

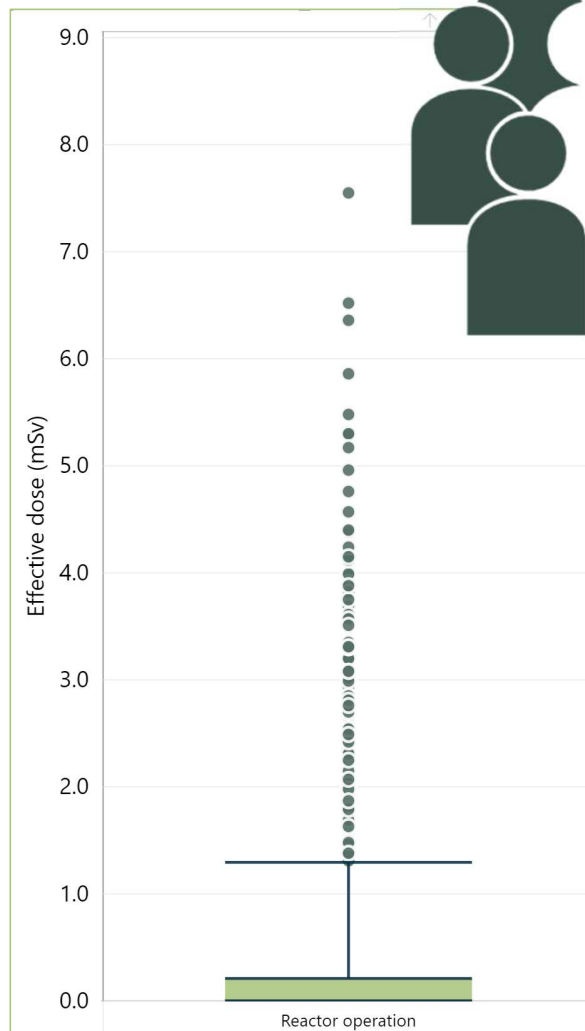
Occupational doses in Belgium



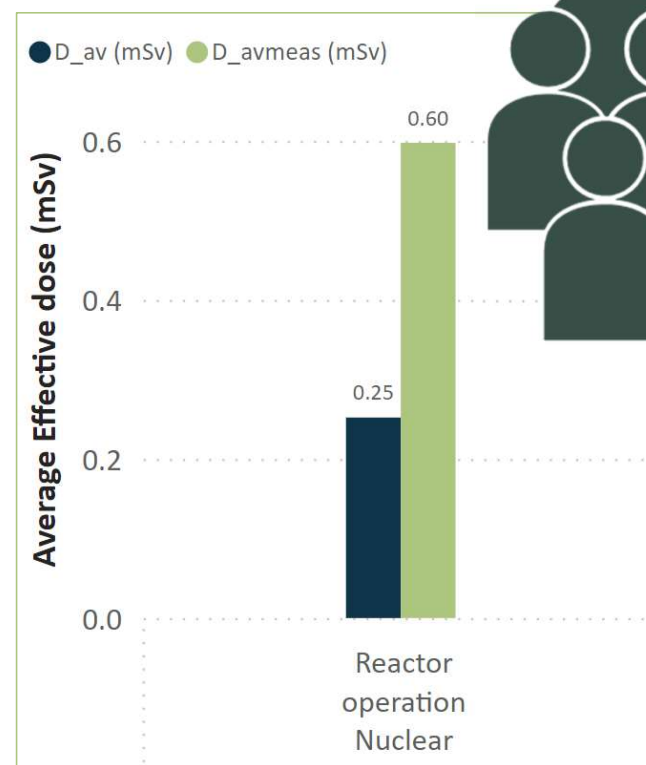
An Dedulle, PhD

an.dedulle@fanc.fgov.be

Individual



Global



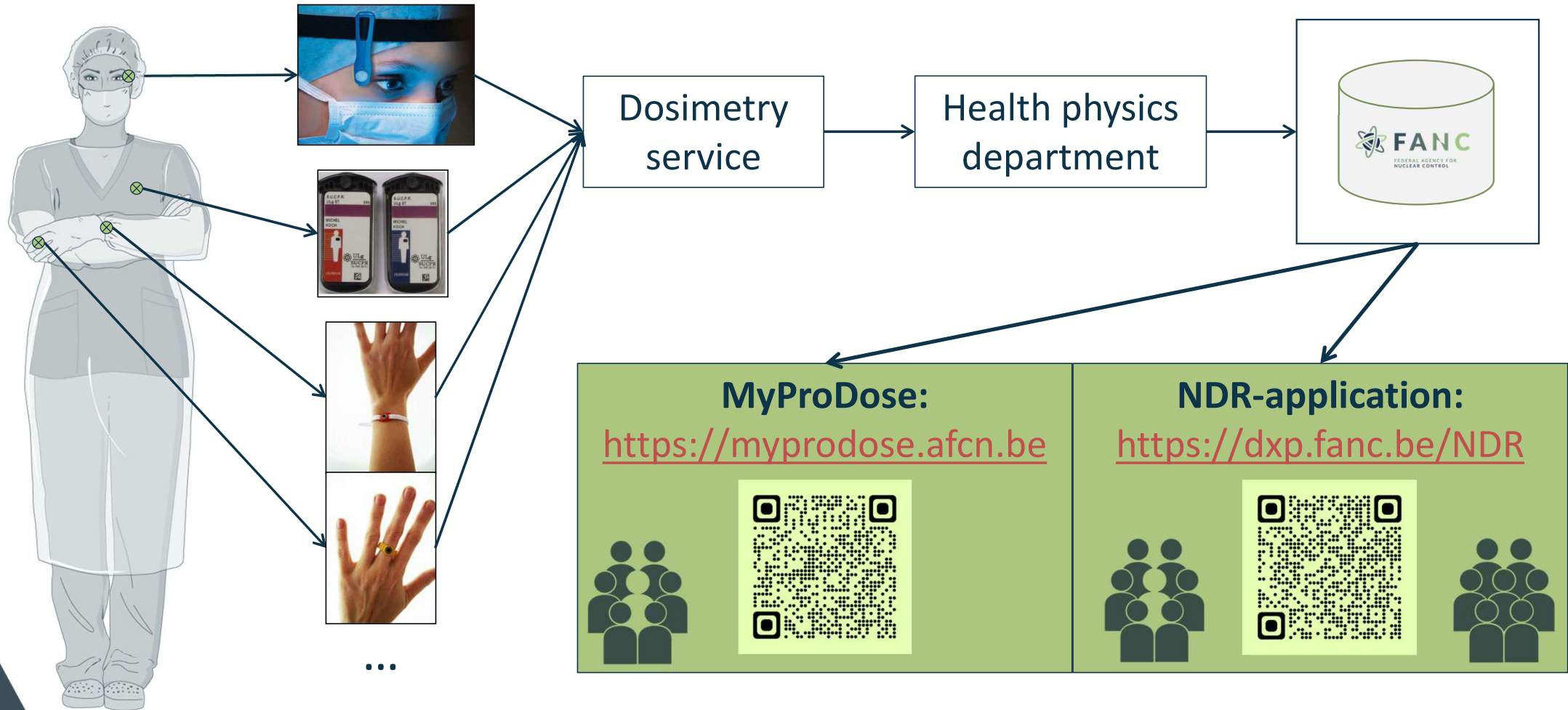
- Introduction
- Demo
 - NDR-application
- Occupational exposure in Belgium
 - Evolution from 2013 to 2020
 - Doses in 2022

Occupational exposure: dose limits

Dose limits		Occupational exposed (*)	Students & apprentices (16 -18 jaar)	Public
Equivalent dose (H)	Effective dose (E)	20 mSv / 12 months	6 mSv / year	1 mSv / year 1 mSv during pregnancy
	Eye lens	20 mSv / 12 months	15 mSv / year	15 mSv / year
	Skin (average over 1 cm ²)	500 mSv / 12 months	150 mSv / year	50 mSv / year
	Extremities	500 mSv / 12 months	150 mSv / year	

(*) A worker is considered as occupational exposed if there is a risk that the dose limits of the public could be exceeded.

Occupational exposure: follow-up



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FANC / AFCN
DataExchange
Portal

Welcome to the FANC Data Exchange Platform

The FANC DXP is subdivided into different applications (modules). Please choose a module below or from the menu bar.

NDR

National Dose Register

Consult the help section

EDWD

Euratom Drinking Water Directive

Consult the help section

SRT / NORM

Radiologic Surveillance / Naturally Occurring Radiative Material

Consult the help section

PHI

Physical Inventory

Consult the help section

TRIMP

Transport Import

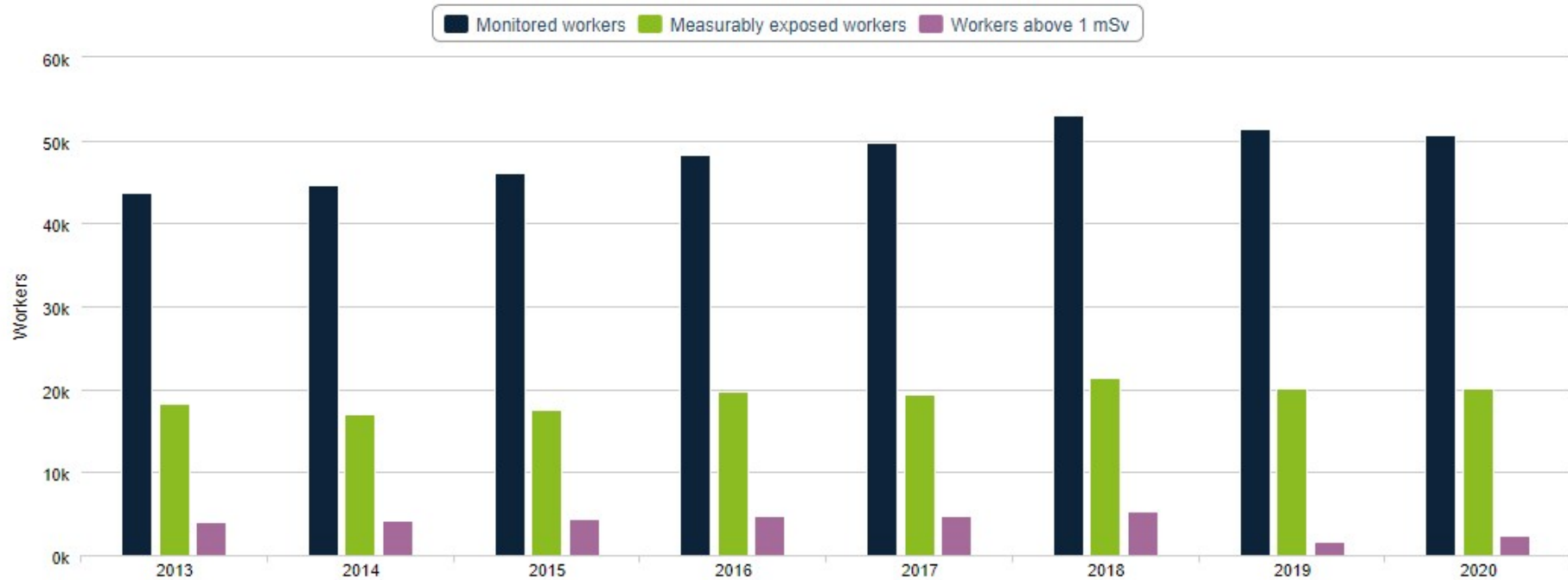
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Evolution of doses [\(https://esorex-platform.org/\)](https://esorex-platform.org/)

