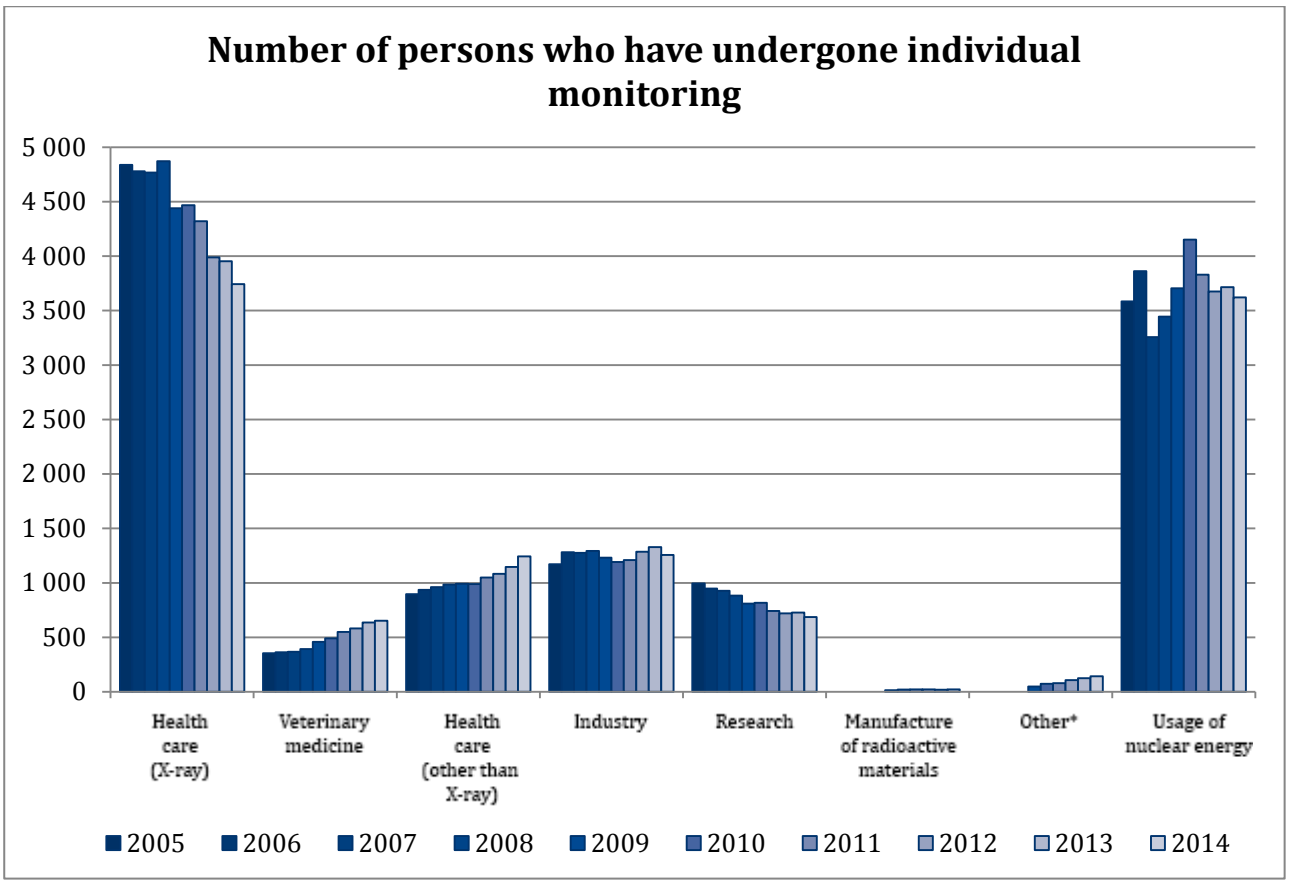
