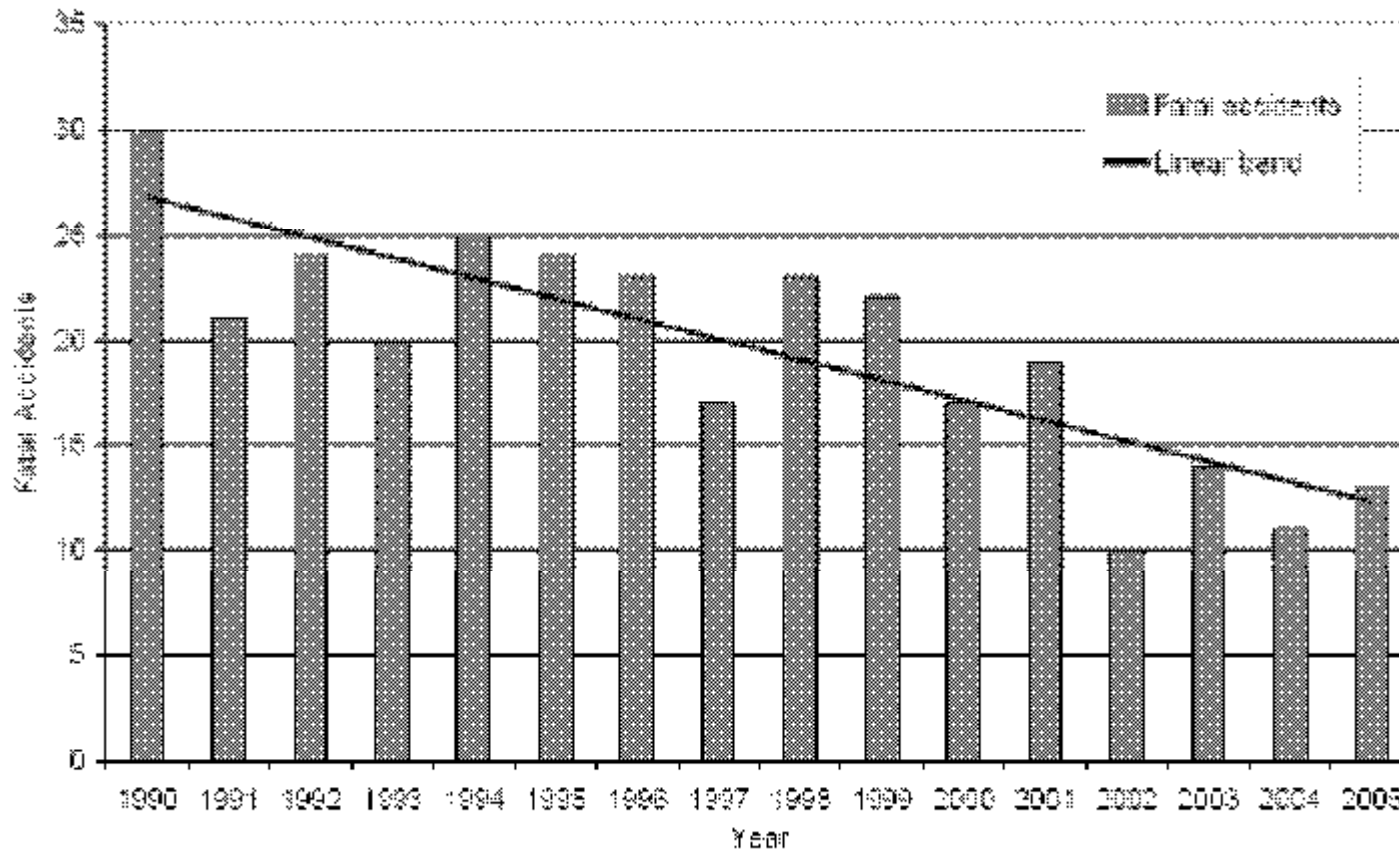


GENERAL AVIATION:

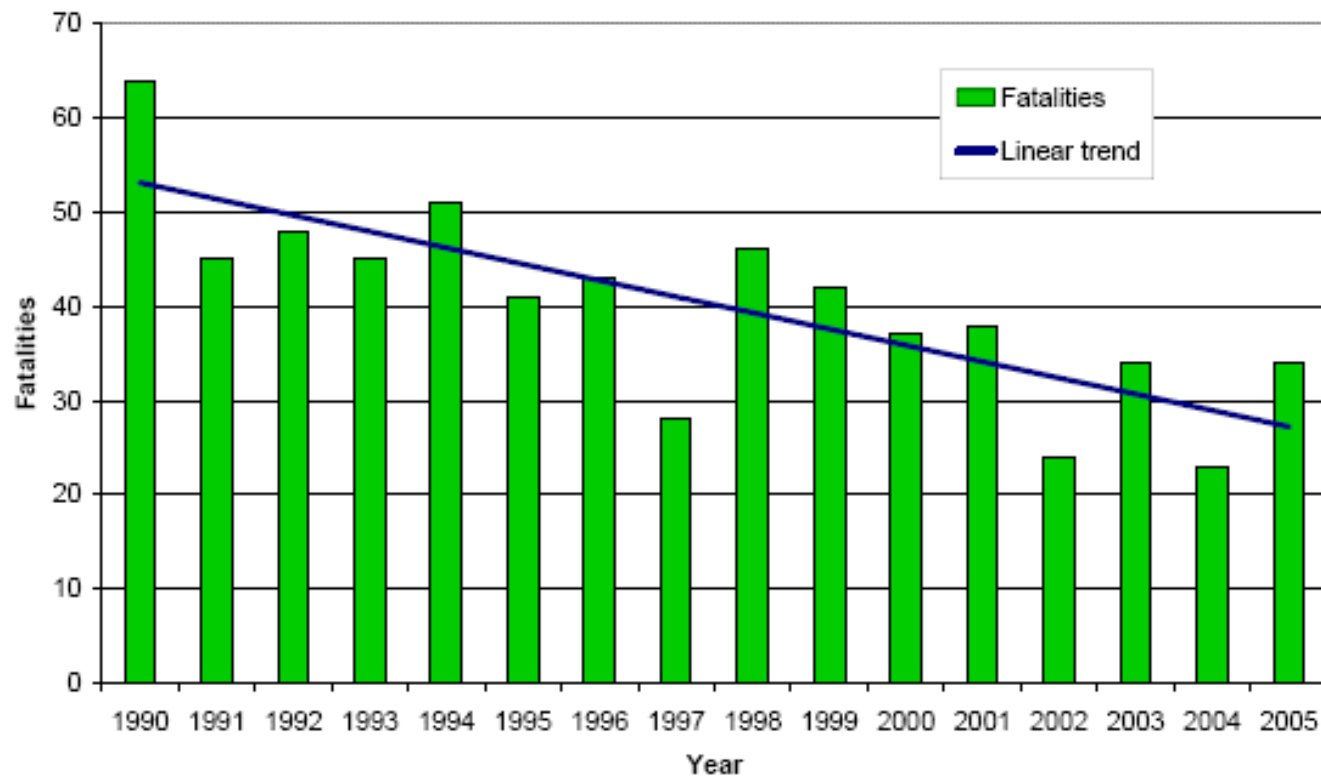
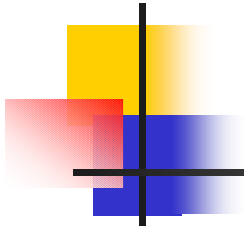
vittime per 100.000 ore/volo 1990 - 2000