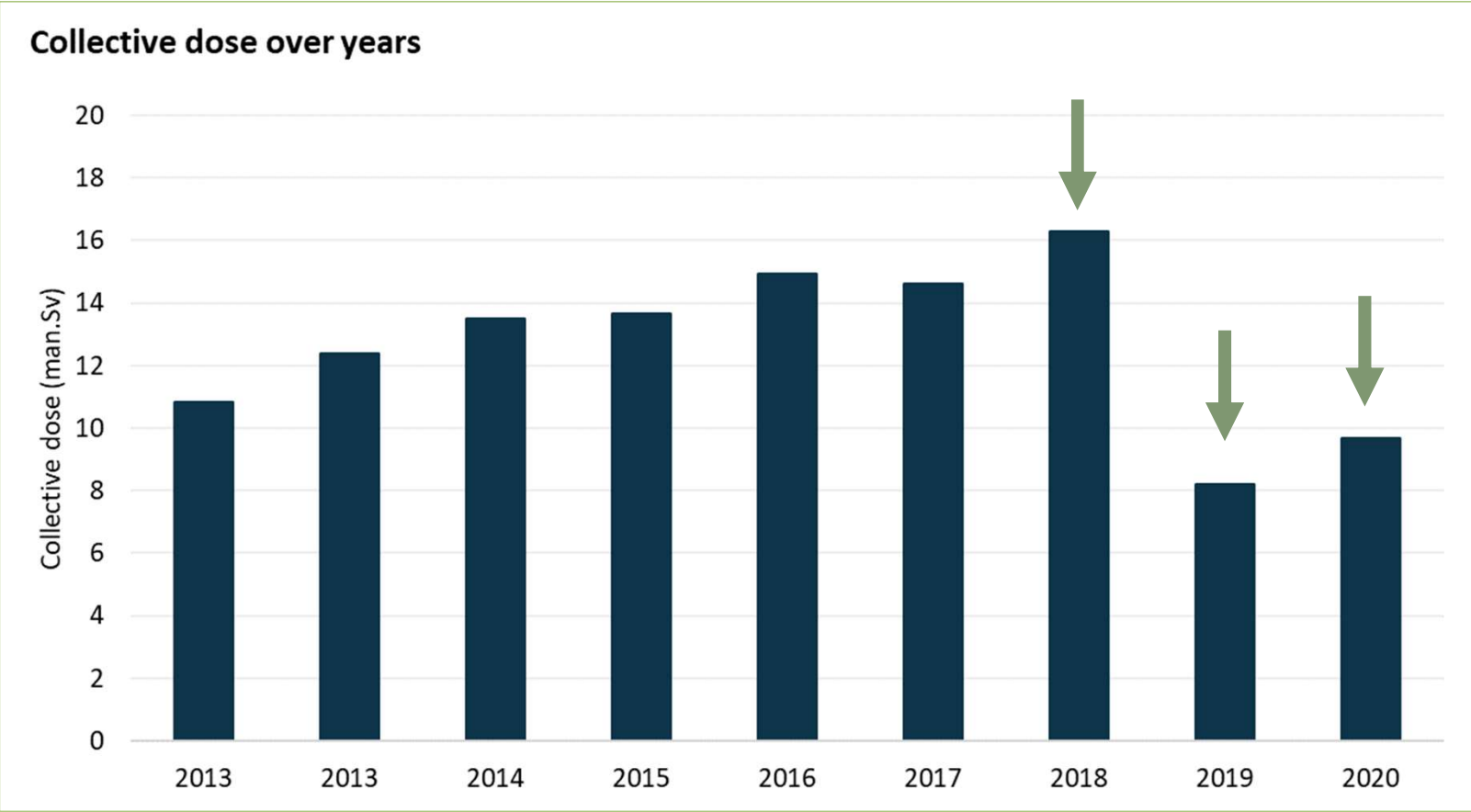
Monitored and measurably exposed workers over years

Country

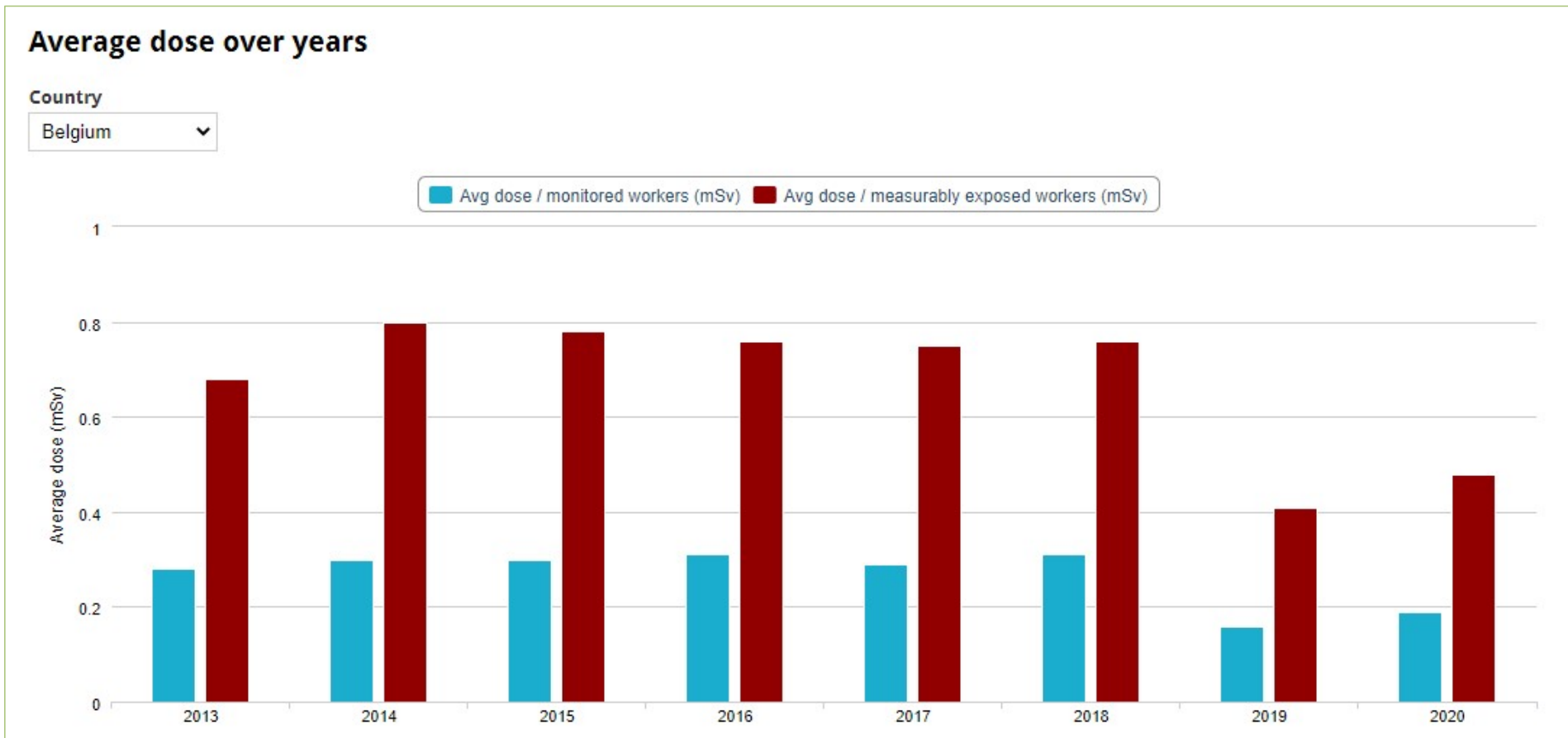
Belgium ▼



Evolution of doses

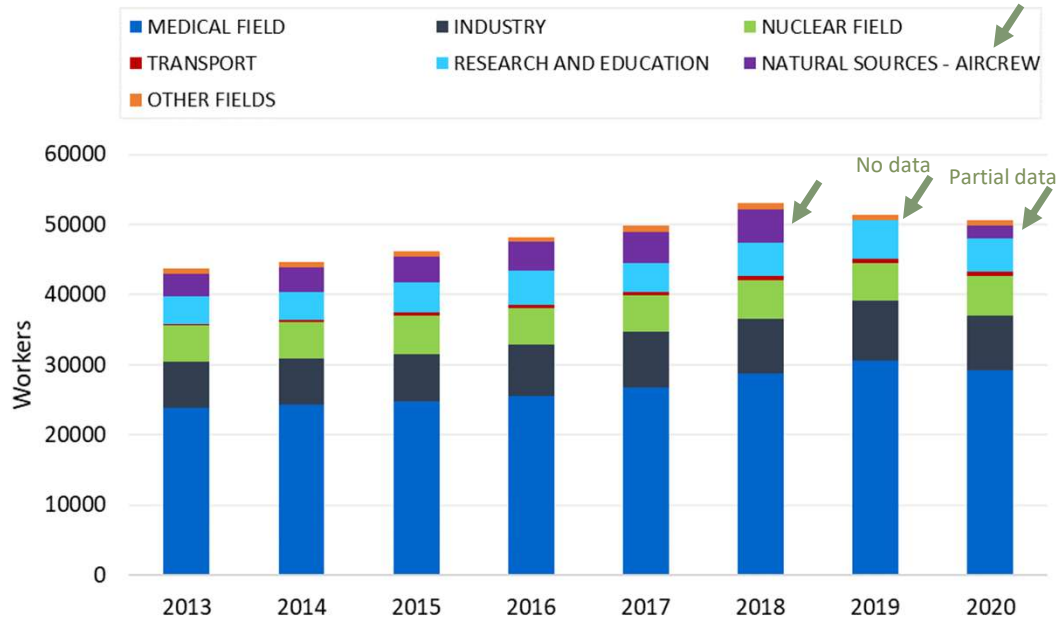


Evolution of doses [\(https://esorex-platform.org/\)](https://esorex-platform.org/)