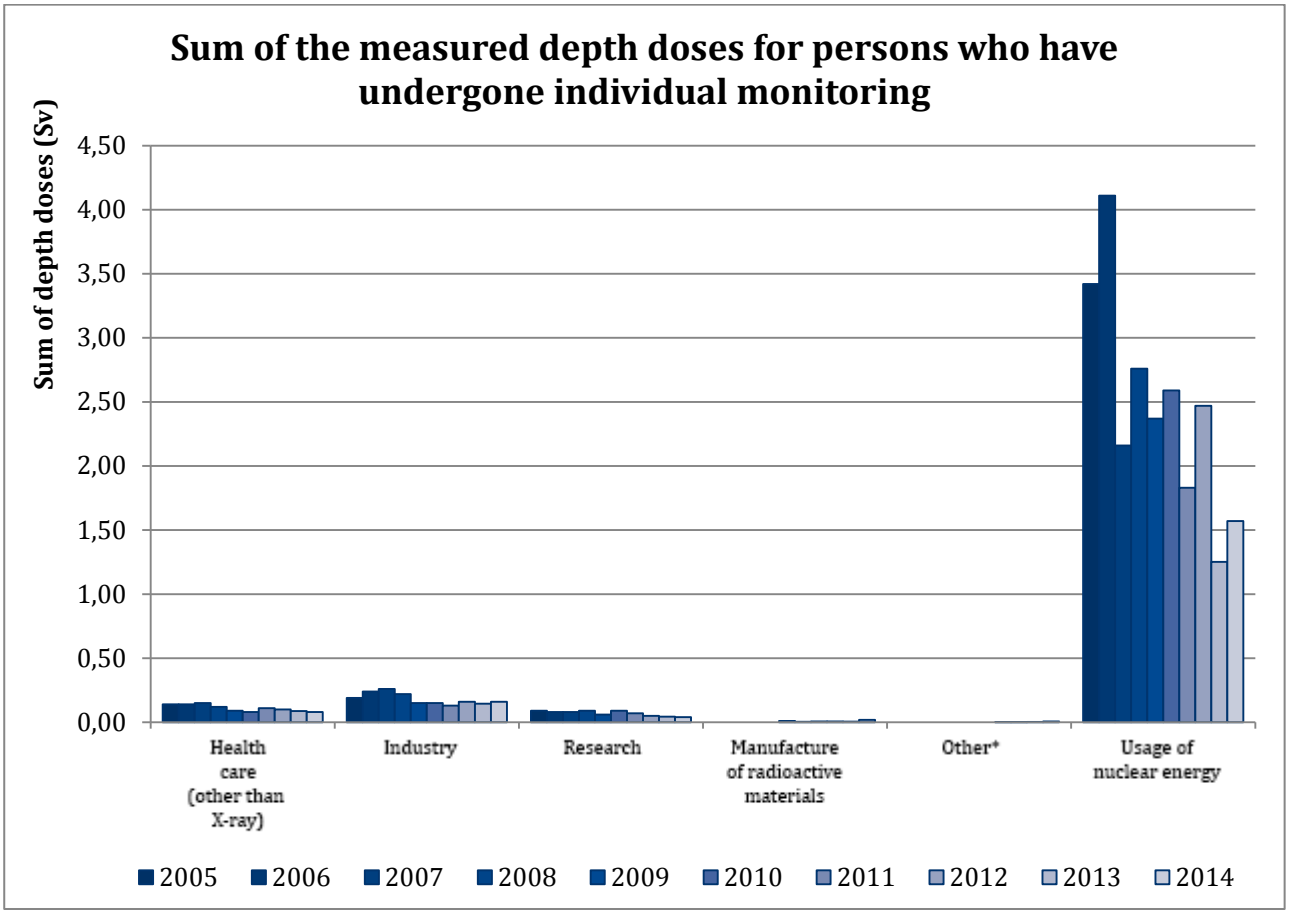