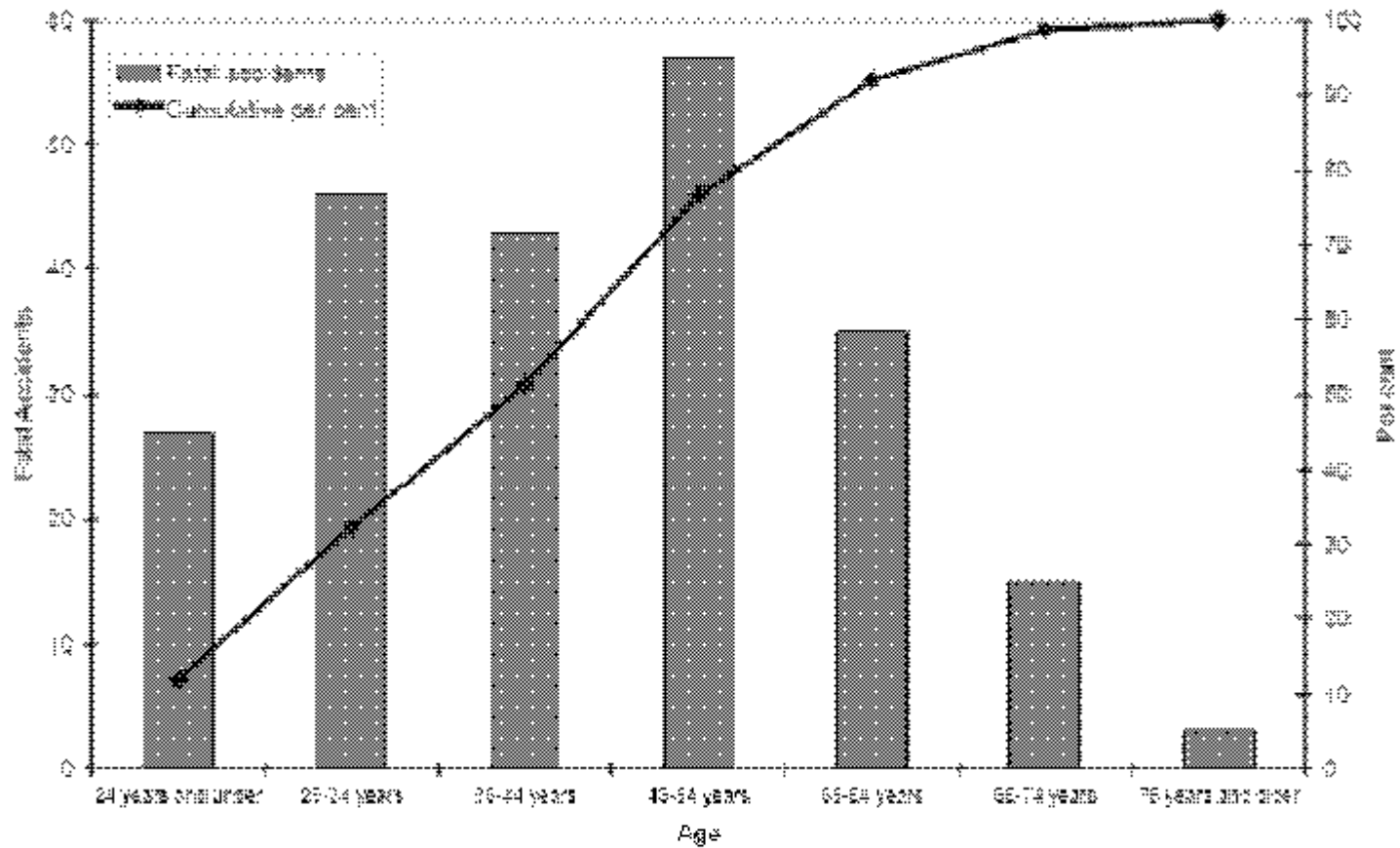
FATAL ACCIDENTS: ATSB 1990 - 2005



ATSB: vittime 1990 - 2005

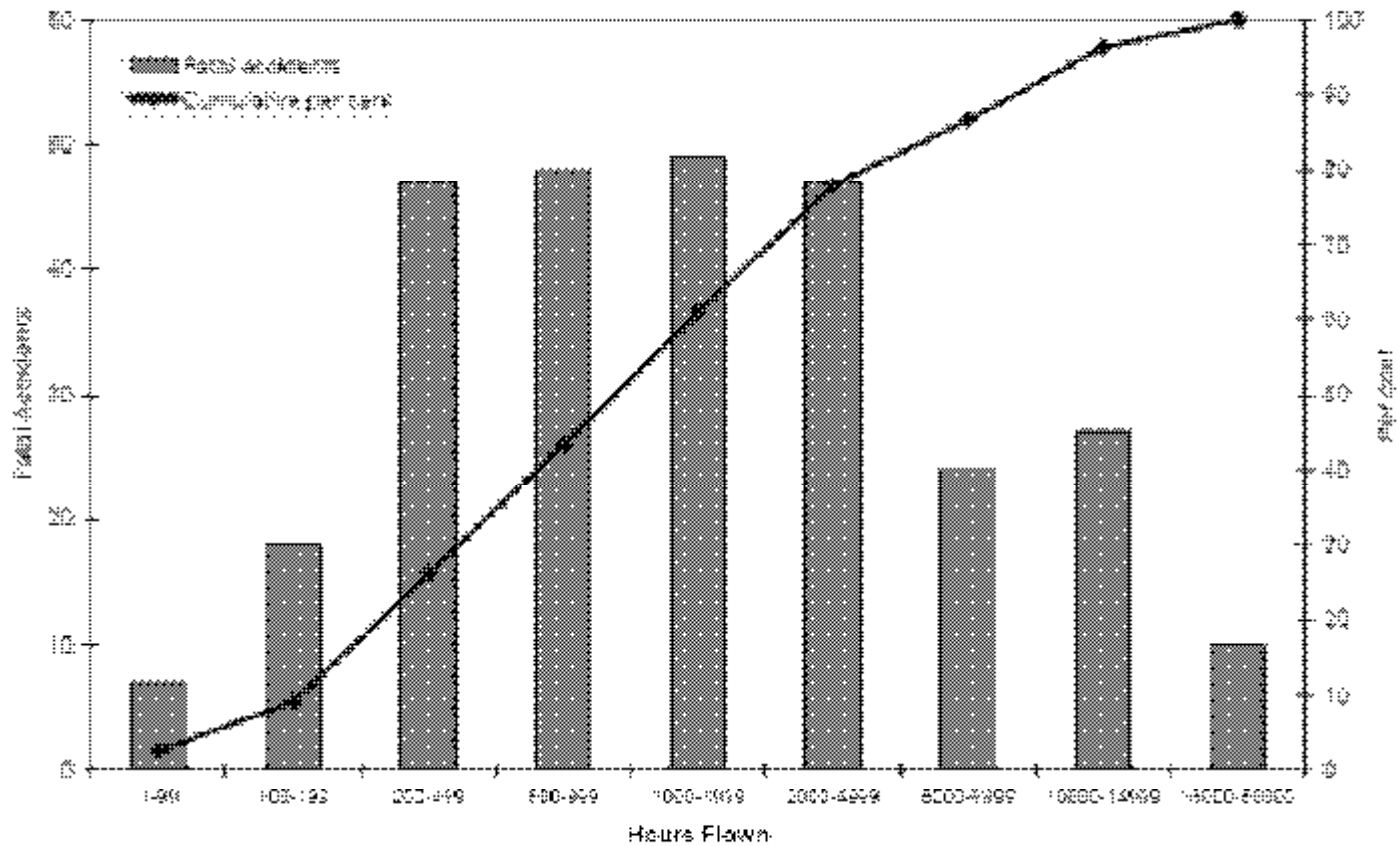


ATSB: vittime per età tra i piloti "in command" 1990 - 2000



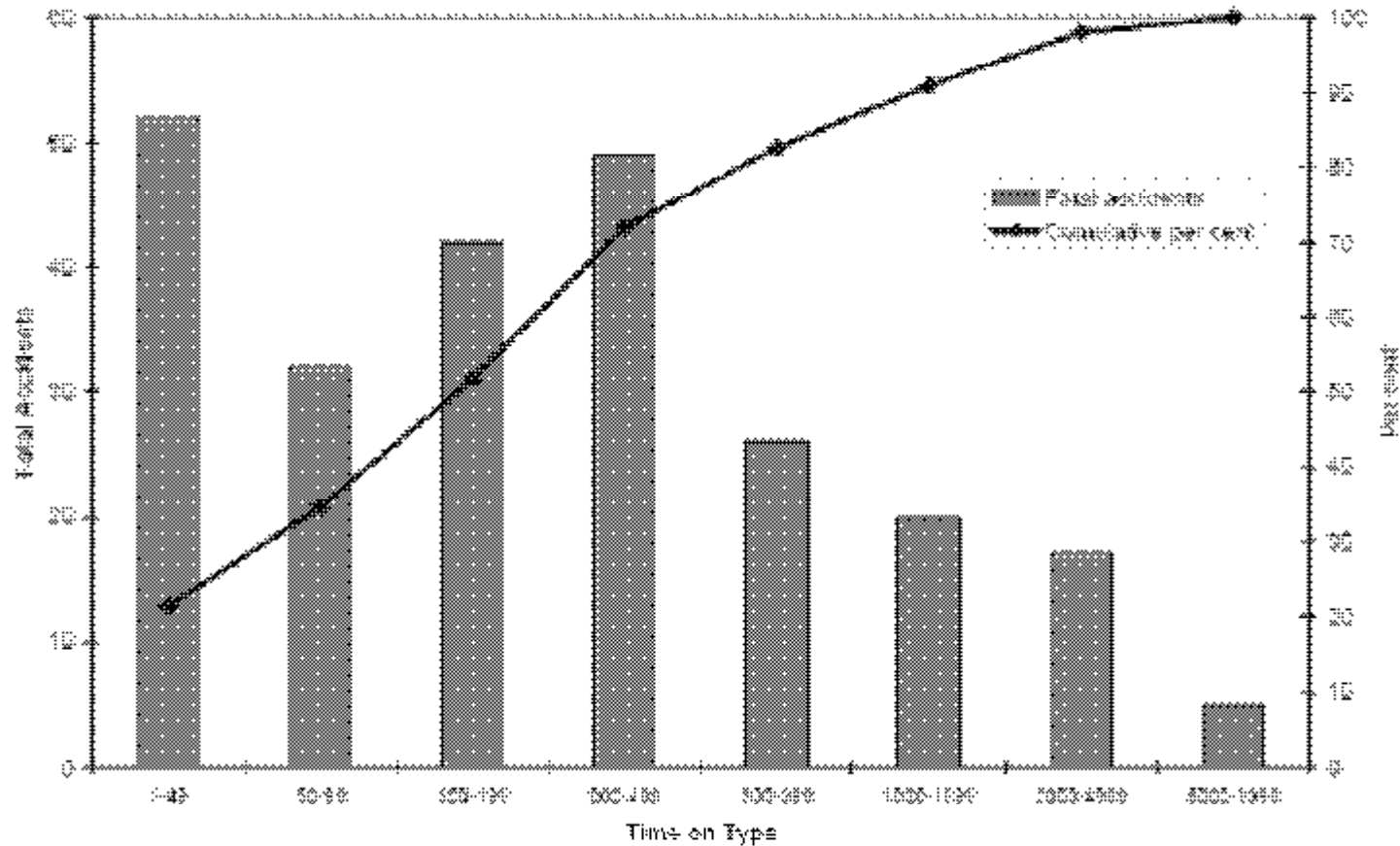
FATAL ACCIDENTS ATSB:

per ore/volo del pilota "in command" 1990 -2005



FATAL ACCIDENTS:

per ore/volate sulla macchina by "pilot in command" 1990 - 2005



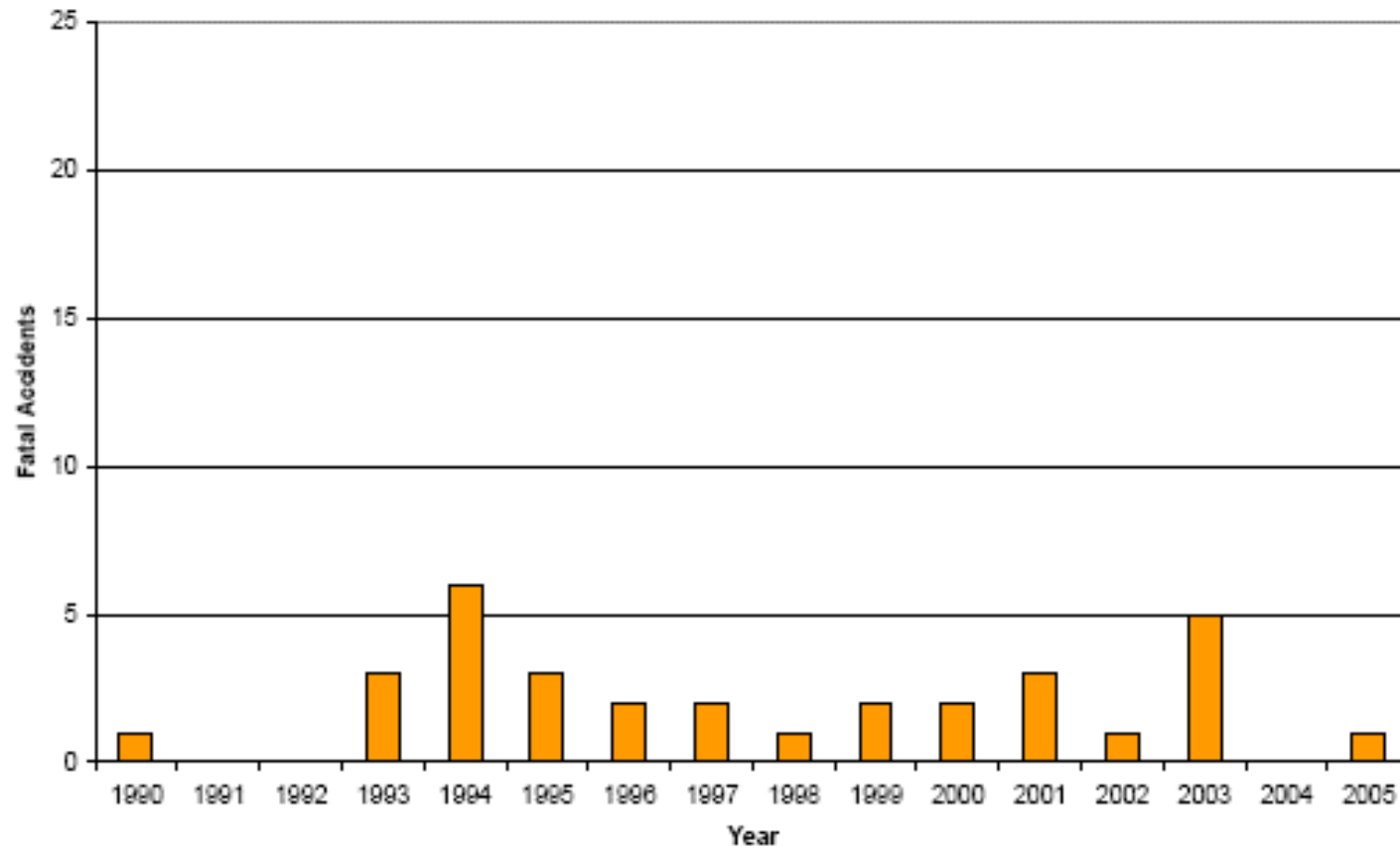
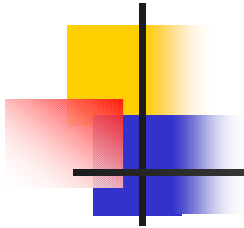
FATAL ACCIDENTS:

per tipologia licenza posseduta 1990 - 2005

Year	ATPL	CPL	PPL	Student	No Licence	Foreign	Unknown	Total
1990	1	17	9	1	1	0	1	30
1991	0	6	10	1	0	0	4	21
1992	0	8	15	0	0	0	1	24
1993	3	12	5	0	0	0	0	20
1994	6	11	8	0	0	0	0	25
1995	3	10	10	0	0	0	1	24
1996	2	13	8	0	0	0	0	23
1997	2	9	6	0	0	0	0	17
1998	1	9	12	1	0	0	0	23
1999	2	9	11	0	0	0	0	22
2000	2	11	3	0	0	1	0	17
2001	3	6	8	2	0	0	0	19
2002	1	6	3	0	0	0	0	10
2003	5	5	4	0	0	0	0	14
2004	0	6	5	0	0	0	0	11
2005	1	6	6	0	0	0	0	13
<i>Total</i>	<i>32</i>	<i>144</i>	<i>123</i>	<i>5</i>	<i>1</i>	<i>1</i>	<i>7</i>	<i>313</i>

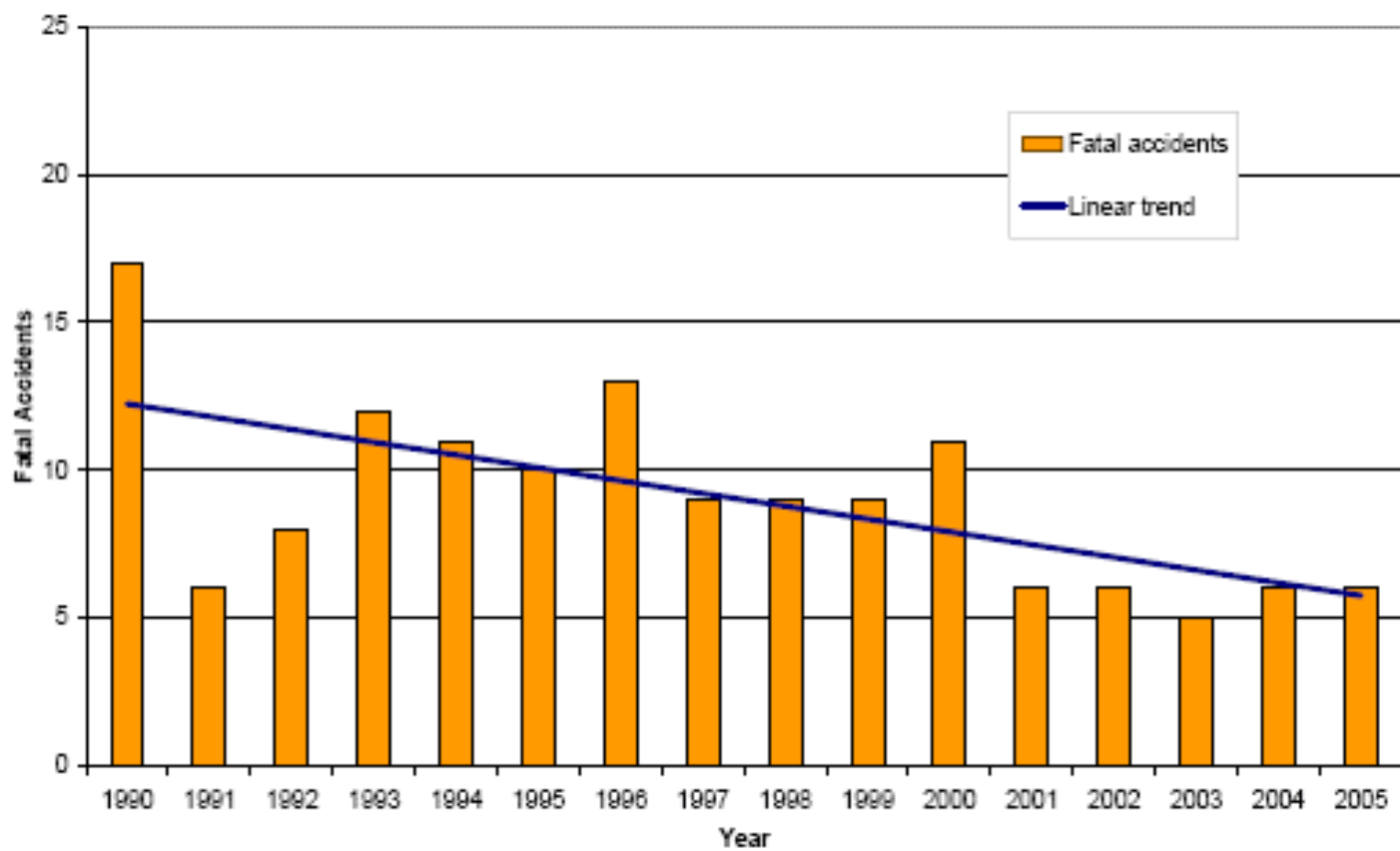
FATAL ACCIDENTS:

piloti ATPL 1990 - 2005



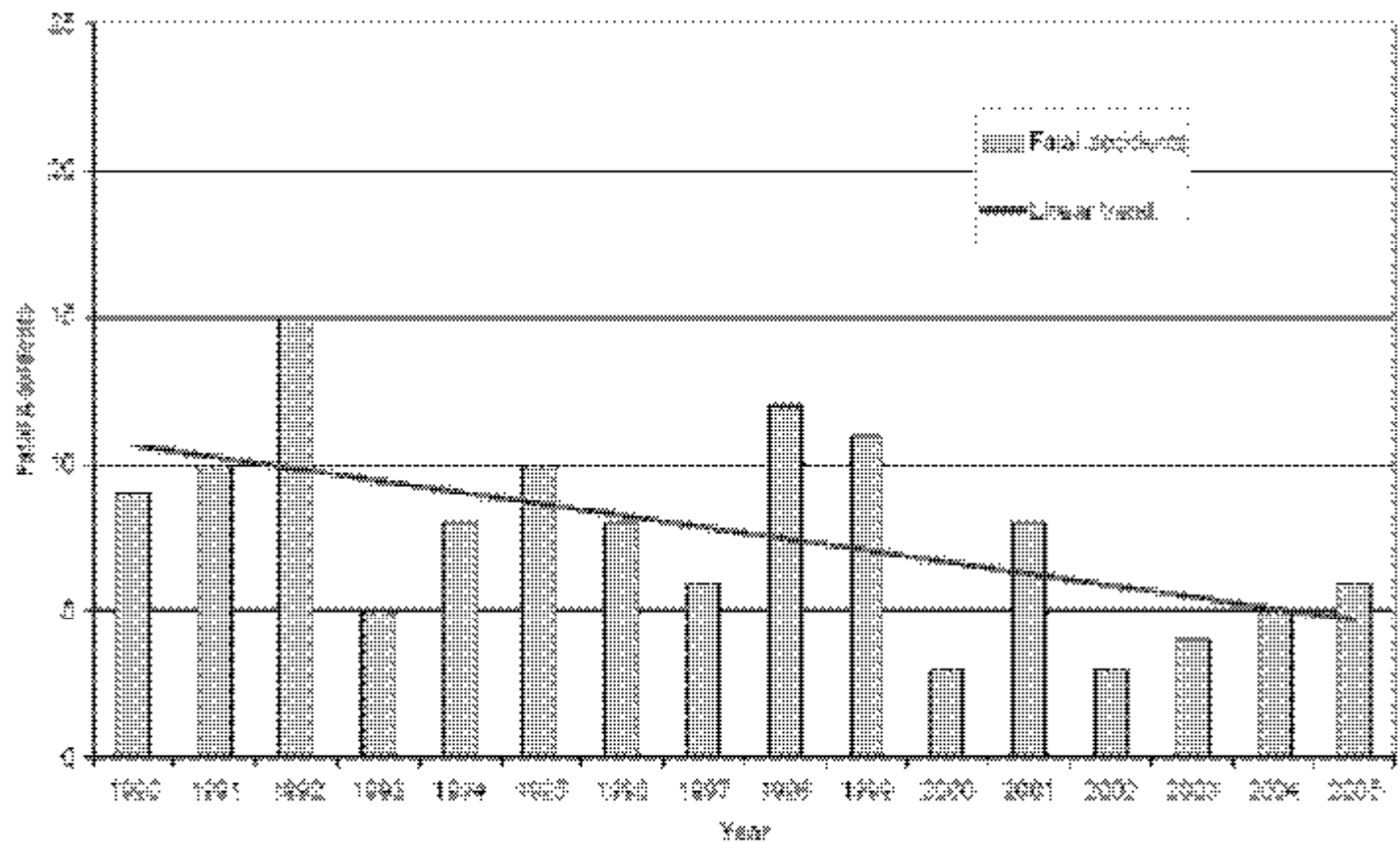
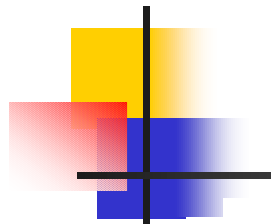
FATAL ACCIDENTS:

piloti CPL 1990 - 2005



FATAL ACCIDENTS:

piloti PPL 1990 - 2005



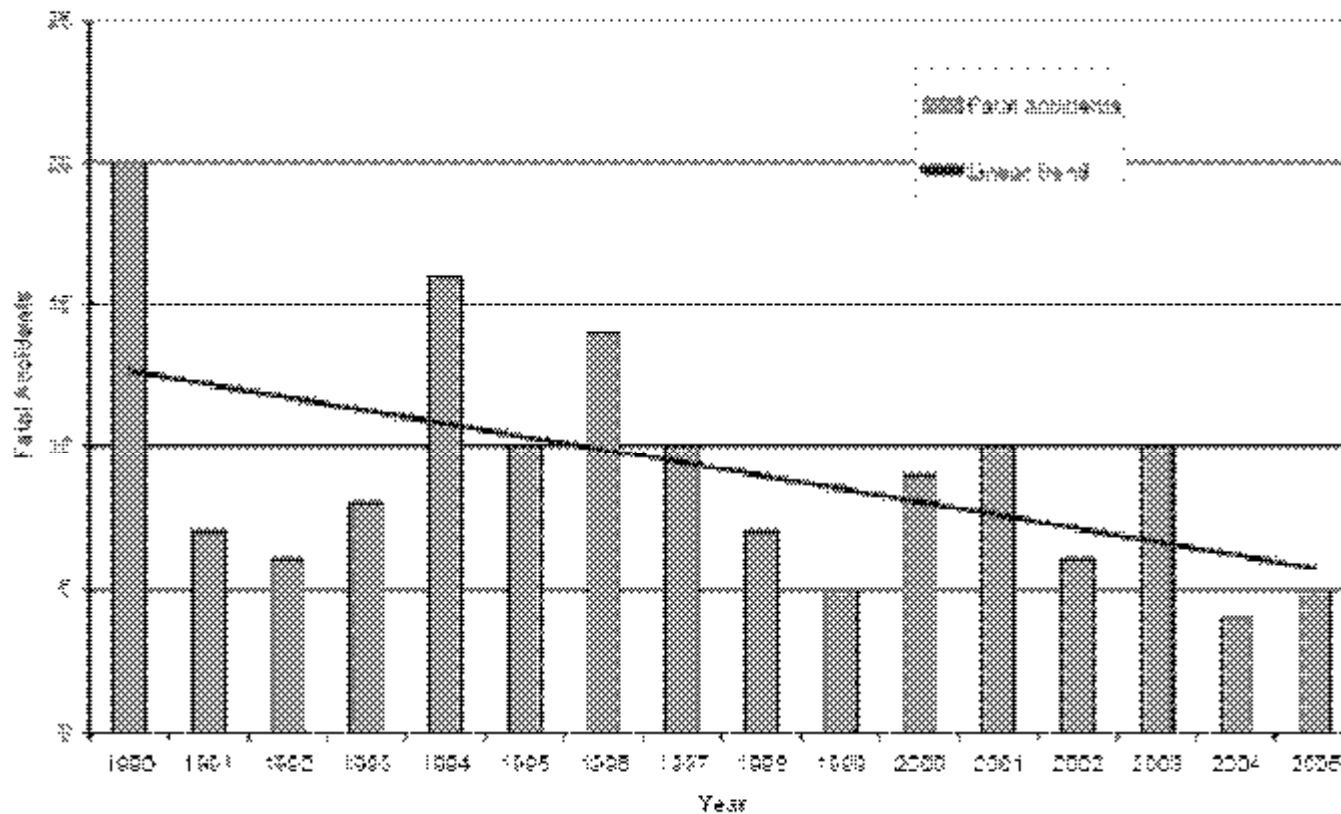
FATAL ACCIDENTS:

by tipologia voli 1990 - 2005

Year	COMMERCIAL					NON-COMMERCIAL		Total
	Low Capacity RPT	Charter	Flying Training	Agriculture	Other Aerial Work	Business	Private	
1990	0	5	4	2	9	2	8	30
1991	0	2	3	1	1	1	10	21
1992	0	2	1	2	1	0	16	24
1993	1	4	0	0	3	0	12	20
1994	0	6	2	4	4	0	9	25
1995	1	2	1	2	4	3	11	24
1996	0	6	0	4	4	2	7	23
1997	0	4	0	5	1	1	6	17
1998	0	2	1	2	2	3	10	20
1999	0	3	1	0	1	2	15	22
2000	1	3	0	3	2	0	8	17
2001	0	4	2	1	3	0	9	19
2002	0	3	1	0	2	0	4	10
2003	0	2	5	0	3	0	4	14
2004	0	0	1	1	2	0	7	11
2005	1	1	0	1	2	0	8	13
Total	4	49	22	26	44	14	152	373

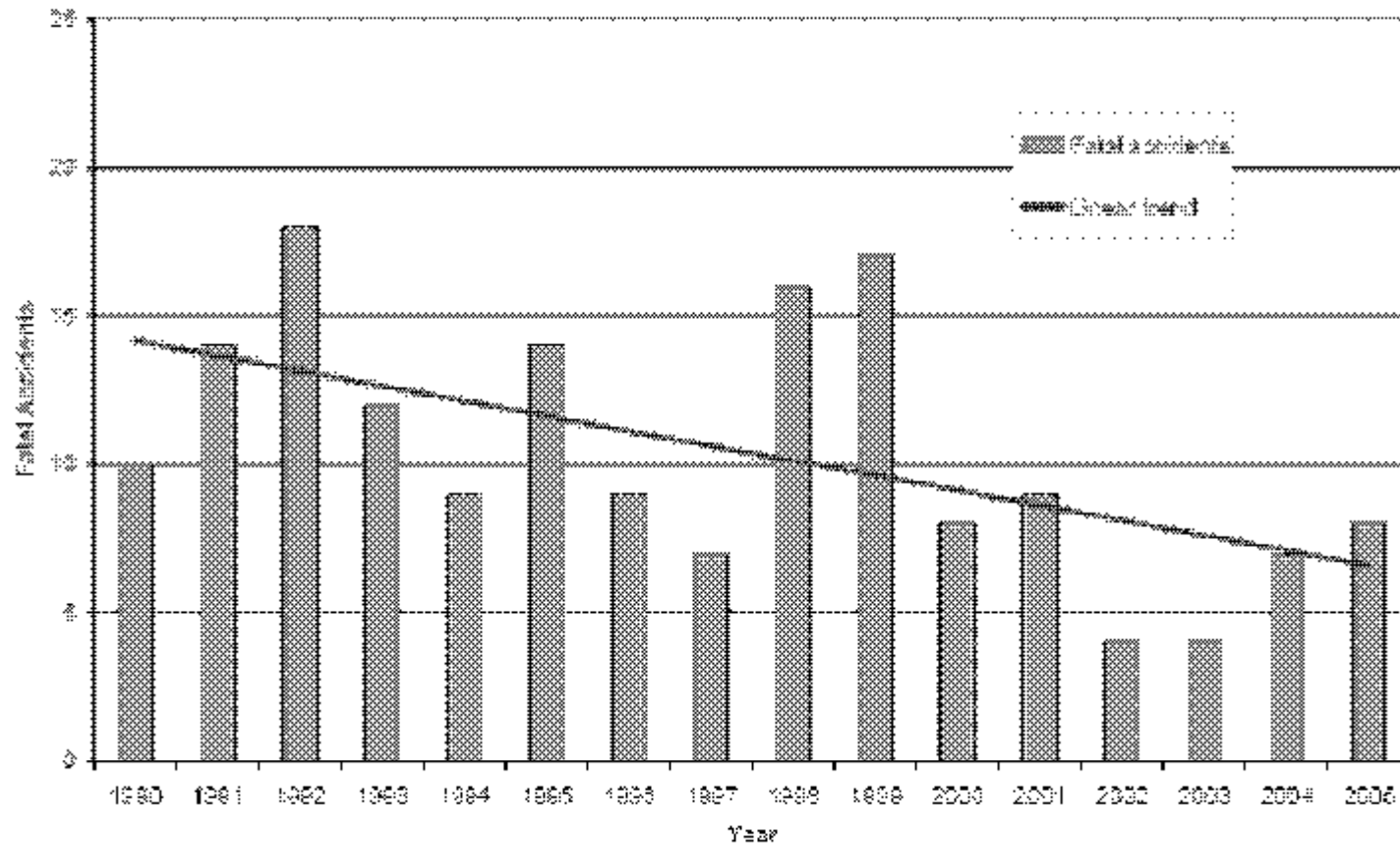
FATAL ACCIDENTS:

per operazione commerciale 1990 - 2005



FATAL ACCIDENTS:

per "non – commercial" operations 1990 - 2005



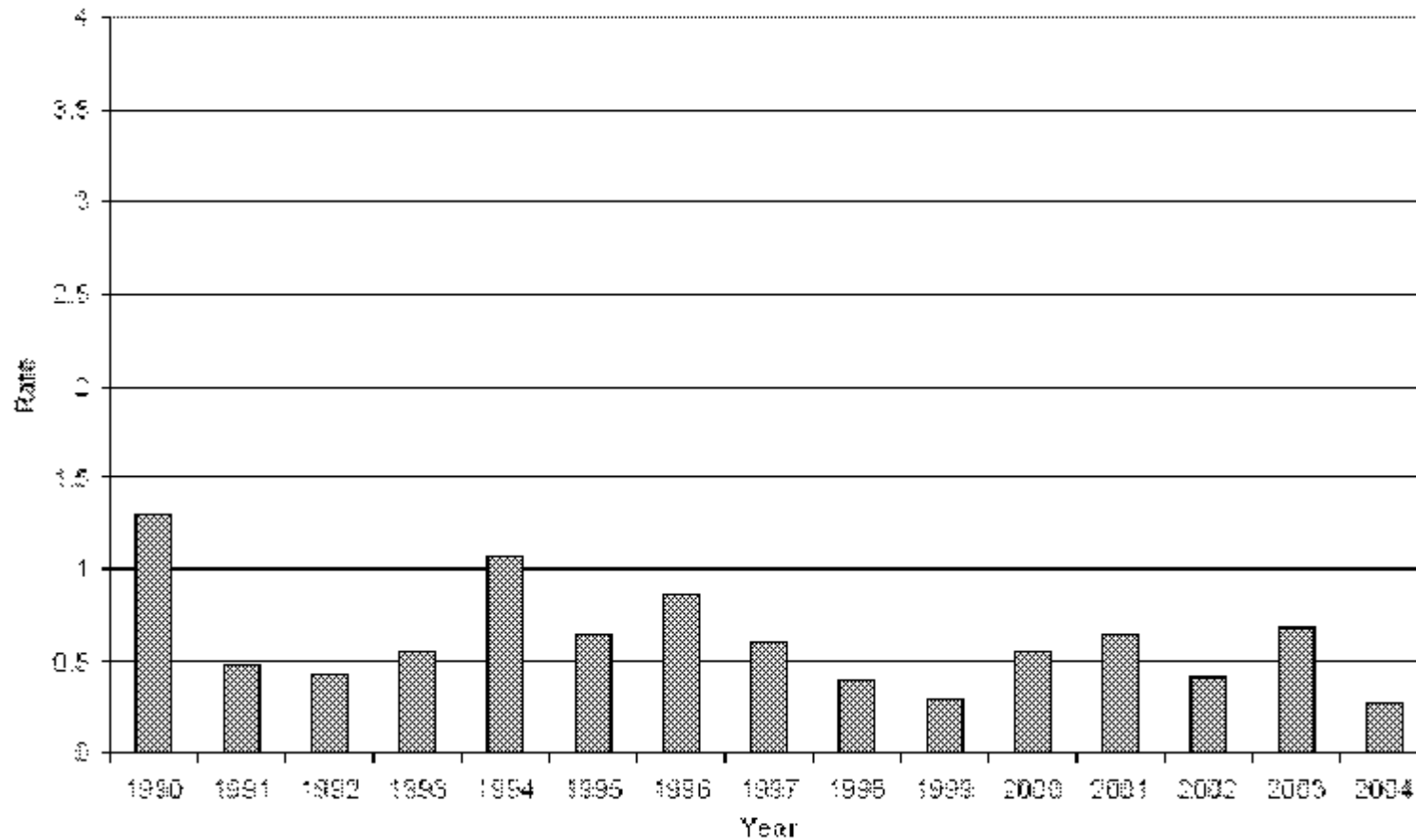
FATAL ACCIDENTS:

per 100.000 ore/volo per operazione 1990 - 2004

Year	COMMERCIAL					NON-COMMERCIAL
	Low Capacity RPT	Charter	Flying Training	Agriculture	Other Aerial Work	Private and Business
1990	0.0	1.2	0.8	1.2	3.0	1.7
1991	0.0	0.5	0.7	0.9	0.3	2.8
1992	0.0	0.5	0.2	2.2	0.4	3.9
1993	0.4	1.0	0.0	0.0	1.0	2.5
1994	0.0	1.4	0.5	4.6	1.3	2.0
1995	0.4	0.4	0.2	1.9	1.3	3.2
1996	0.0	1.2	0.0	3.2	1.4	2.0
1997	0.0	0.8	0.0	3.7	0.3	1.6
1998	0.0	0.4	0.2	1.4	0.6	3.7
1999	0.0	0.6	0.2	0.0	0.3	3.9
2000	0.4	0.6	0.0	2.4	0.7	2.1
2001	0.0	0.9	0.5	0.9	1.0	2.2
2002	0.0	0.7	0.2	0.0	0.6	1.0
2003	0.0	0.5	1.2	0.0	0.9	1.0
2004	0.0	0.0	0.3	1.1	0.6	1.8

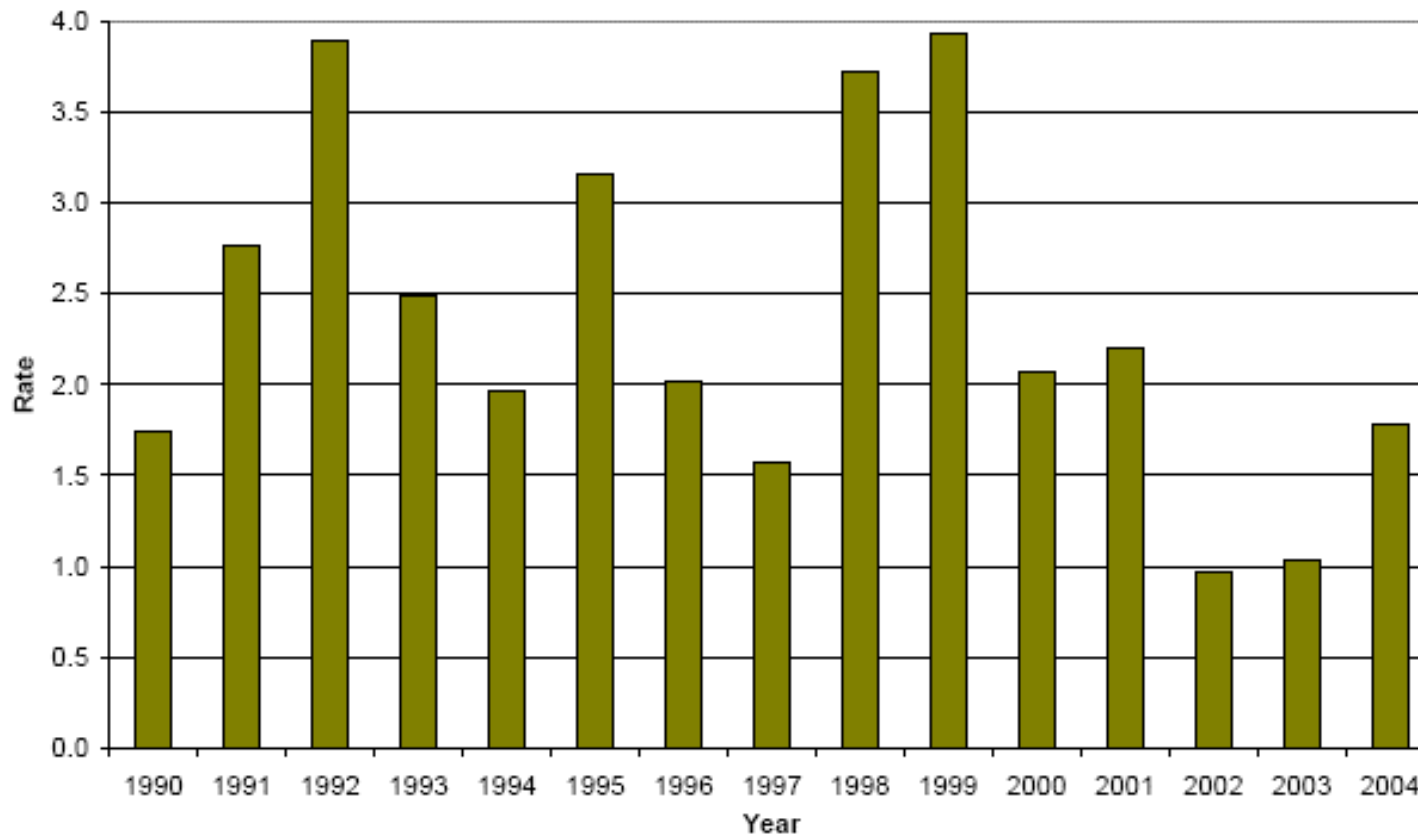
FATAL ACCIDENTS:

per "commercial operations" per 100.000 voli 1990 - 2004



FATAL ACCIDENTS:

per "non commercial operations" per 100.000 voli 1990 - 2004



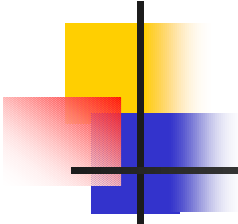
FATAL ACCIDENTS:

per "licenza di volo" per tipologia voli 1990 - 2005

Operation Type	ATPL	CPL	PPL	Student	No Licence	Foreign	Unknown	Total
Low Capacity RPT	2	2	0	0	0	0	0	4
Charter	12	36	0	0	0	0	1	49
Agriculture	1	25	1	0	0	0	0	26
Flying Training	2	10	3	6	0	0	2	23
Other Aerial Work	6	34	2	0	0	0	1	43
Business	1	1	12	0	0	0	0	14
Private	8	55	104	0	1	1	3	163
Total	32	144	123	6	1	1	7	215

FATAL ACCIDENTS:

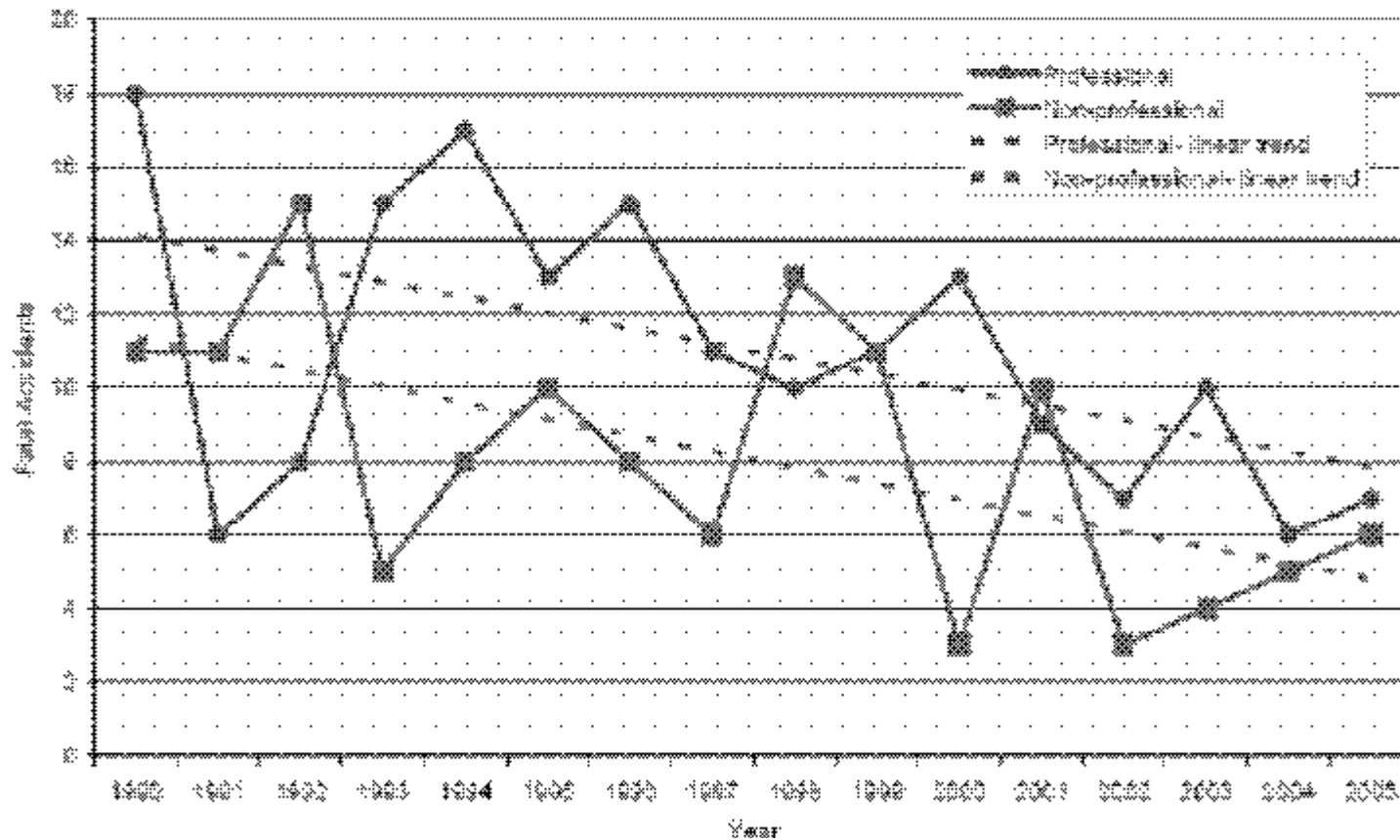
per livello "pilot proficiency" 1990 - 2005



Year	Professional	Non-professional	Total
1990	18	11	29
1991	6	11	17
1992	8	15	23
1993	15	5	20
1994	17	8	25
1995	13	10	23
1996	15	8	23
1997	11	6	17
1998	10	13	23
1999	11	11	22
2000	13	3	16
2001	9	10	19
2002	7	3	10
2003	10	4	14
2004	6	5	11
2005	7	6	13
<i>Total</i>	<i>176</i>	<i>129</i>	<i>305</i>

FATAL ACCIDENTS:

per livello "pilot proficiency" 1990 - 2005



FATAL ACCIDENTS:

per peso/aereo e licenza del pilota 1990 - 2005

Weight	ATPL	CPL	PPL	Student	No Licence	Foreign	Unknown	Total
0-2250 kg	14	104	117	5	1	1	6	248
2250-5700 kg	15	38	6	0	0	0	1	60
5700-27000 kg	3	2	0	0	0	0	0	5
<i>Total</i>	32	144	123	5	1	1	7	313

FATAL ACCIDENTS:

per genere occupanti e tipologia operazioni 1990 - 2005

Occupant	COMMERCIAL					NON-COMMERCIAL		Total
	Low Capacity RPT	Charter	Flying Training	Agriculture	Other Aerial Work	Business	Private	
Pilot	7	45	29	28	47	13	150	319
Passenger	25	83	2	2	26	14	162	324
Total	32	139	31	30	73	27	312	643

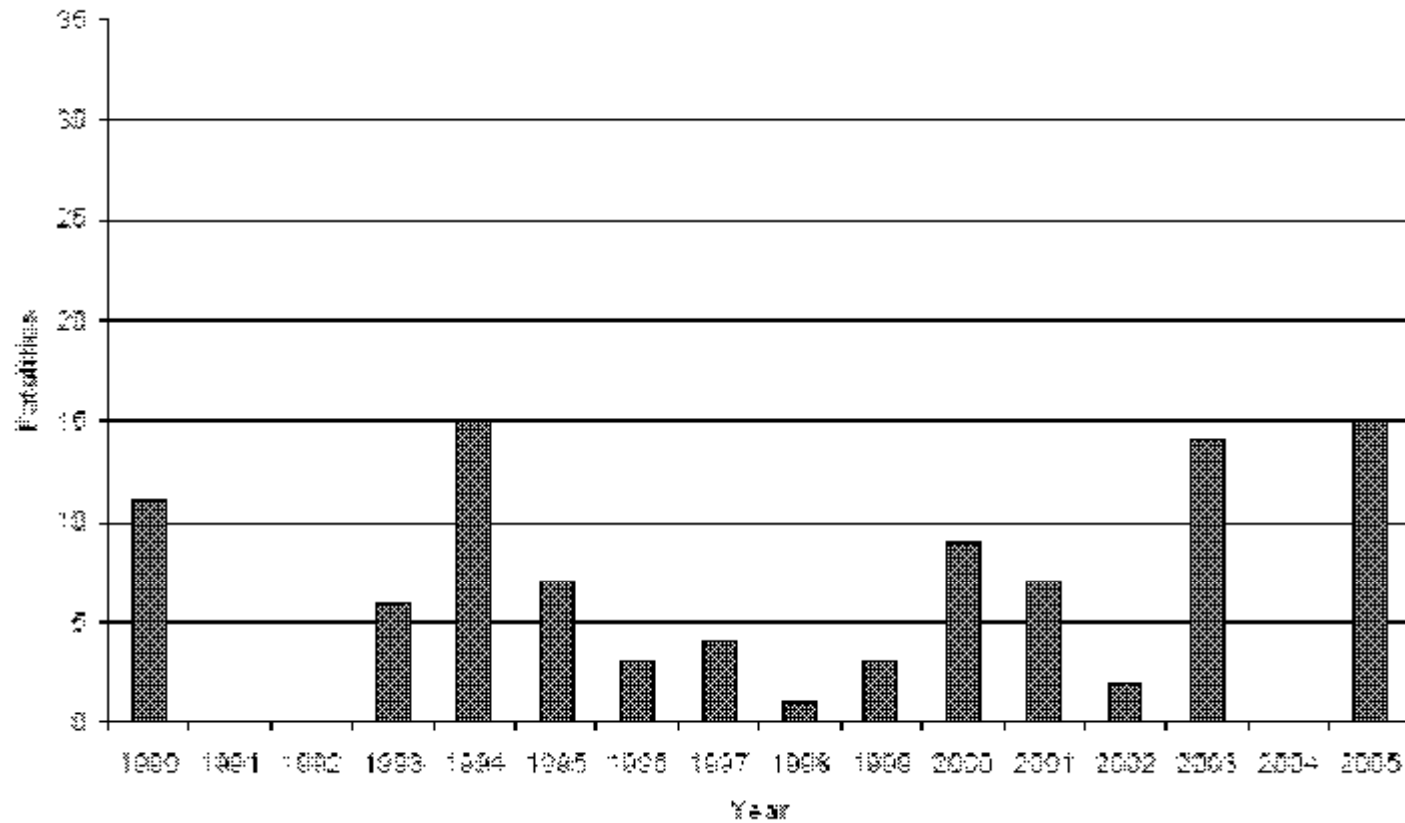
FATAL ACCIDENTS:

per tipologia licenza 1990 - 2005

Year	ATPL	CPL	PPL	Student	No licence	Foreign	Unknown	Total
1990	11	30	16	1	3	0	1	64
1991	0	20	17	1	0	0	7	46
1992	0	18	29	0	0	0	1	48
1993	6	31	9	0	0	0	0	46
1994	15	25	11	0	0	0	0	51
1995	7	15	19	0	0	0	1	42
1996	3	21	19	0	0	0	0	43
1997	4	14	10	0	0	0	0	28
1998	1	20	24	1	0	0	0	46
1999	0	21	16	0	0	0	0	37
2000	0	24	3	0	0	1	0	27
2001	7	18	10	2	0	0	0	37
2002	2	14	8	0	0	0	0	24
2003	14	10	8	0	0	0	0	32
2004	0	13	10	0	0	0	0	23
2005	15	12	7	0	0	0	0	34
Total	97	305	222	3	0	1	10	643