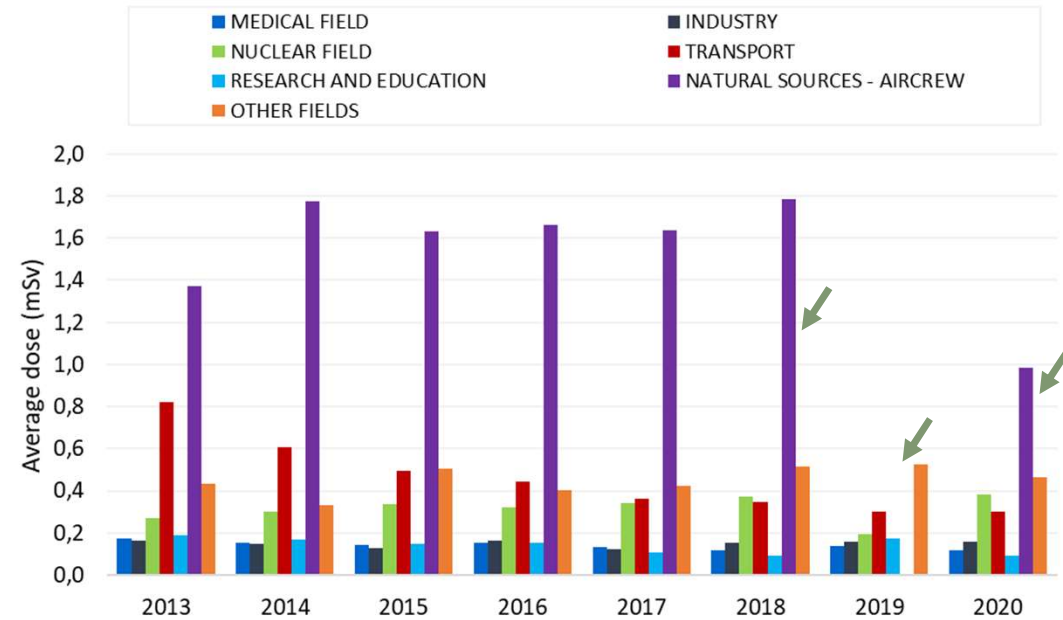


Evolution of doses

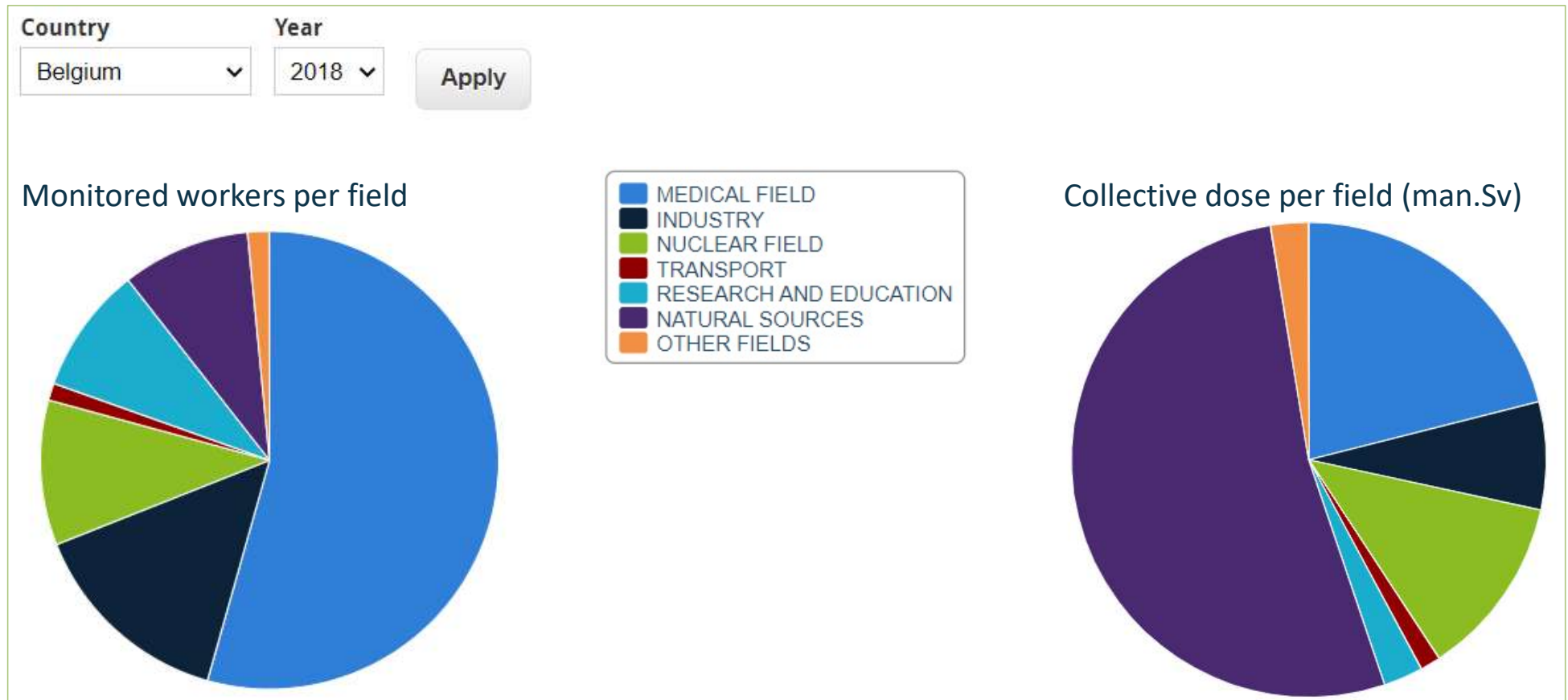
Monitored workers over years



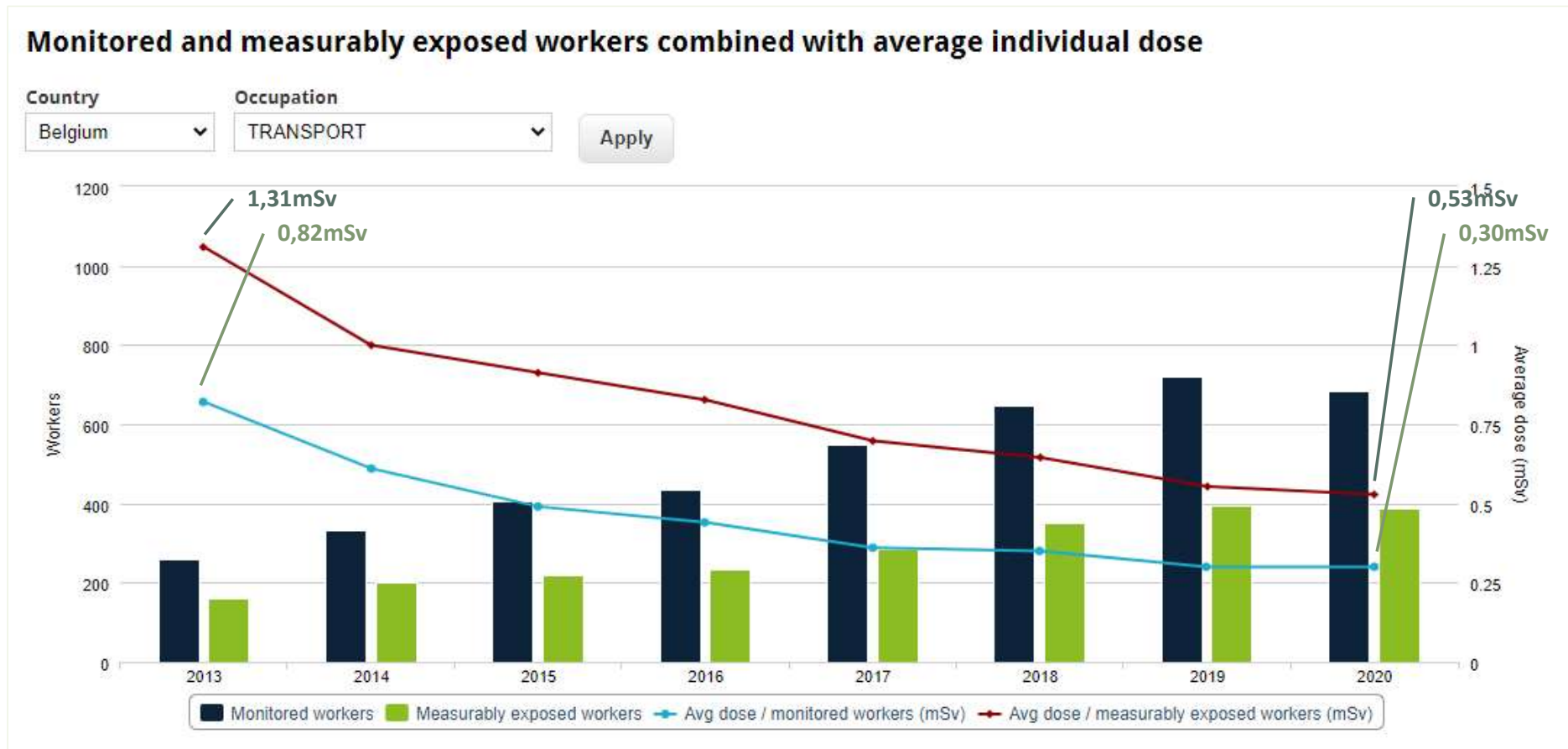
Average dose over years



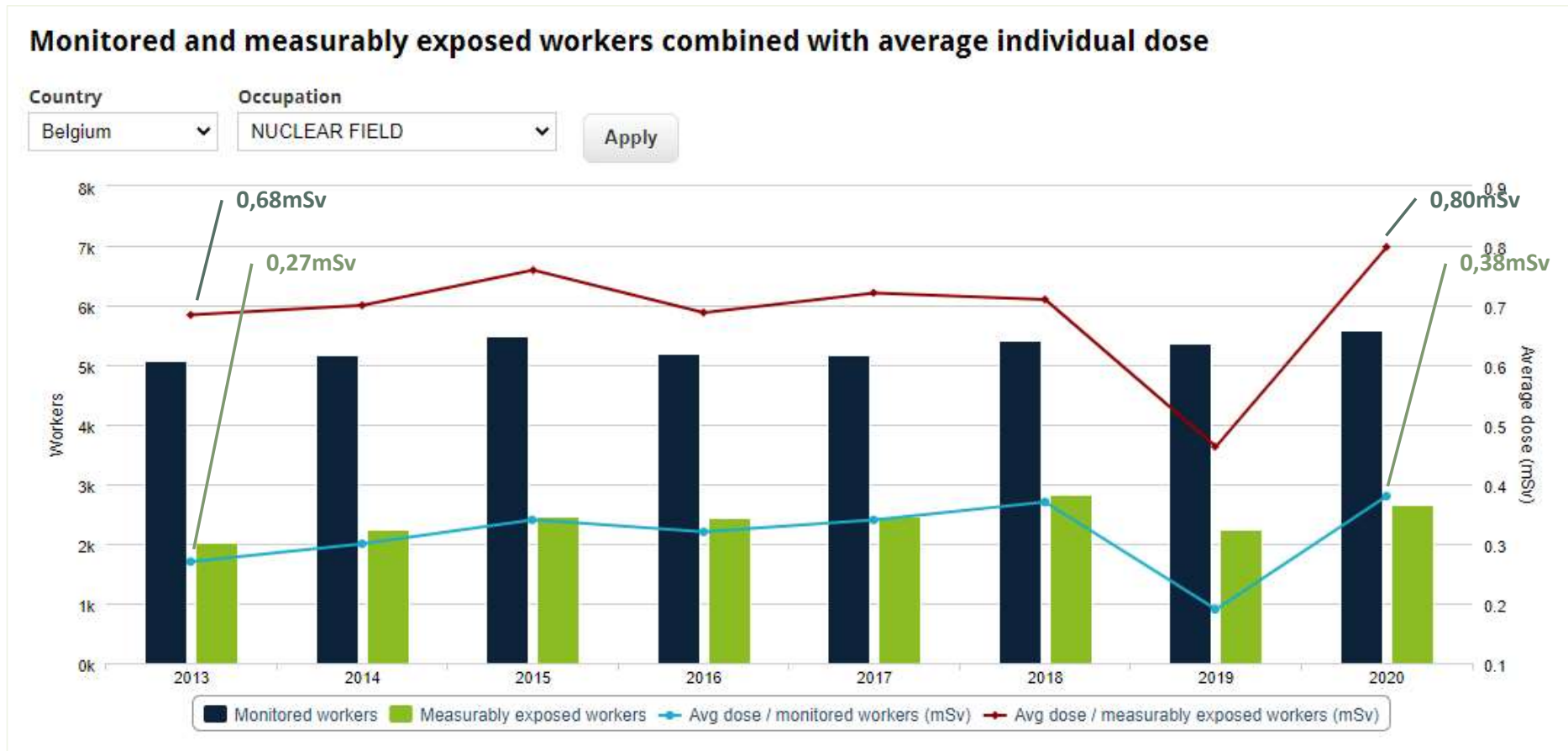
Evolution of doses [\(https://esorex-platform.org/\)](https://esorex-platform.org/)



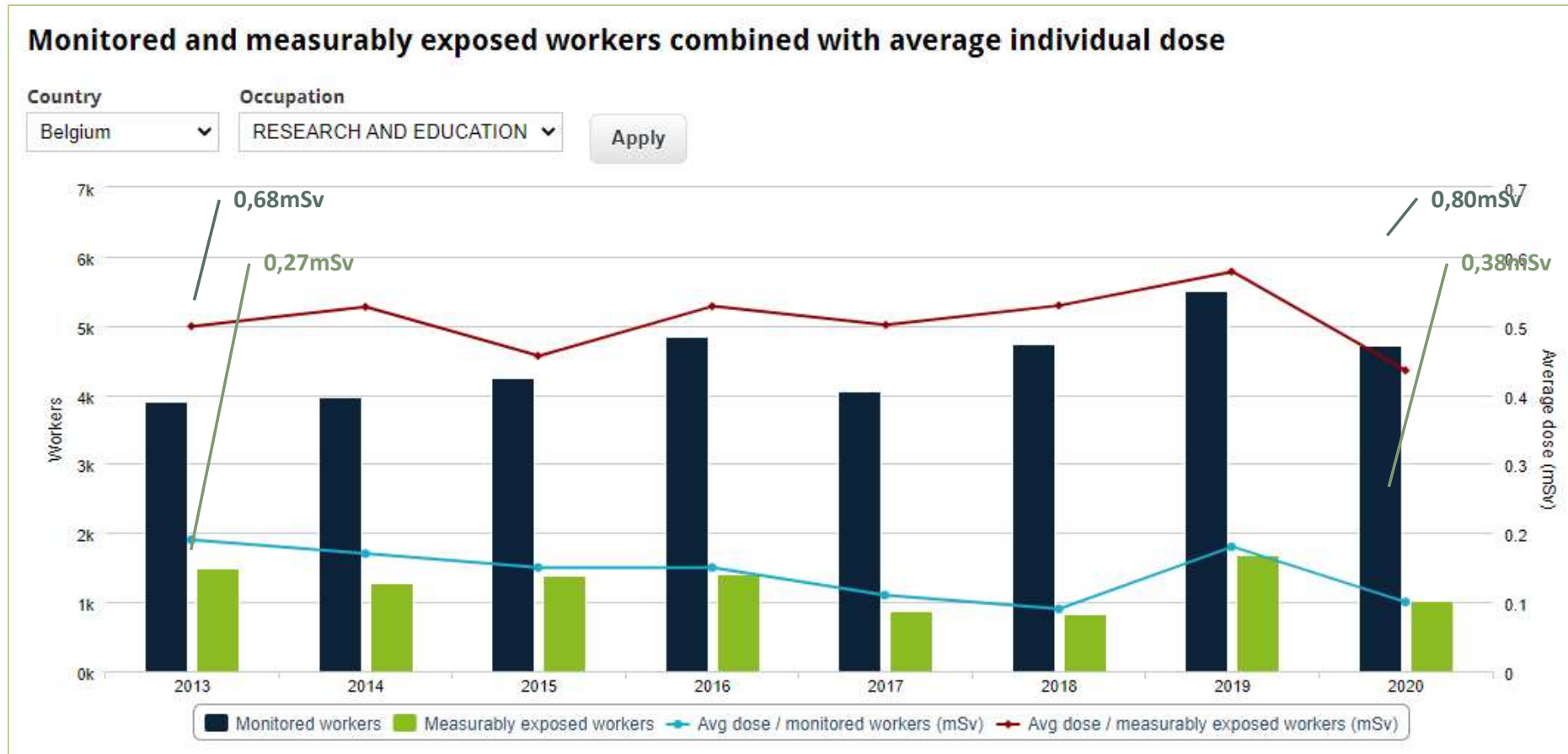
Evolution of doses [\(https://esorex-platform.org/\)](https://esorex-platform.org/)