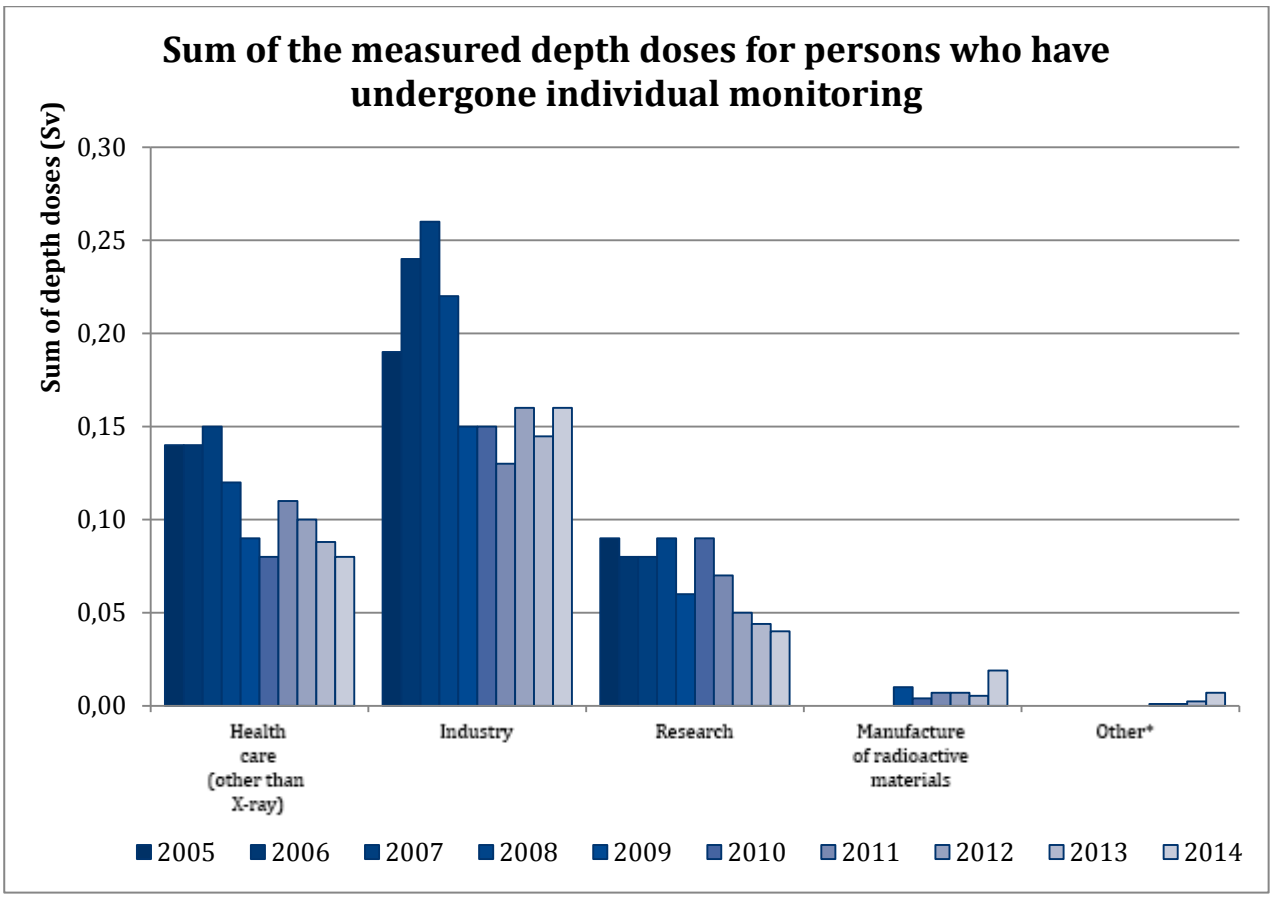