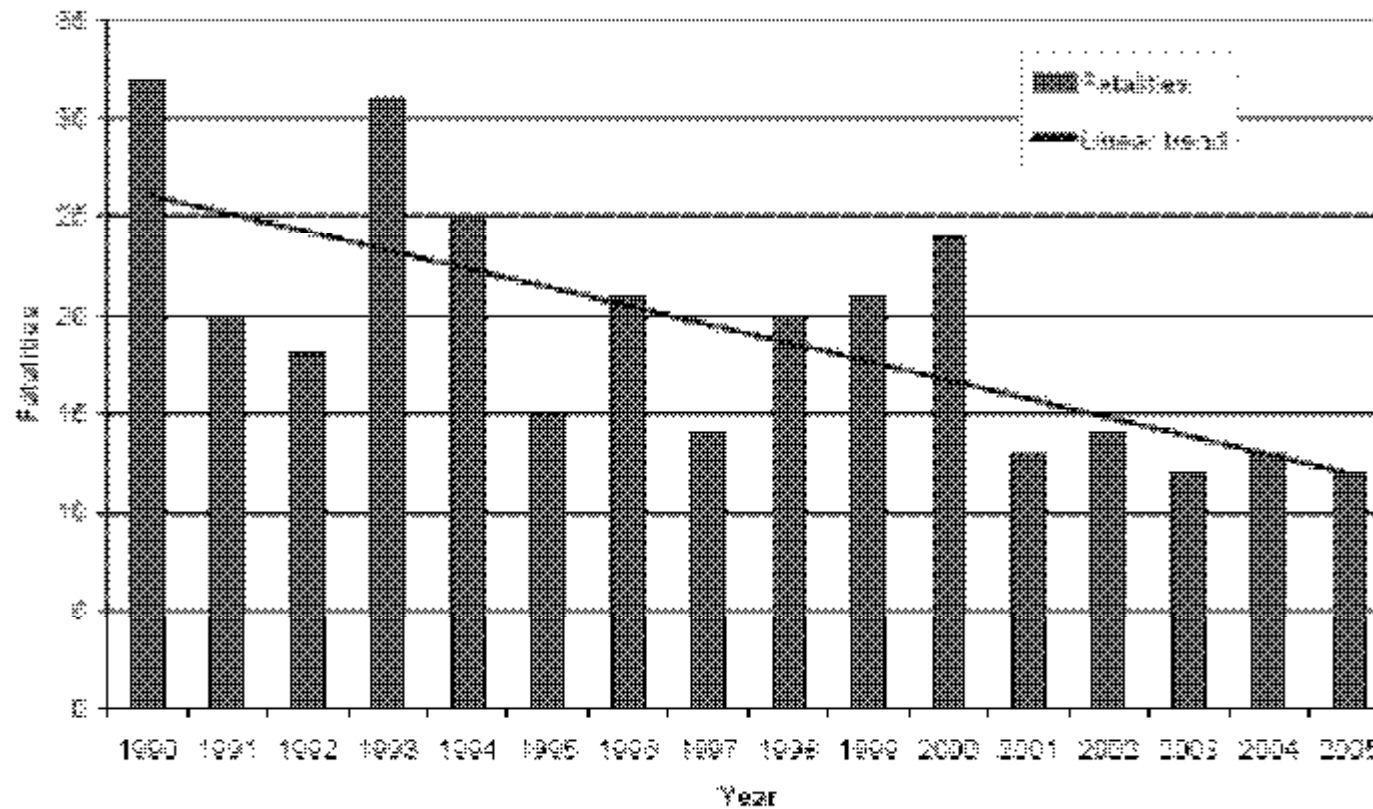
VITTIME:

Per licenza ATPL 1990 - 2005



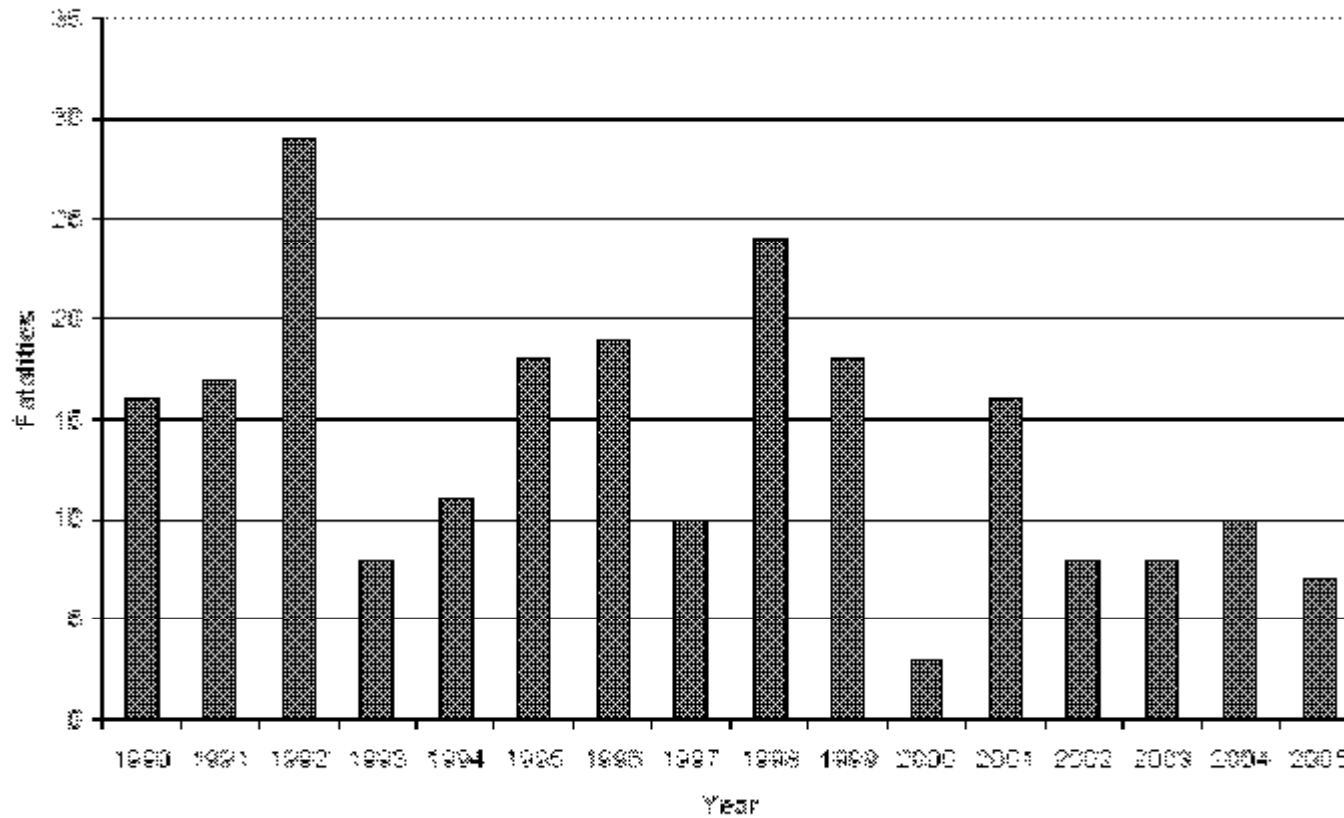
VITTIME:

Per licenza CPL 1990 - 2005



VITTIME:

Per licenza PPL 1990 - 2005



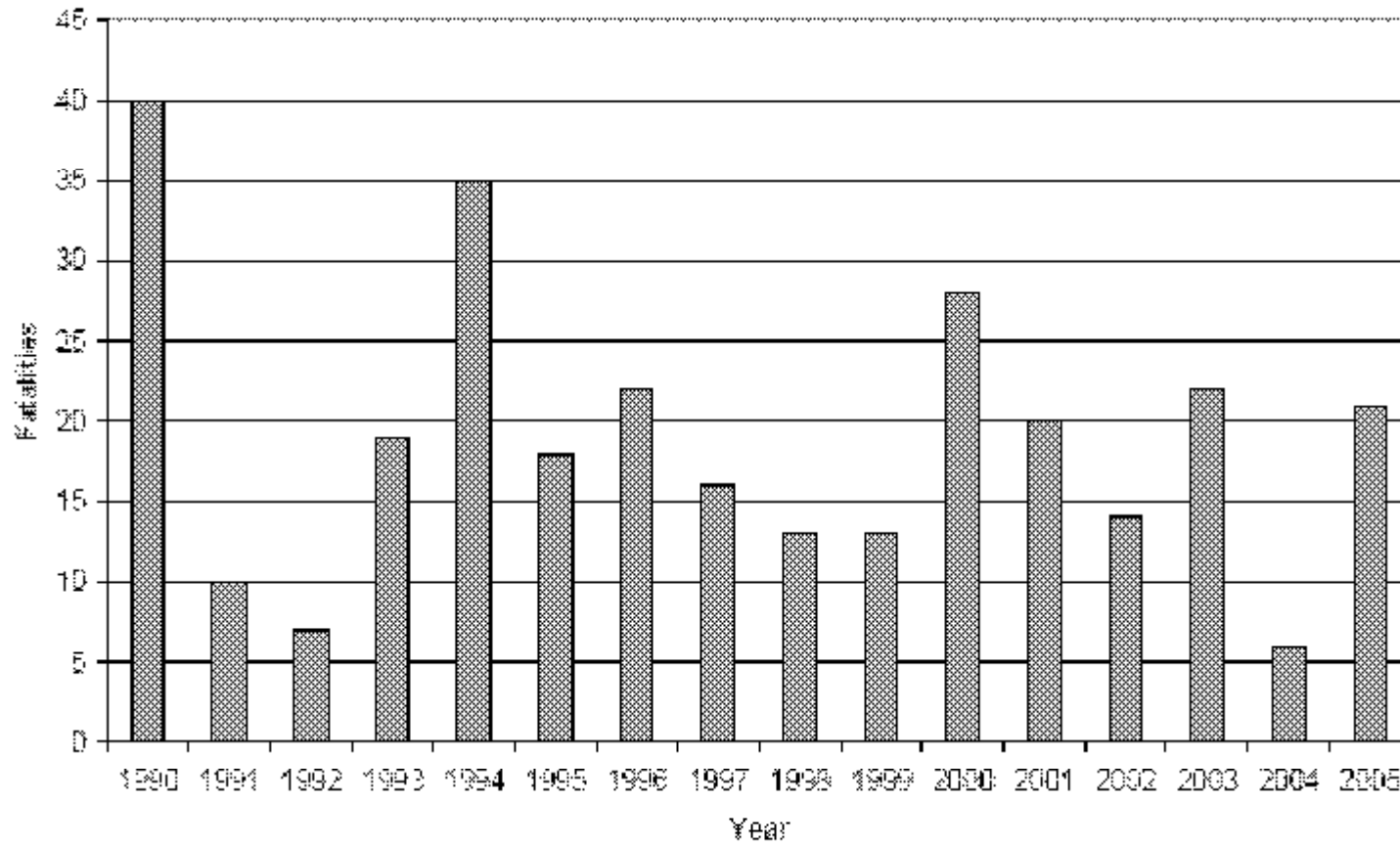
VITTIME:

per categoria di operazione 1990- 2005

Year	COMMERCIAL					NON-COMMERCIAL		Total
	Low Capacity RPT	Charter	Flying Training	Agriculture	Other Aerial Work	Business	Private	
1990	0	18	6	2	14	7	17	64
1991	0	3	4	2	1	1	34	45
1992	0	2	2	2	1	0	41	48
1993	7	8	0	0	4	0	26	45
1994	0	22	4	4	5	0	16	51
1995	2	7	1	2	6	6	17	41
1996	0	13	0	4	5	4	17	43
1997	0	8	0	6	2	1	11	23
1998	0	7	1	2	3	6	27	46
1999	0	10	1	0	2	2	27	42
2000	8	11	0	3	6	0	9	37
2001	0	10	2	1	7	0	18	33
2002	0	8	1	5	5	0	10	24
2003	0	8	7	0	7	0	12	34
2004	0	0	2	1	3	0	17	23
2005	15	3	0	1	2	0	13	34
Total	22	138	31	30	73	27	312	643