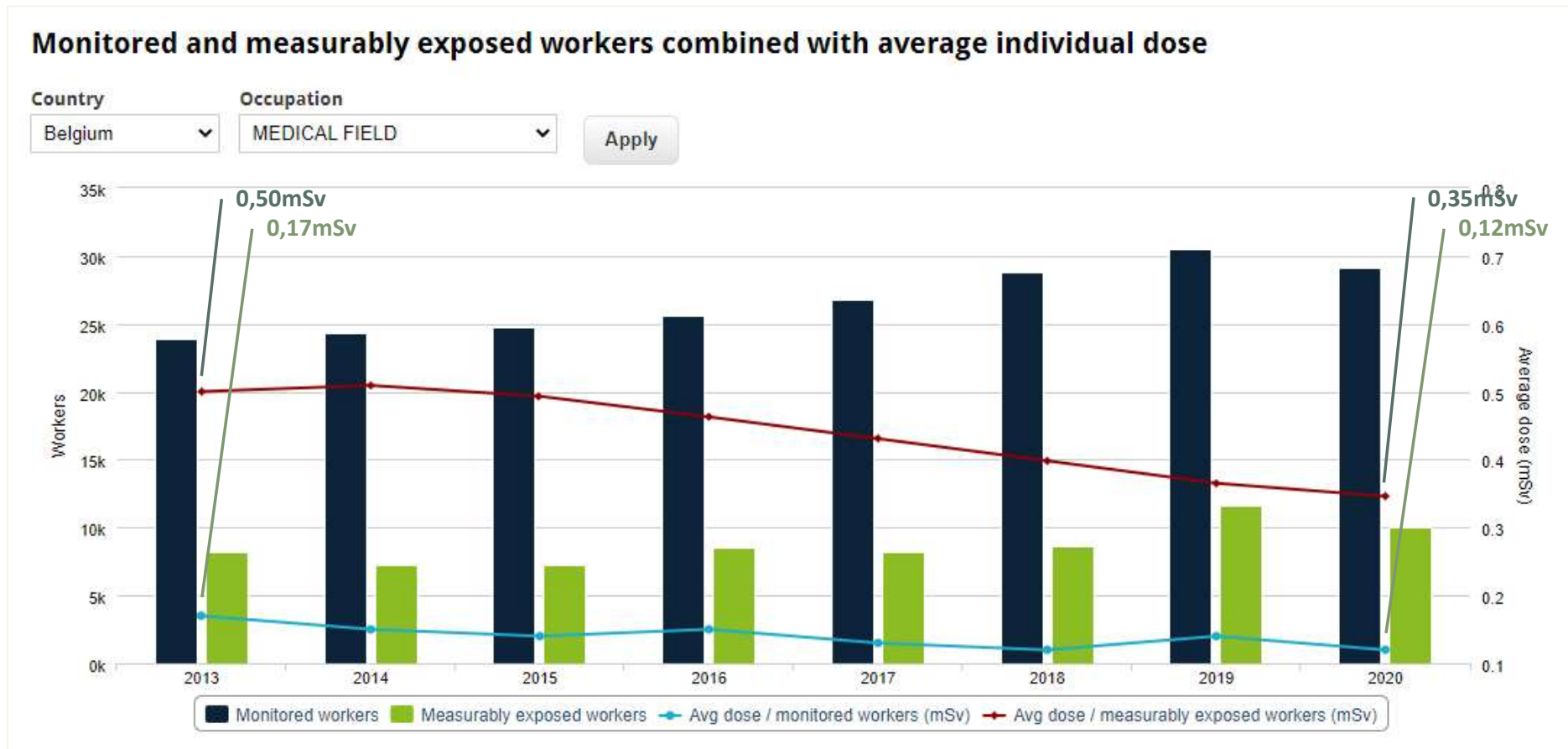
Evolution of doses [\(https://esorex-platform.org/\)](https://esorex-platform.org/)



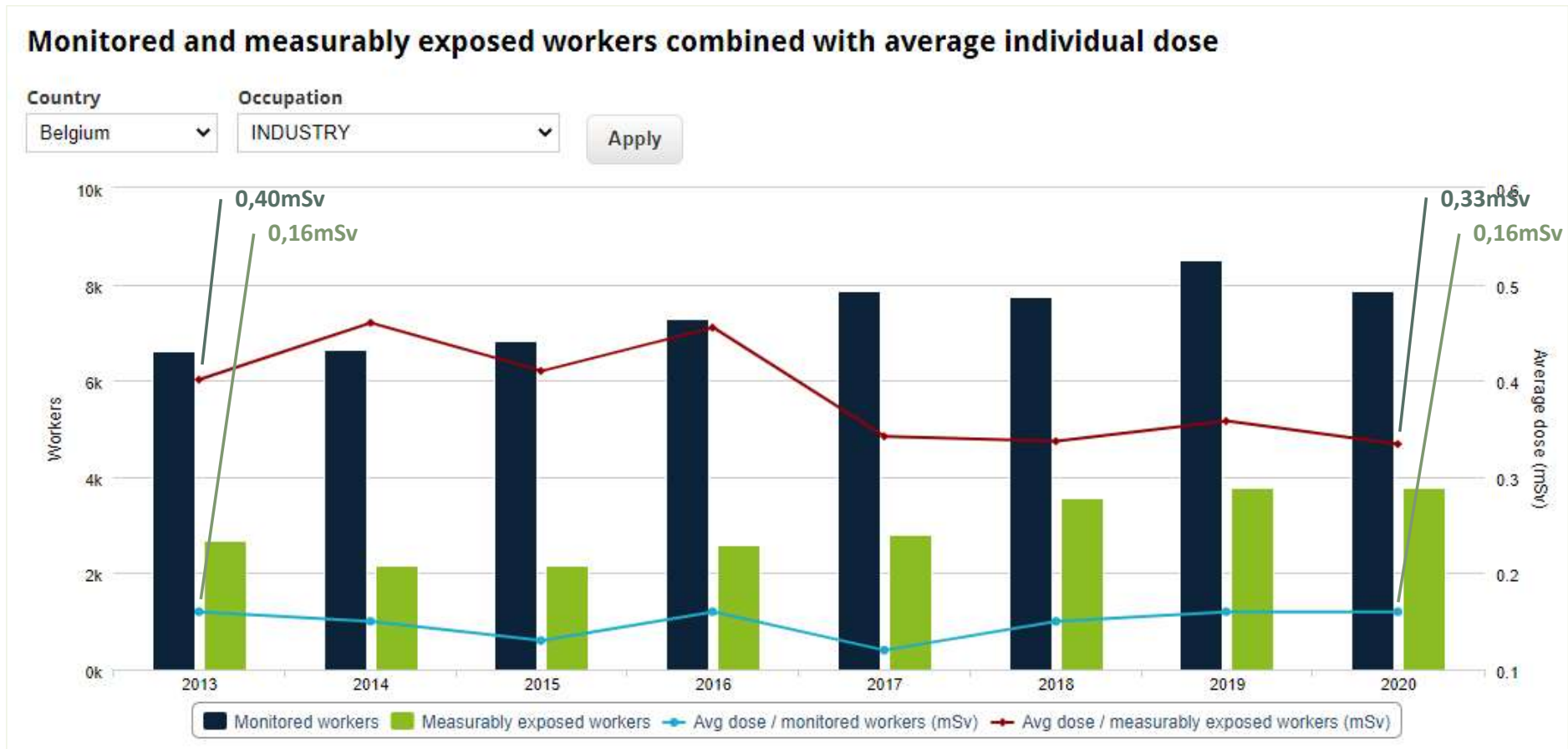
Evolution of doses [\(https://esorex-platform.org/\)](https://esorex-platform.org/)



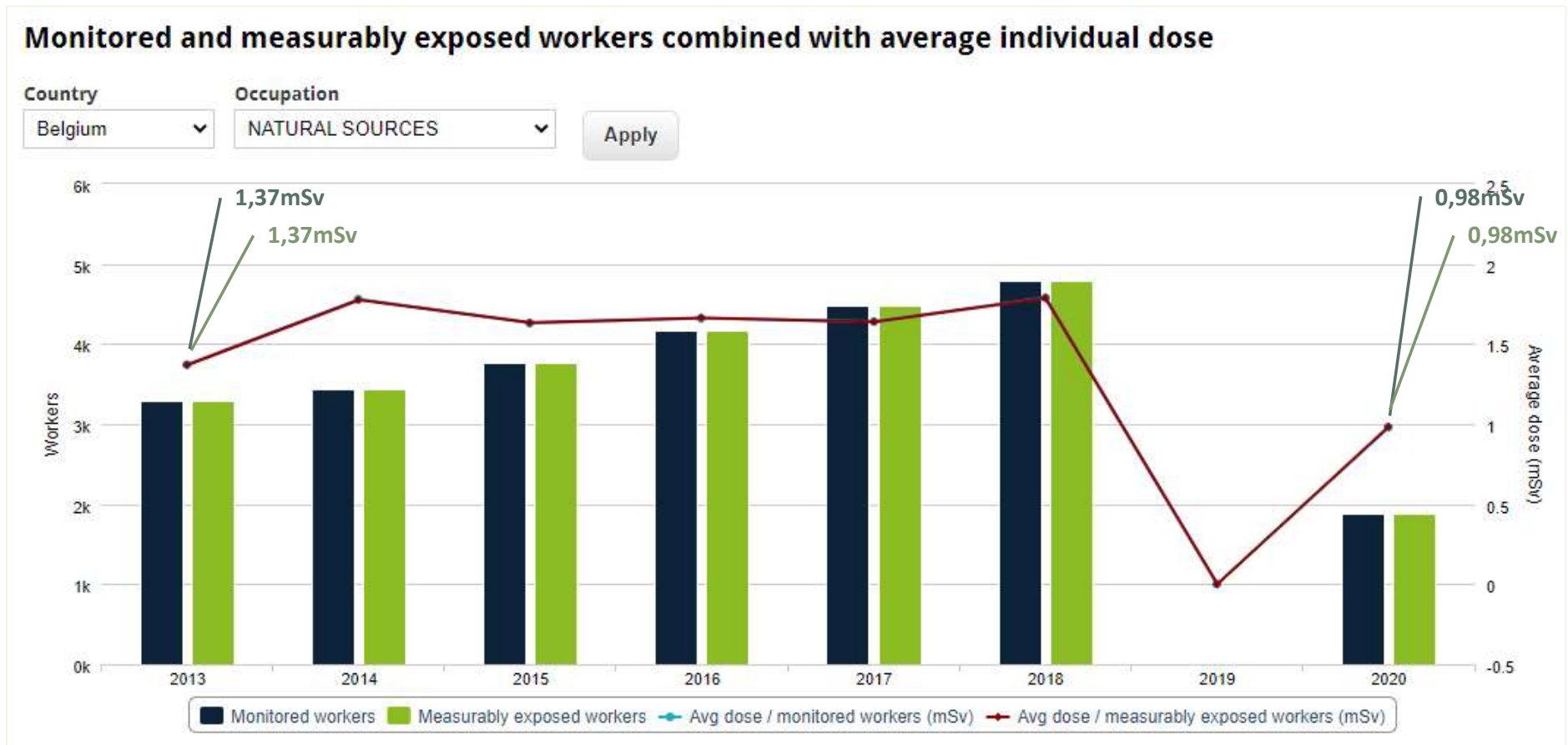
Evolution of doses [\(https://esorex-platform.org/\)](https://esorex-platform.org/)