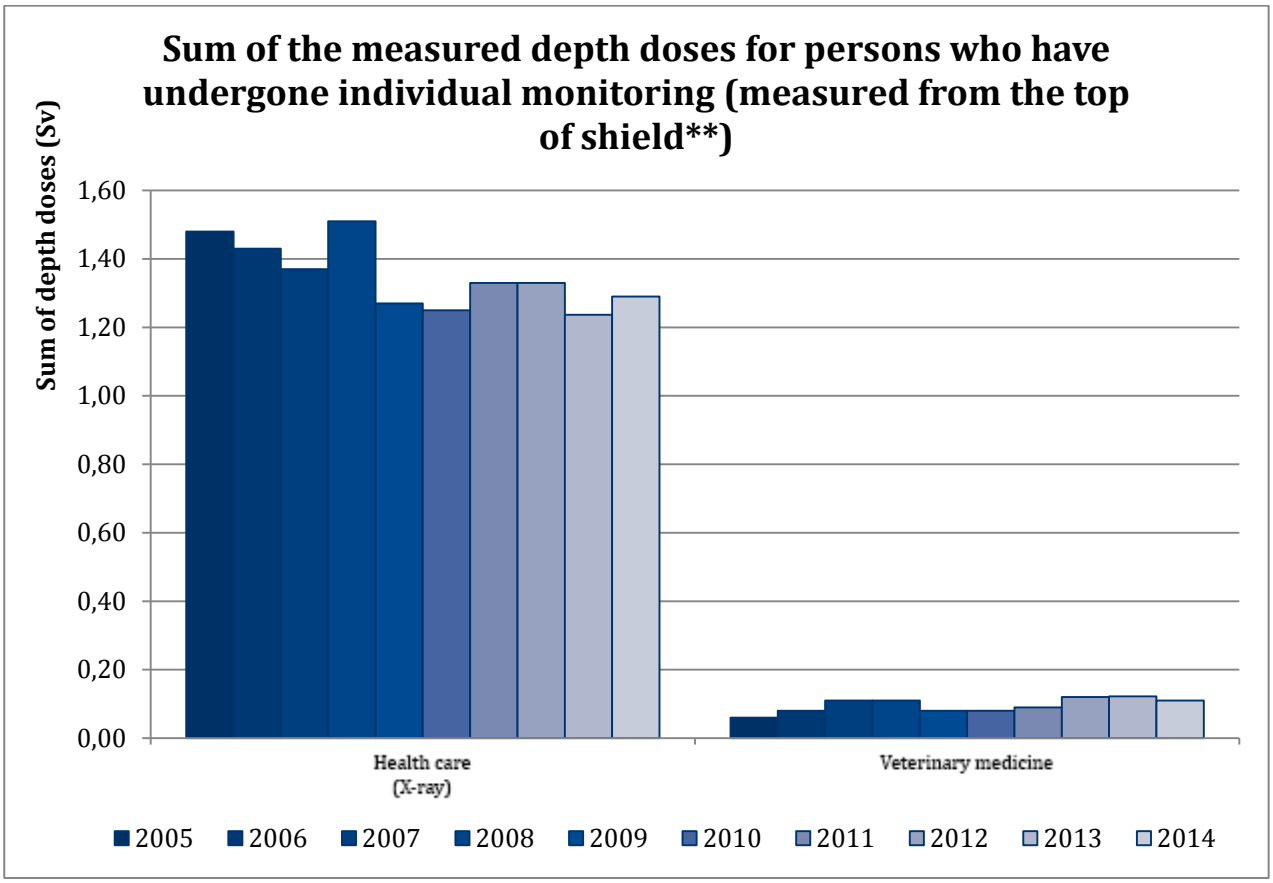
* Services, installation/servicing/technical testing and trade/import/export