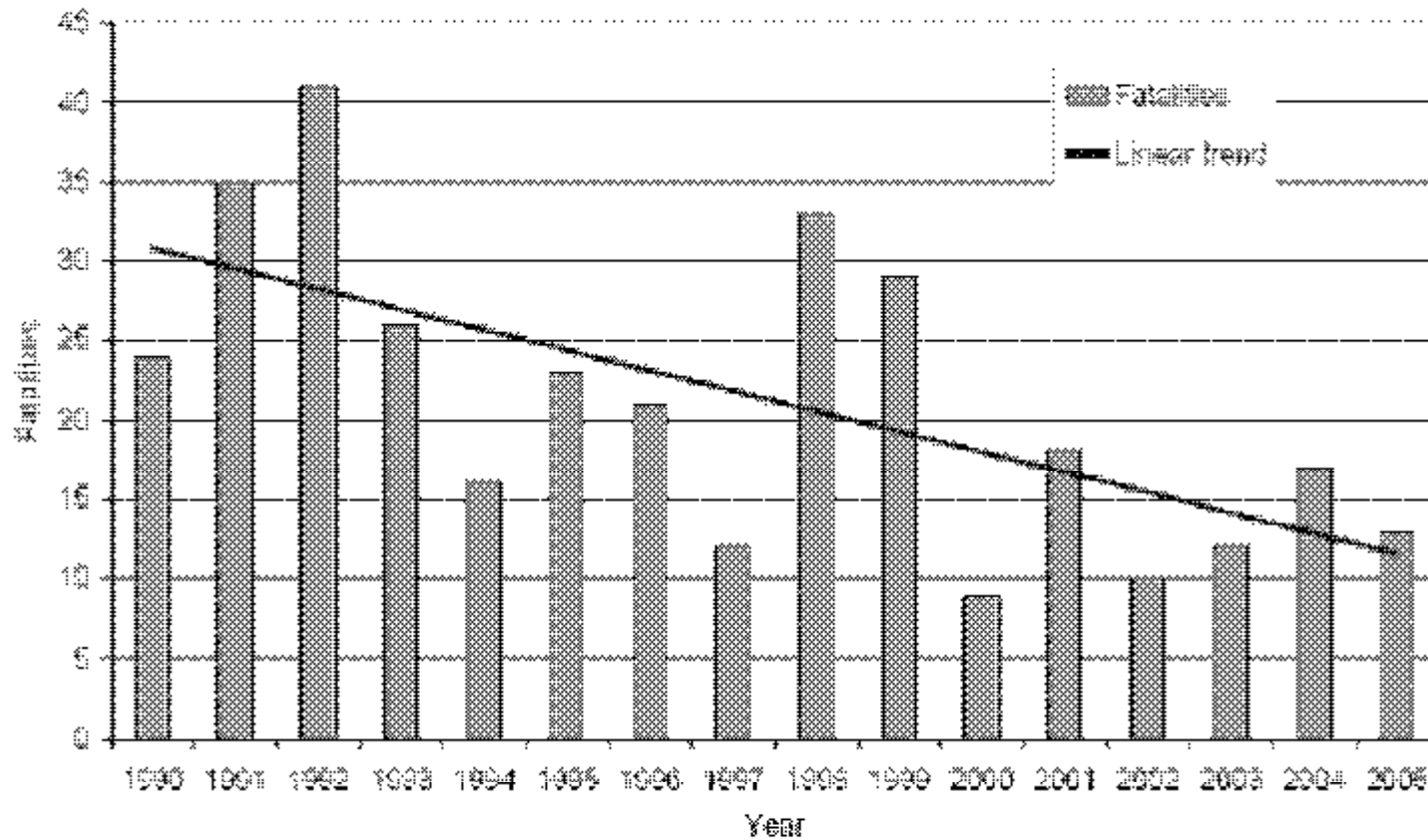
VITTIME:

PER OPERAZIONE COMMERCIALI 1990 - 2005



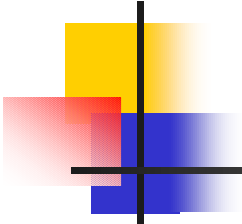
VITTIME:

PER NON – COMMERCIAL OPERATIONS 1990 - 2005



VITTIME:

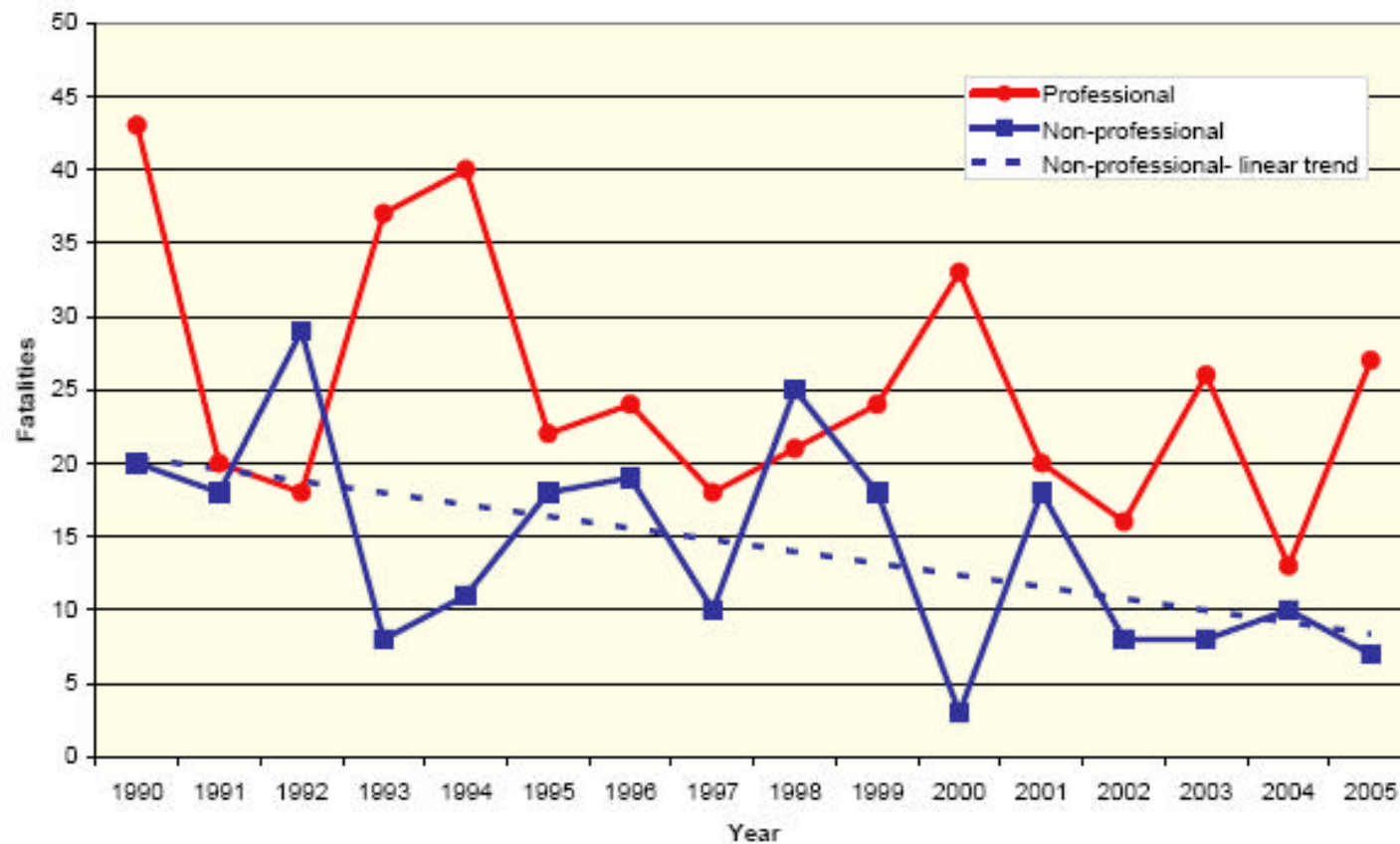
BY LIVELLO DI PILOT PROFICIENCY 1990 - 2005



Year	Professional	Non-professional	Total
1990	43	20	63
1991	20	18	38
1992	18	29	47
1993	37	8	45
1994	40	11	51
1995	22	18	40
1996	24	19	43
1997	18	10	28
1998	21	25	46
1999	24	18	42
2000	33	3	36
2001	20	18	38
2002	16	8	24
2003	26	8	34
2004	13	10	23
2005	27	7	34
Total	402	230	632

VITTIME:

BY LIVELLO DI PILOT PROFICIENCY 1990 - 2005



VITTIME:

BY PESO/AEREO E LICENZA PILOTI 1990 - 2005

Weight	ATPL	CPL	PPL	Student	No Licence	Foreign	Unknown	Total
0-2250 Kg	24	199	213	5	3	1	9	454
2250-5700 Kg	53	104	9	0	0	0	1	167
5700-27000 Kg	20	2	0	0	0	0	0	22
Total	97	305	222	5	3	1	10	643



ANALISI
DA
REPLICARE PER
IL PAESE ITALIA?