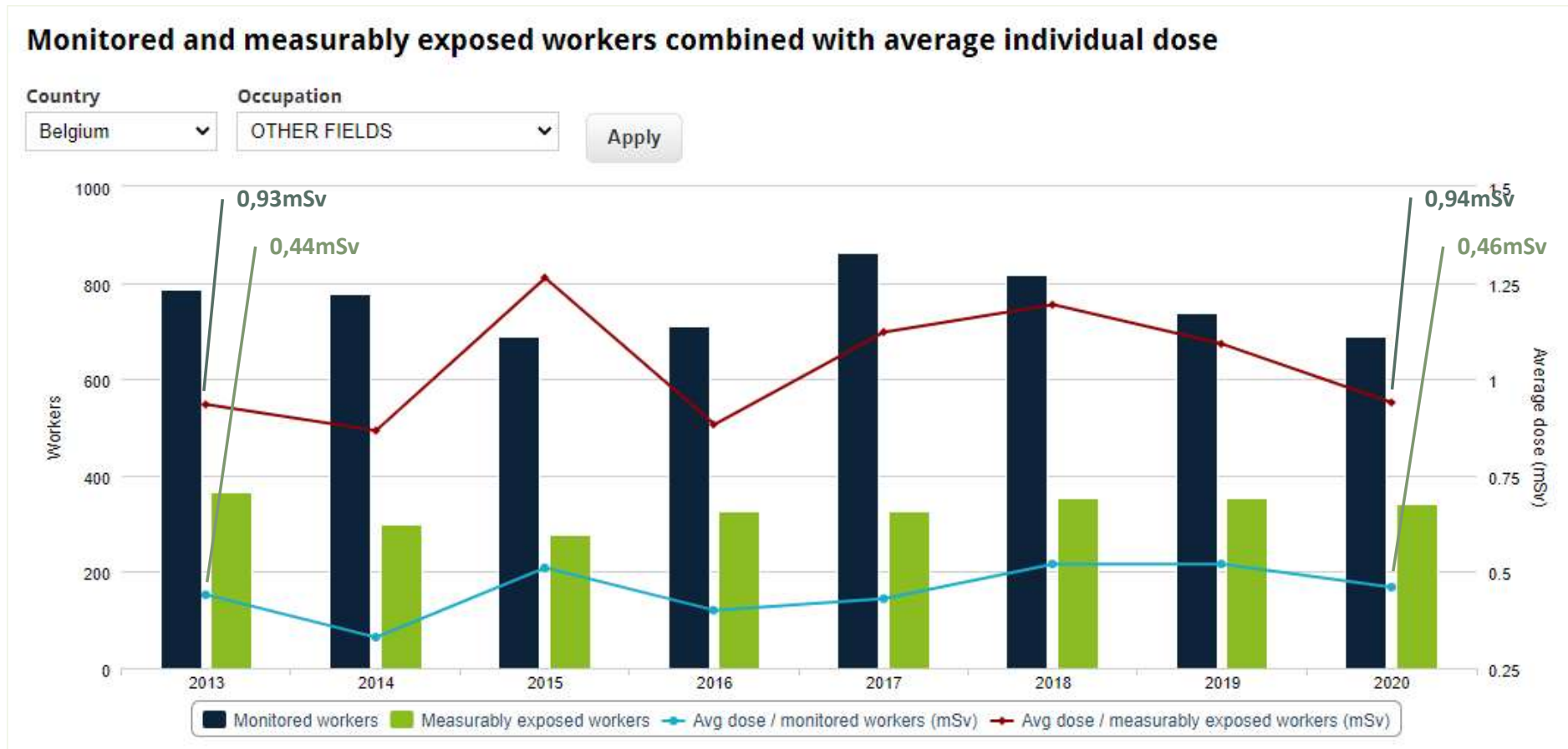
Evolution of doses [\(https://esorex-platform.org/\)](https://esorex-platform.org/)



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Evolution of doses [\(https://esorex-platform.org/\)](https://esorex-platform.org/)



Evolution of doses: remarks

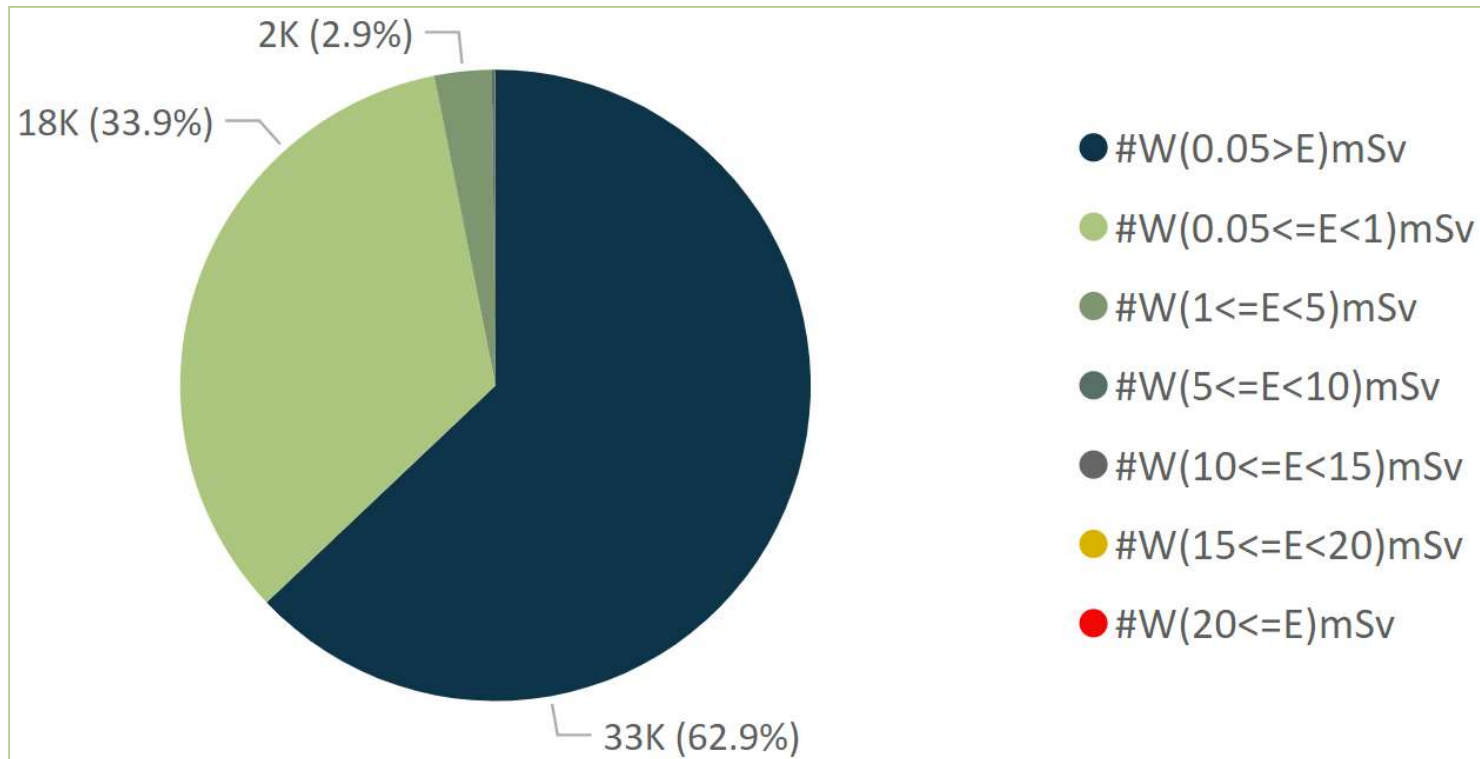
Categorisation by activity sector: (semi-)manual based on operator/employer

From 2021:

- ⇒ Activity sector, worker practice and profession could be included in the data
- ⇒ More detailed statistics possible

Doses in 2022

Number of workers

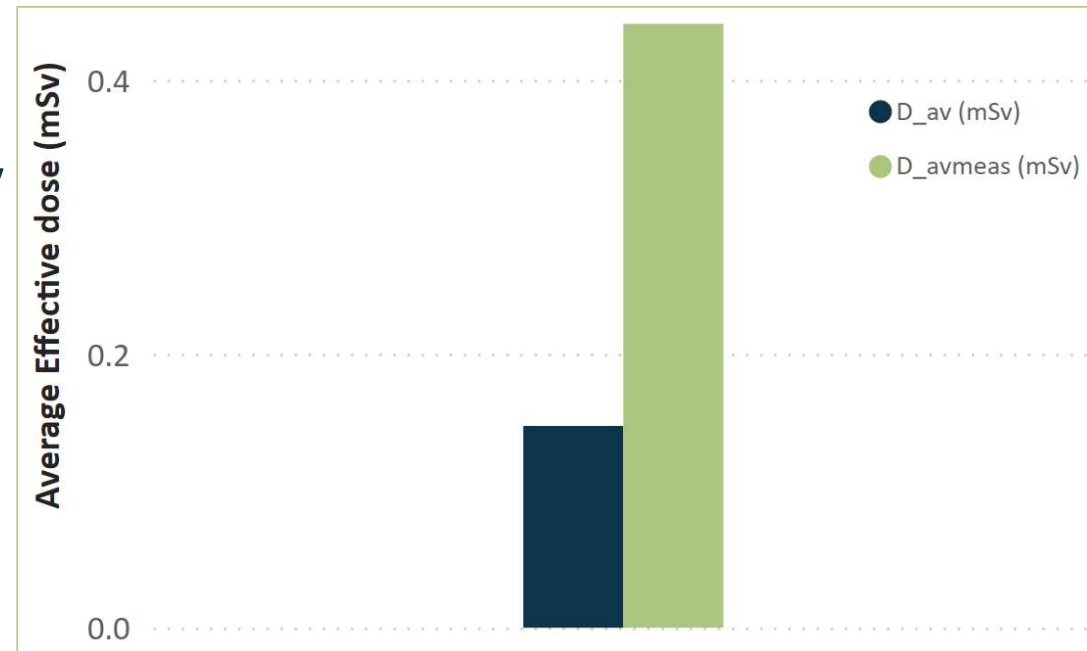


52158	32825	17707	1532	81	10	3	(Blank)
#Workers	#W(0.05>E)mSv	#W(0.05<=E<1)...	#W(1<=E<5)mSv	#W(5<=E<10)mSv	#W(10<=E<15)m...	#W(15<=E<20)m...	#W(20<=E)mSv

Doses in 2022

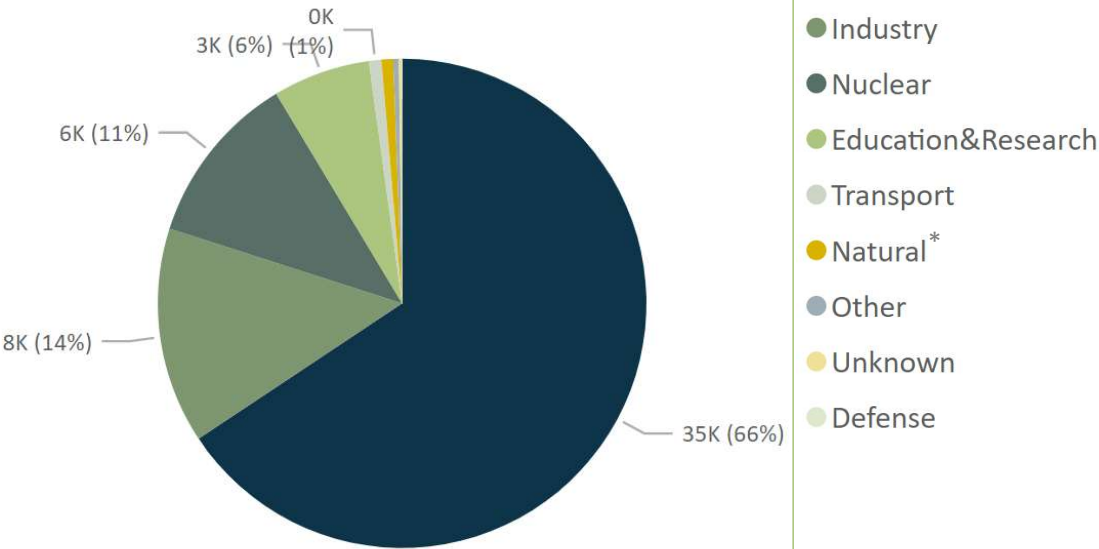
Effective dose

- Collective dose: 7.686 manSv
- Average dose/worker: 0.15 mSv
- Average dose/exposed worker: 0.44 mSv