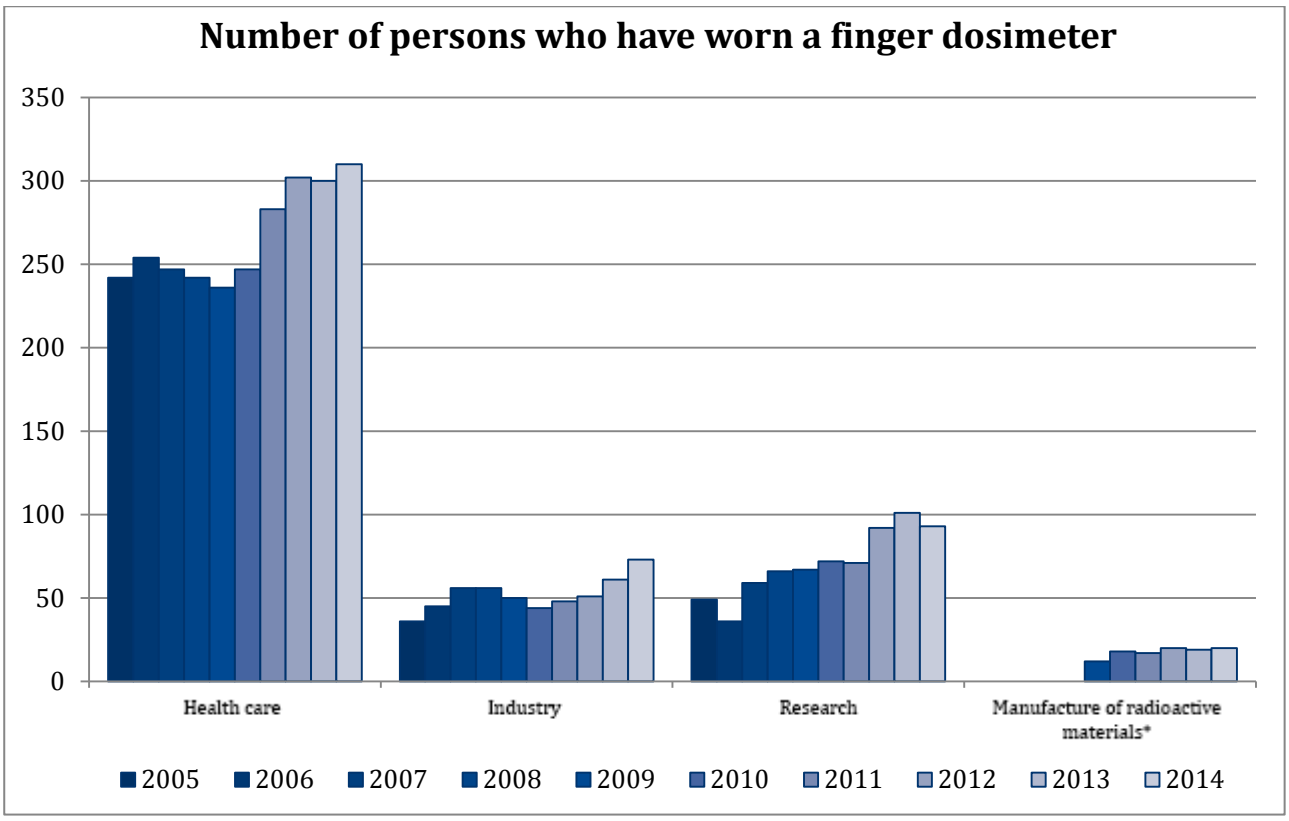
* Services, installation/servicing/technical test use and trade/import/export



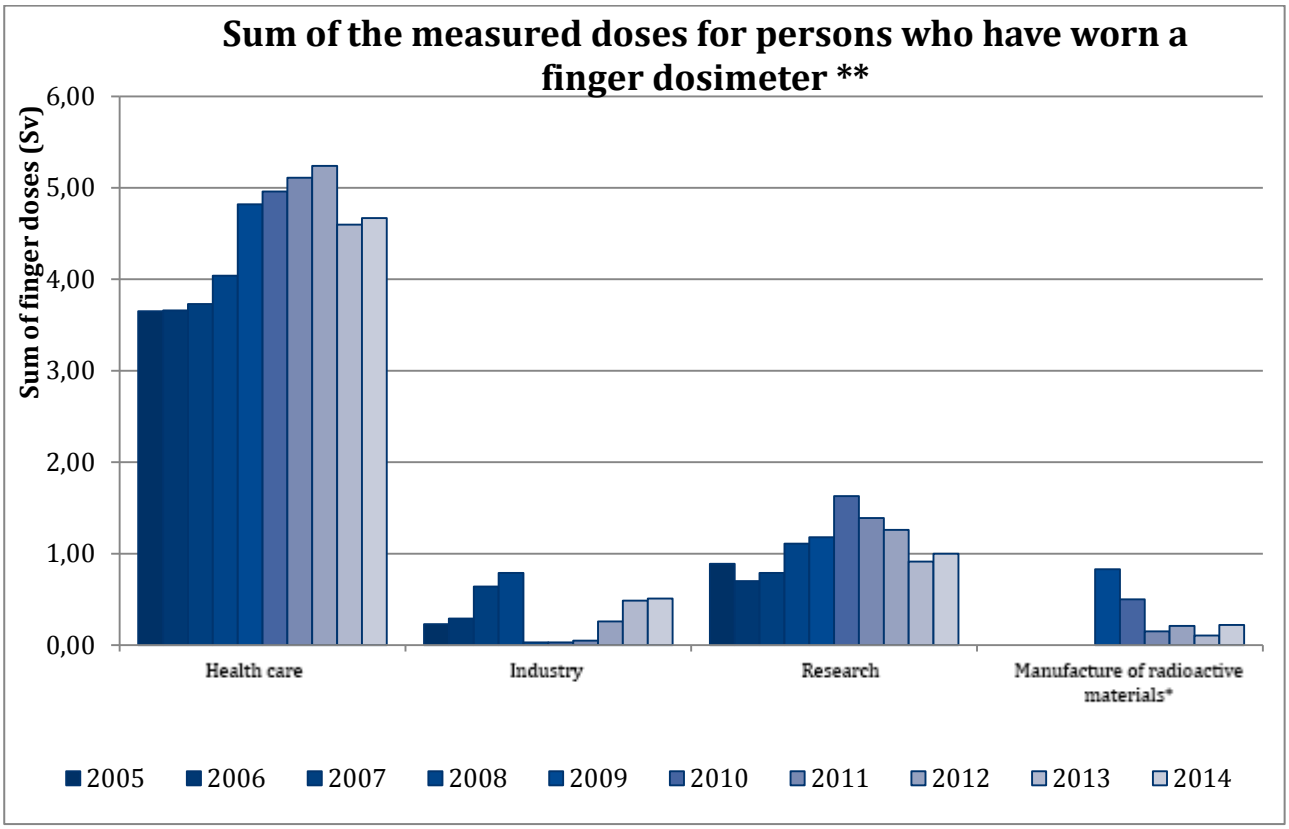
* Services, installation/servicing/technical test use and trade/import/export