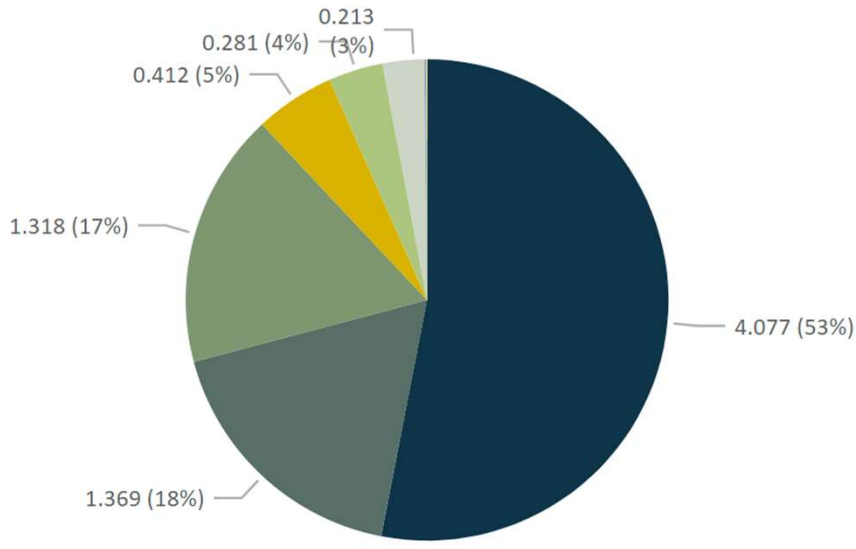


Doses in 2022

#Workers by ActivitySector

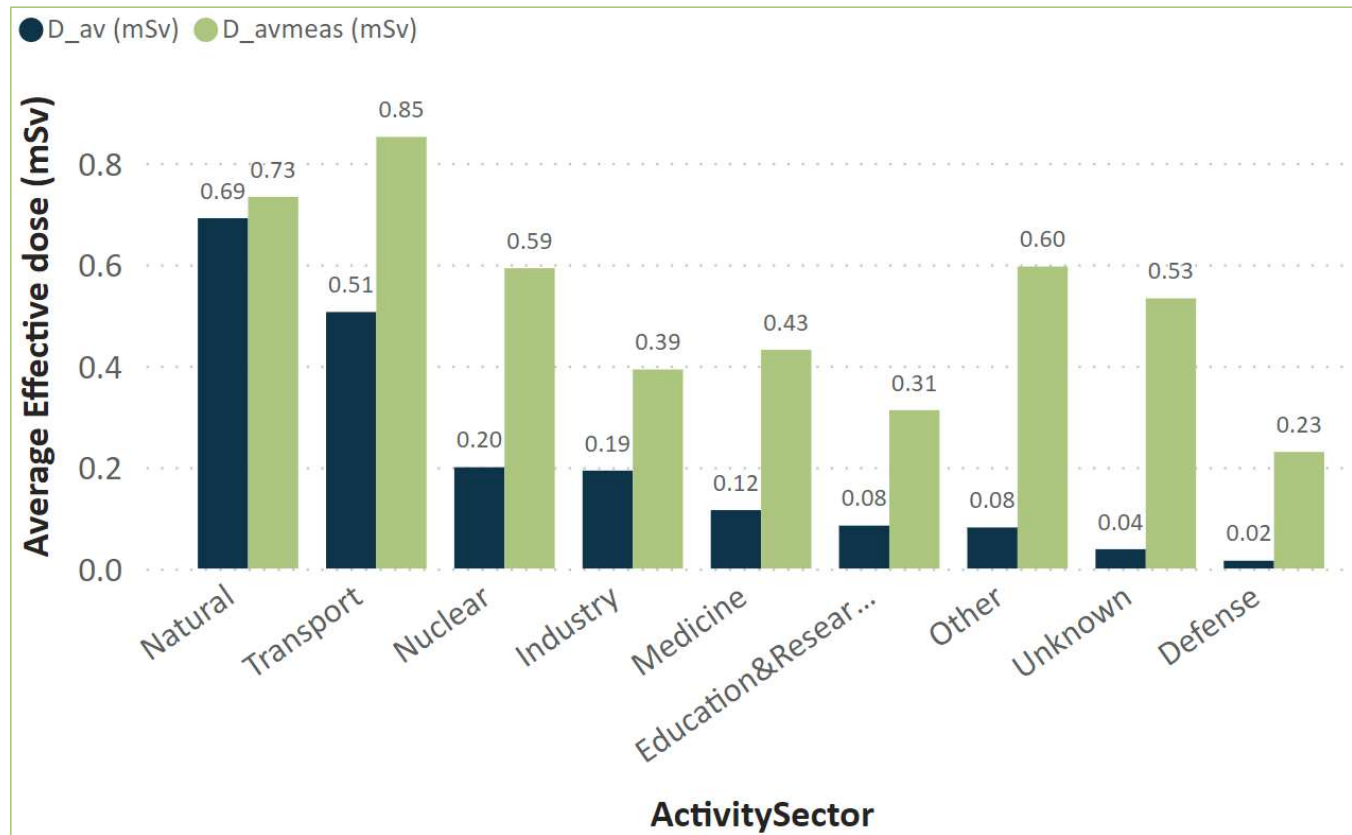


Dcoll (manSv) by ActivitySector



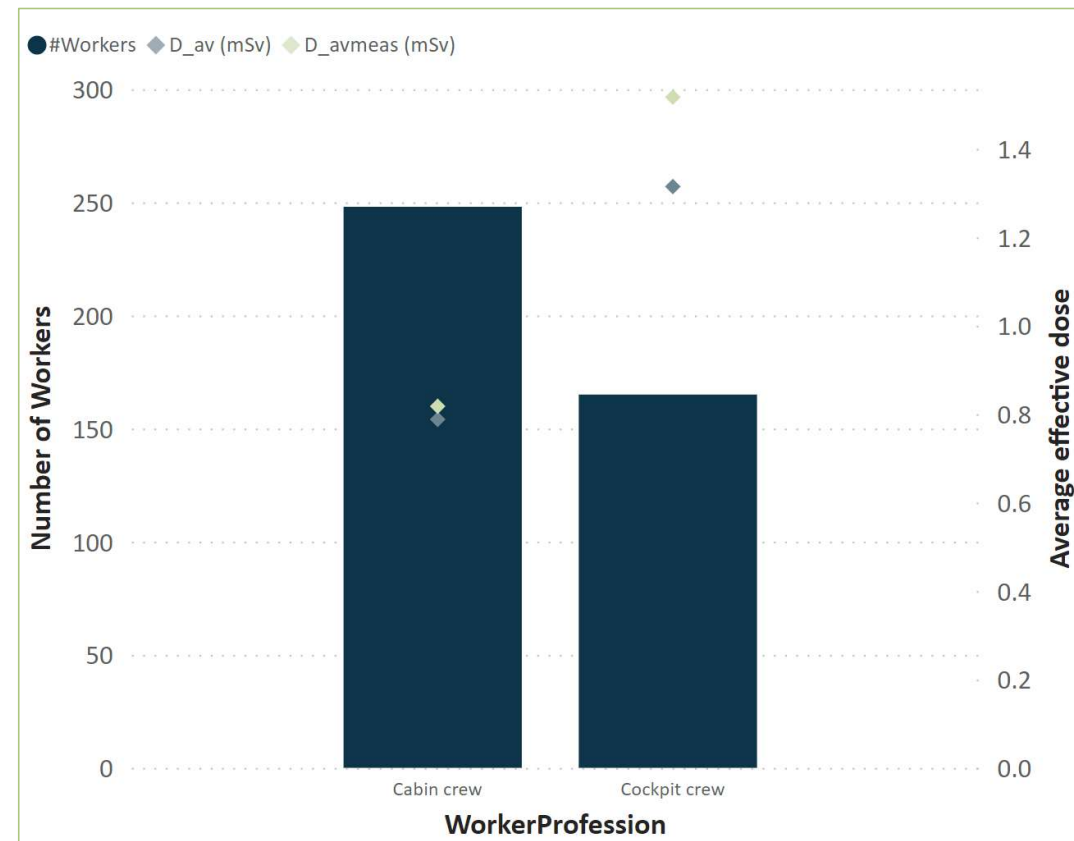
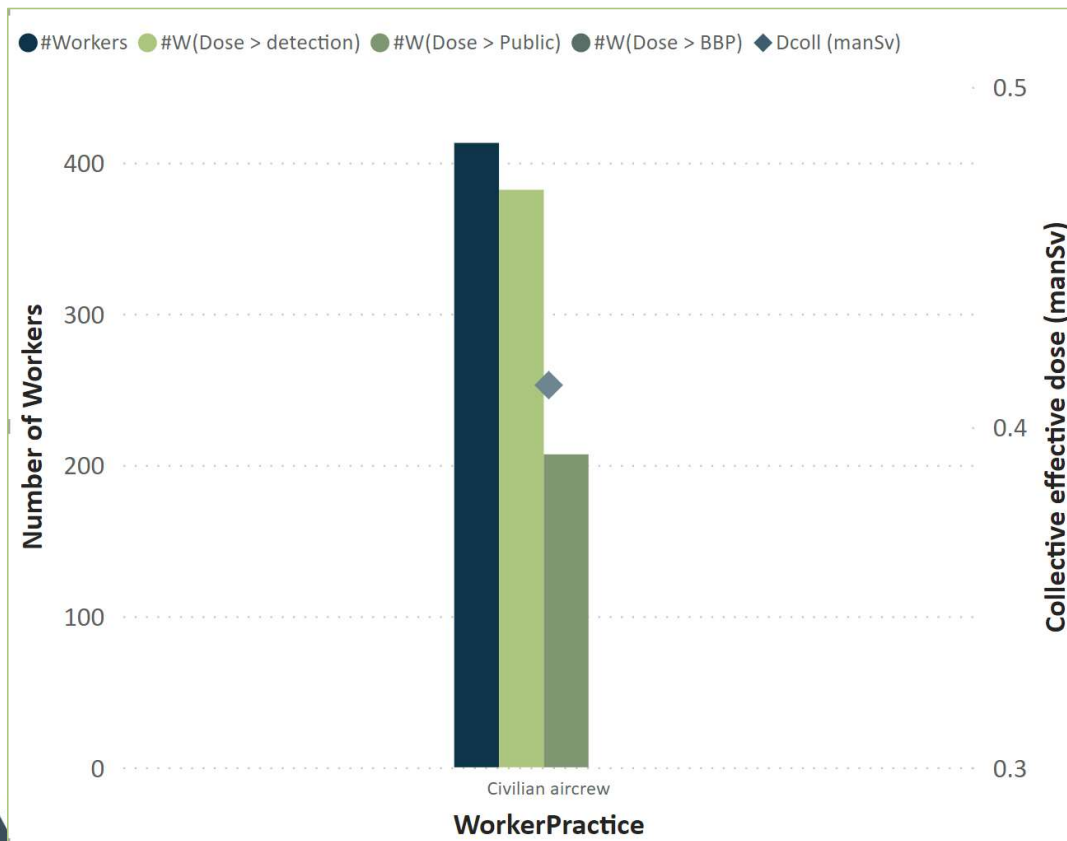
*Incomplete data

Doses in 2022



Doses in 2022

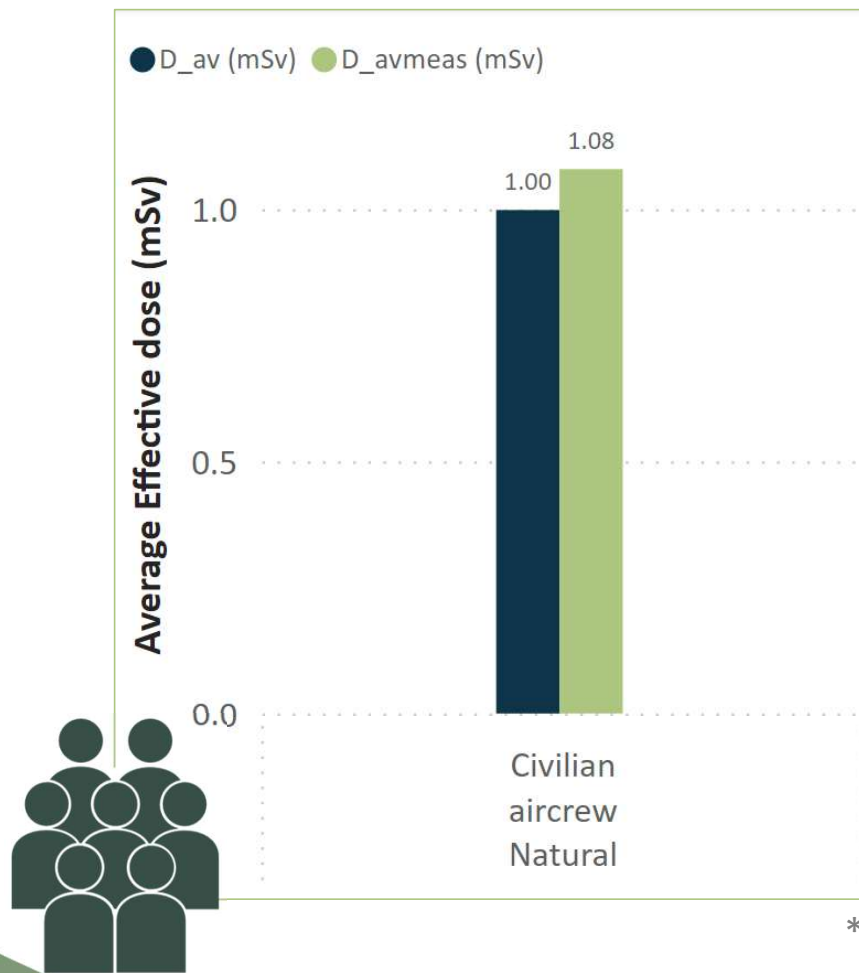
Activity sector: Natural*



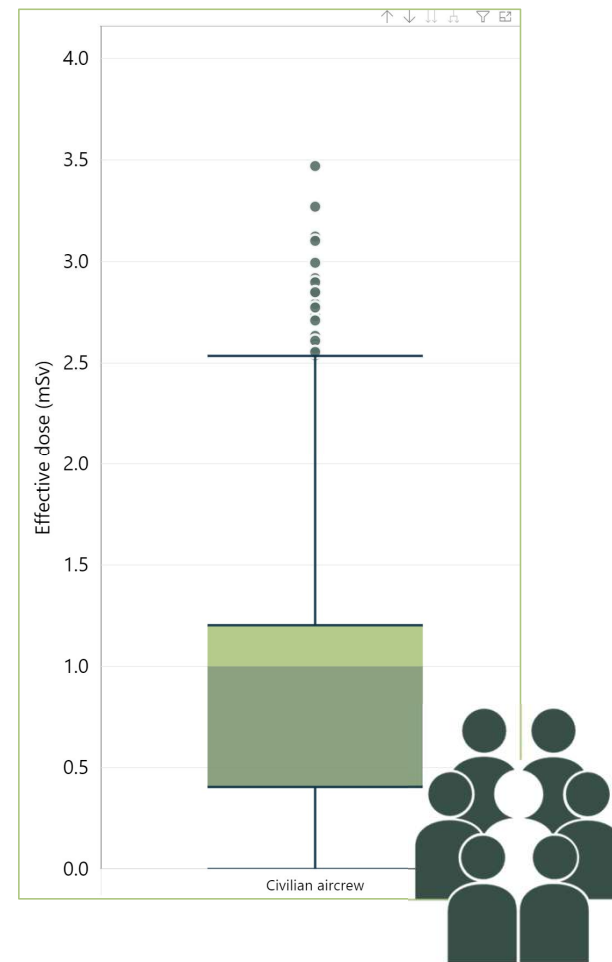
*Incomplete data

Doses in 2022

Activity sector: Natural*

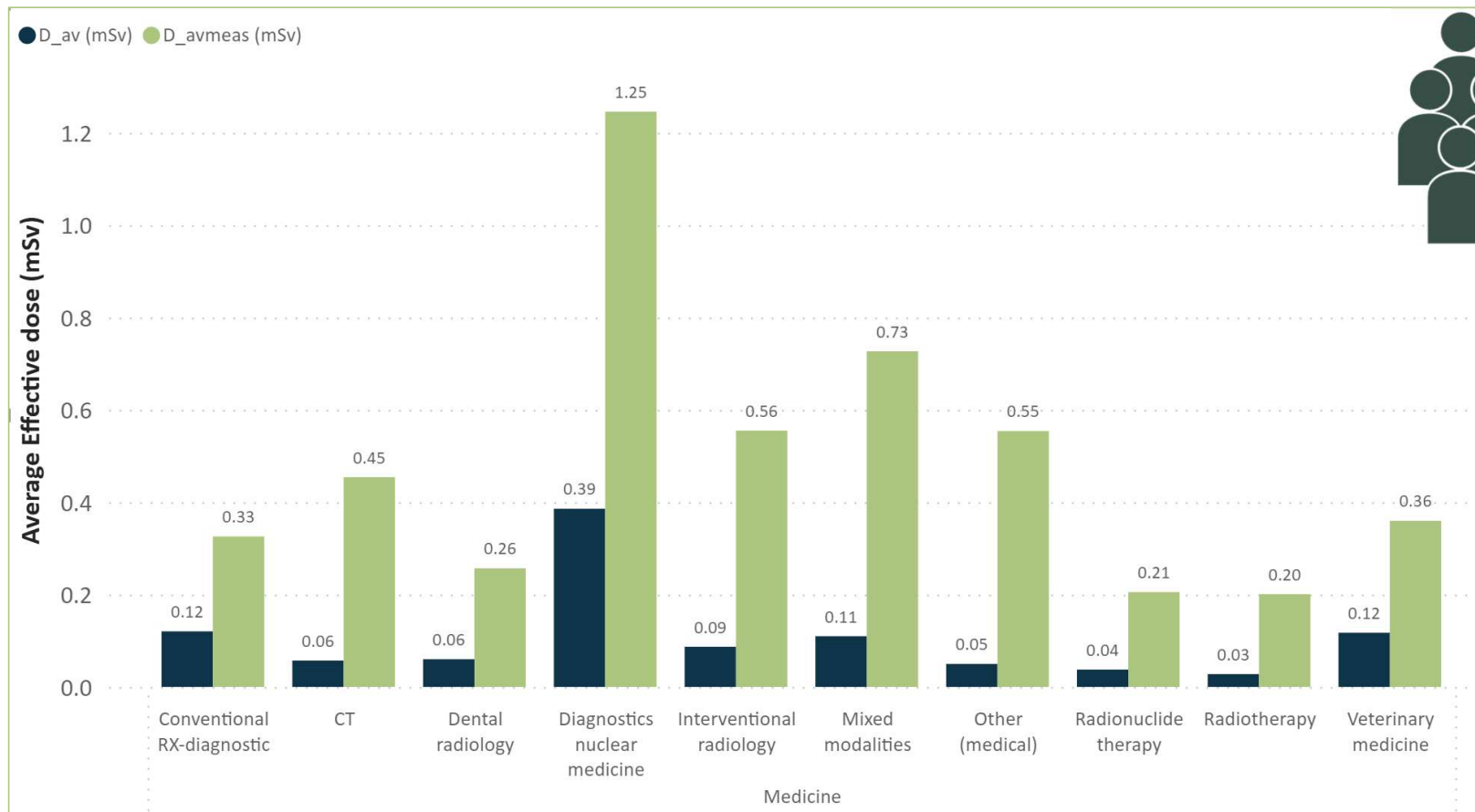


*Incomplete data

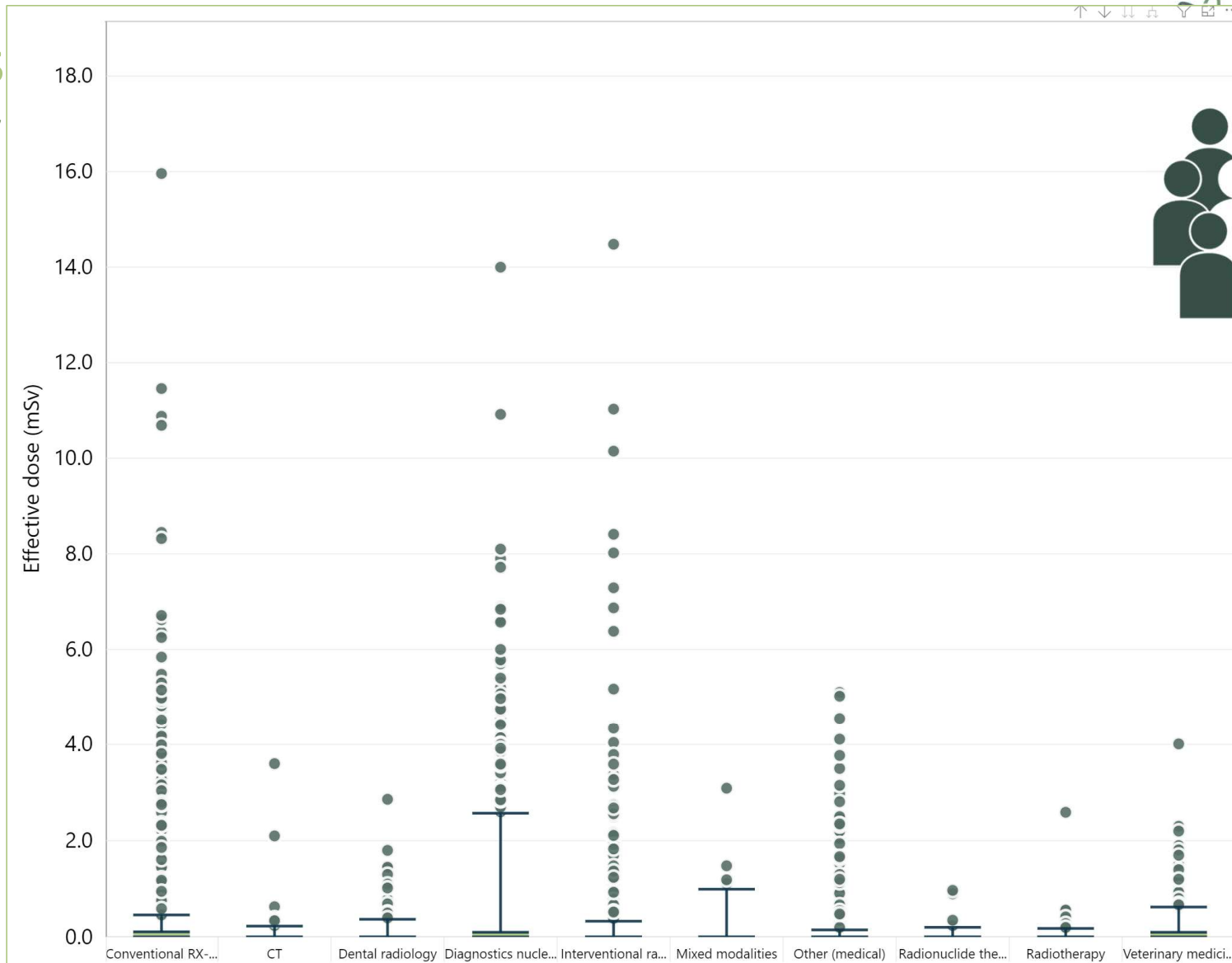


Doses in 2022

Activity sector: Medicine

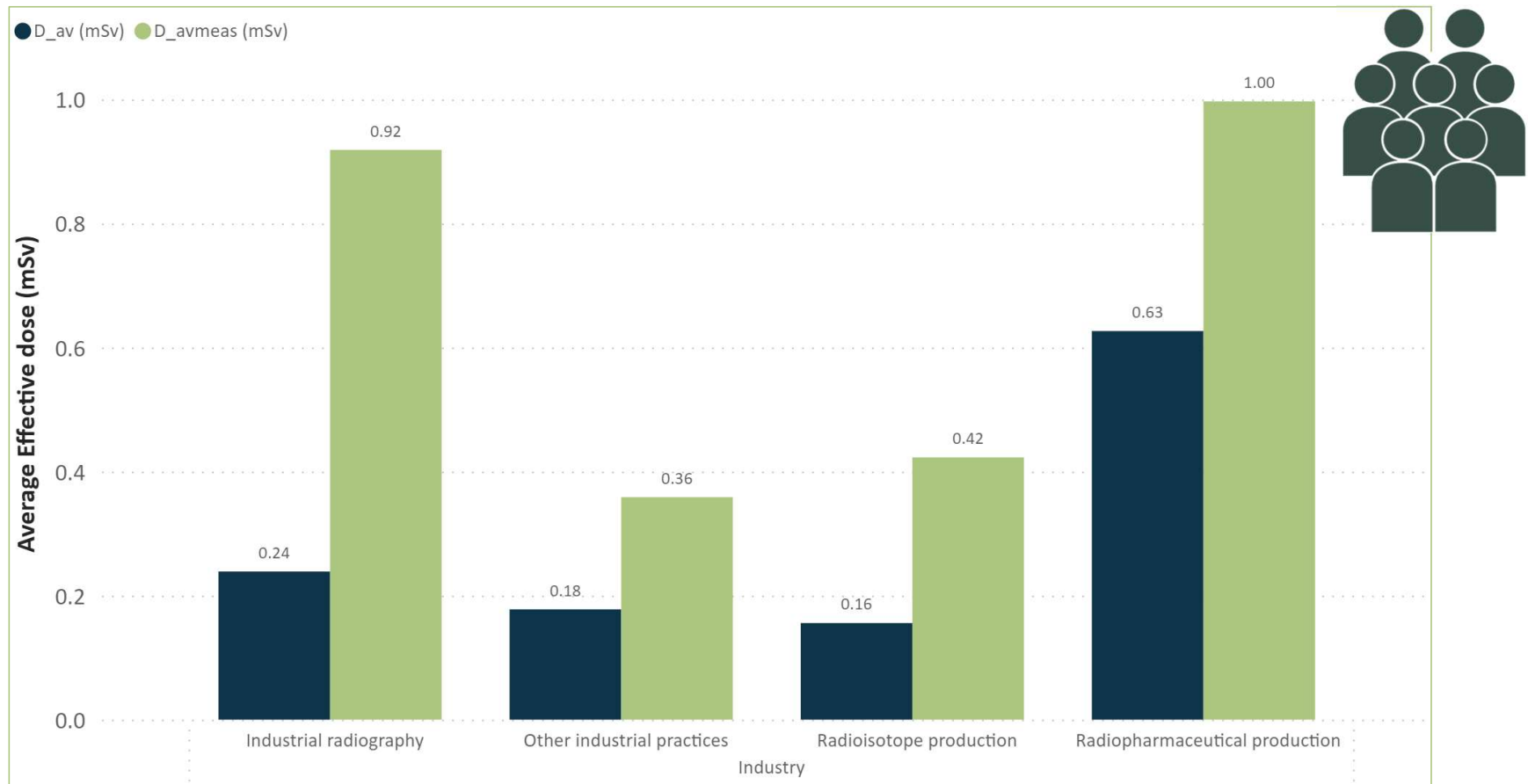