** The effective dose can be estimated by dividing the measurement result with a factor of 10–60 depending on the shields used, for example.

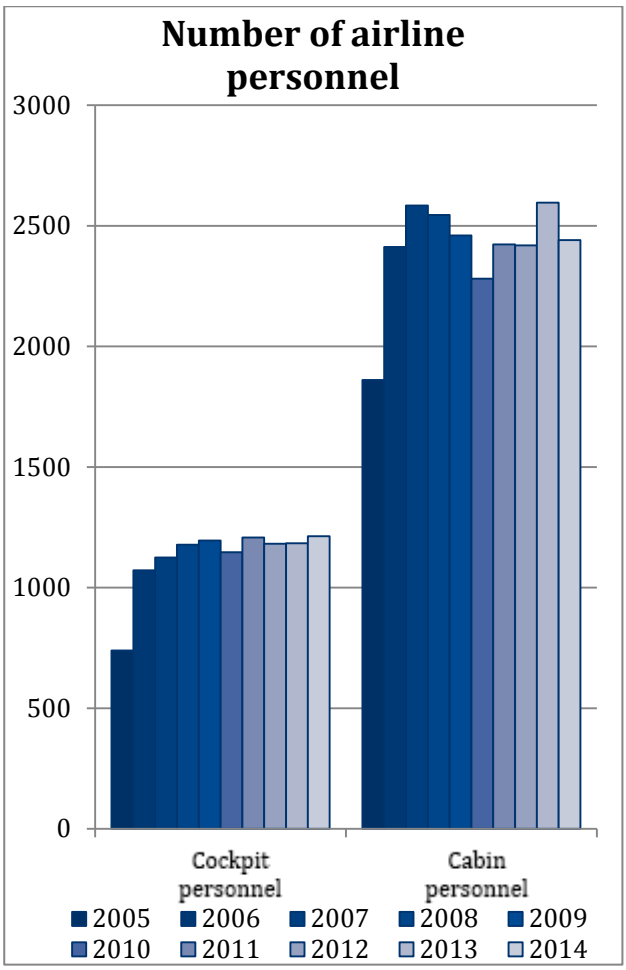


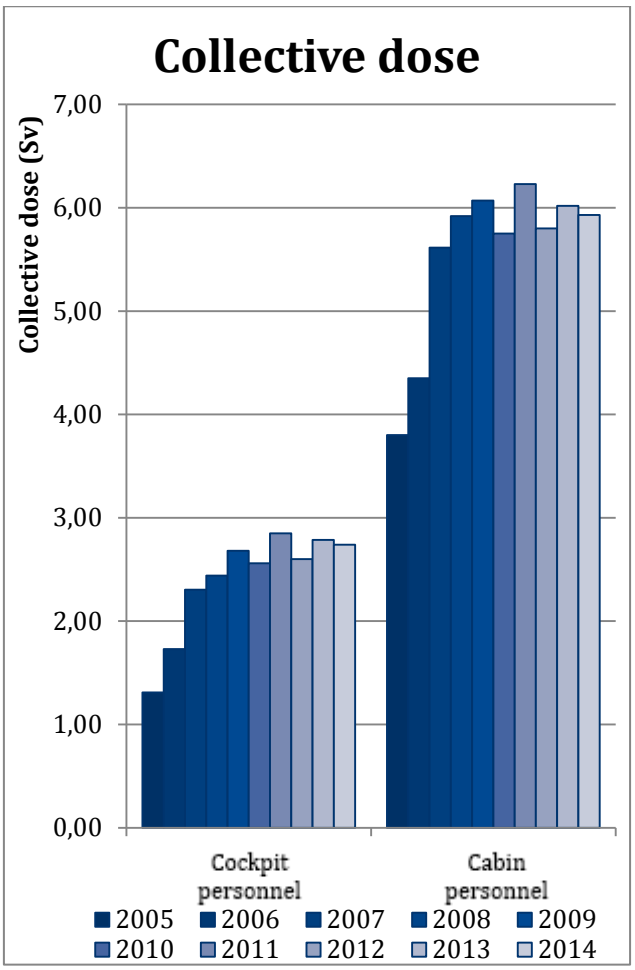
* Previously included under industry



* Previously included under industry

** The data in the figure does not include an industrial abnormal incident in 2013, which resulted in an approximately 30 Sv dose to a single worker.


Number of airline personnel
3000
2500
2000
1500
1000
500
0
Cockpit personnel
Cabin personnel
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014


Collective dose
Collective dose (Sv)
7,00
6,00
5,00
4,00
3,00
2,00
1,00
0,00
Cockpit personnel
Cabin personnel
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014

LARGEST AND MOST EXPOSED WORKER GROUPS

Use of nuclear energy 2014

Position	Number of workers	Sum of doses (Sv)	Average of doses that meet the recording level*)	Average of all doses	Maximum dose (mSv)
Mechanical and machine maintenance	701	0.50	1.36	0.71	7.11
Cleaning	218	0.19	1.72	0.88	7.66
Materials inspection	224	0.17	1.12	0.76	9.11
Insulation work	75	0.13	3.26	1.74	9.15
Electrical and I&C work	641	0.11	0.60	0.16	6.03
Radiation protection personnel	82	0.10	1.67	1.24	6.16
Nuclear power plant work abroad	246	0.09	0.82	0.35	8.80

Use of radiation 2014

Position	Number of workers	Sum of doses (Sv)	Average of doses that meet the recording level*)	Average of all doses	Maximum dose (mSv)
Cardiologist and interventional cardiologist **)	207	0.65	3.53	3.14	24.16
Interventional radiologist **)	37	0.25	8.31	6.74	28.76
Radiologist **)	328	0.20	2.48	0.62	13.55
Specialist (e.g. surgeon, urologist, orthopaedist, neuroradiologist, gastroenterologist) **)	295	0.06	1.50	0.21	12.77
Nurse **)	1,118	0.05	0.51	0.05	4.48
Radiology nurse **)	1,319	0.04	0.42	0.03	3.06
Radiology nurse	549	0.06	0.79	0.10	3.19
Veterinary nurse **)	399	0.07	0.81	0.17	4.05
Veterinarian **)	246	0.04	1.63	0.17	9.16
Materials inspection	488	0.10	0.34	0.20	3.99
Tracer tests	24	0.04	2.27	1.80	6.32

Practices causing exposure to natural radiation 2014

Position	Number of workers	Sum of doses (Sv)	Average of doses that meet the recording level*)	Average of all doses	Maximum dose (mSv)
Cabin crew	2,441	5.93	2.49	2.43	5.84
Cockpit crew	1,213	2.74	2.29	2.26	4.50
Other work involving exposure to radon	50	235.80	4.72	4.72	17.07

*) The recording level is 0.10 mSv/month or 0.30 mSv/3 months.

**) Usually, depth doses are (sufficiently accurate) approximate values of the effective doses. The doses of these worker groups are exceptions. When radiation (X-radiation) is used in health care and veterinary medicine, the workers wear personal protective devices and the dose is measured with a dosimeter on top of the protective device. Then, the effective dose can be determined by dividing the depth dose with a factor of 10–60.