Doses Activity



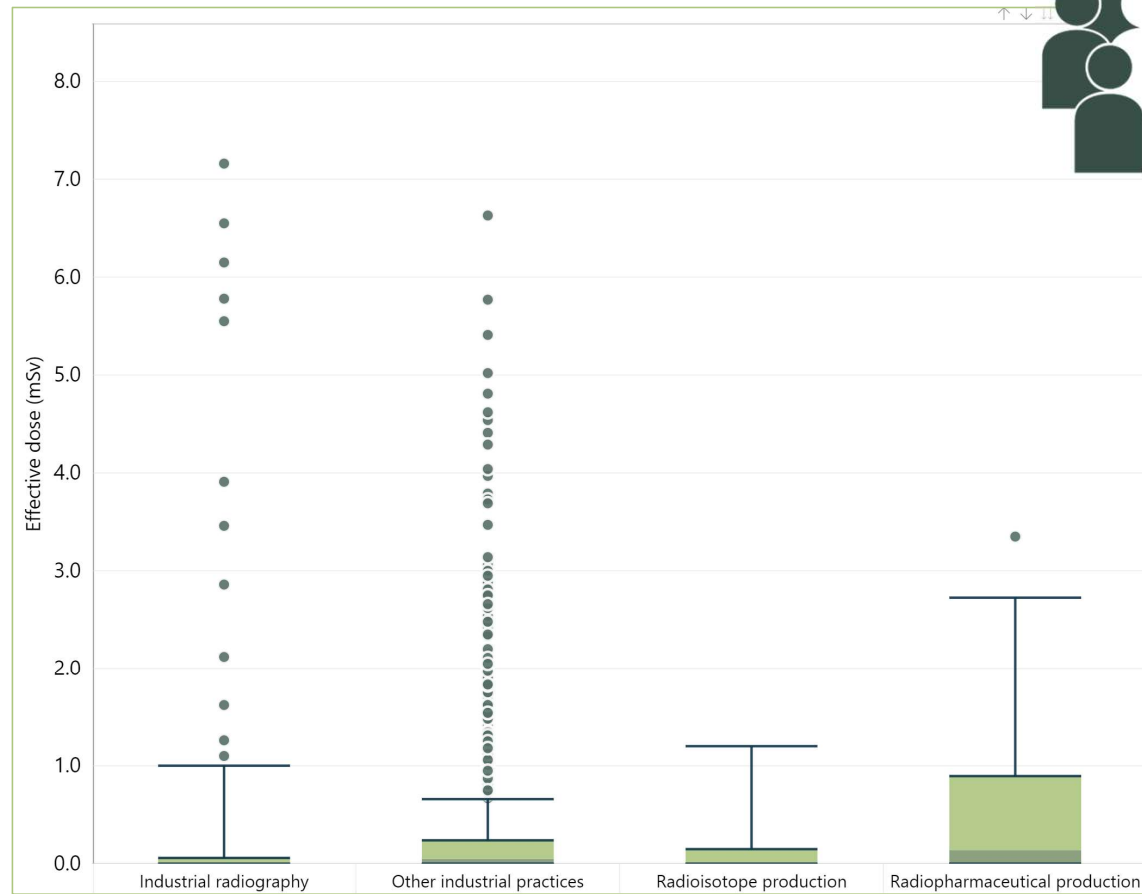
Doses in 2022

Activity sector: industry



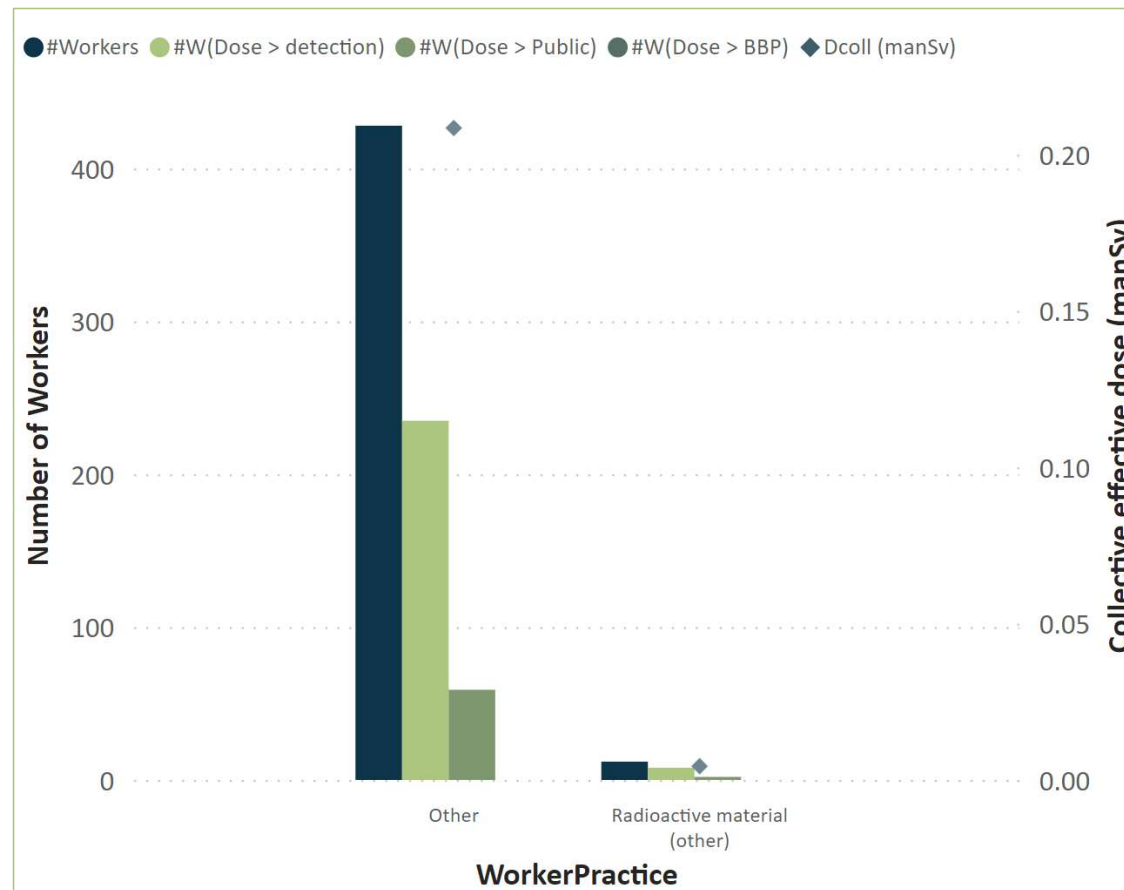
Doses in 2022

Activity sector: Industry



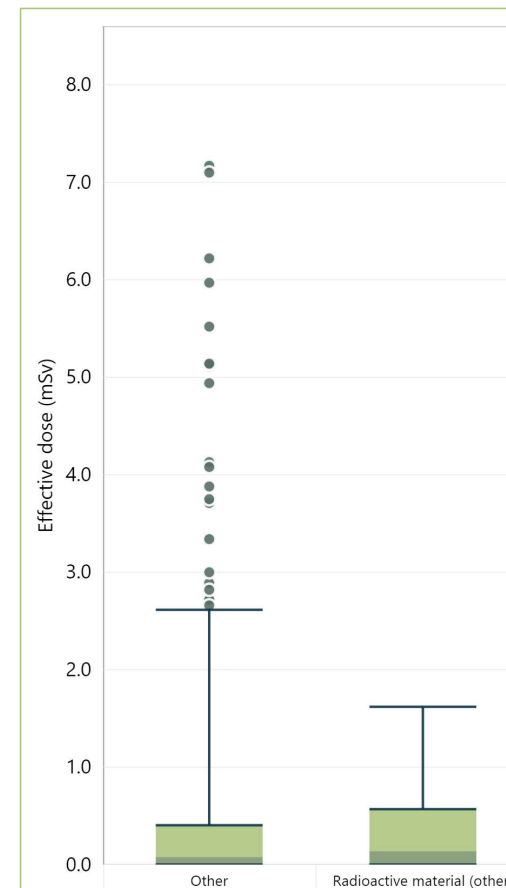
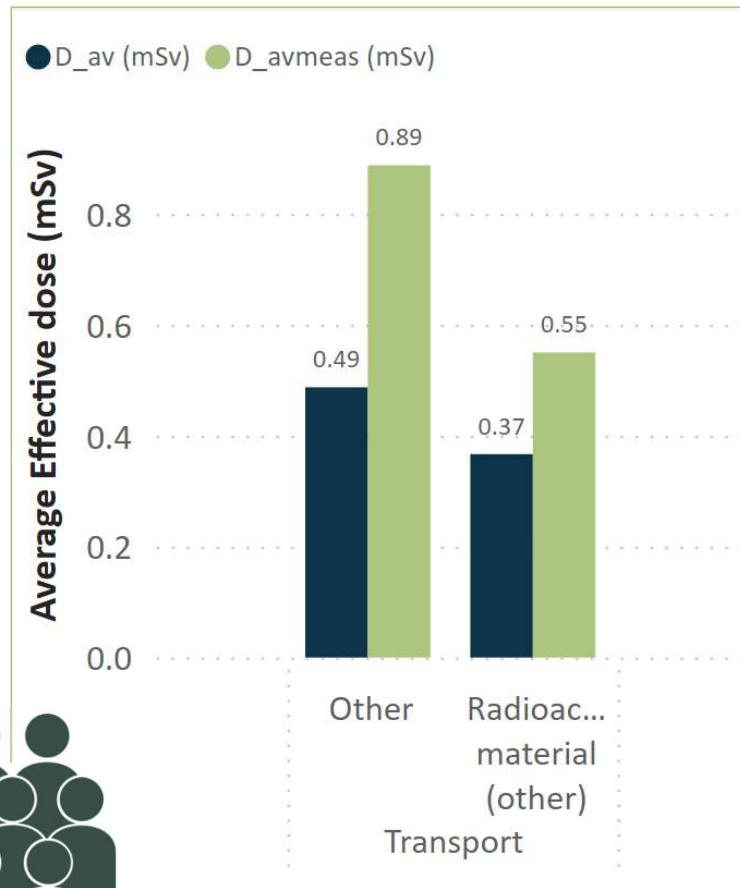
Doses in 2022

Activity sector: Transport



Doses in 2022

Activity sector: Transport

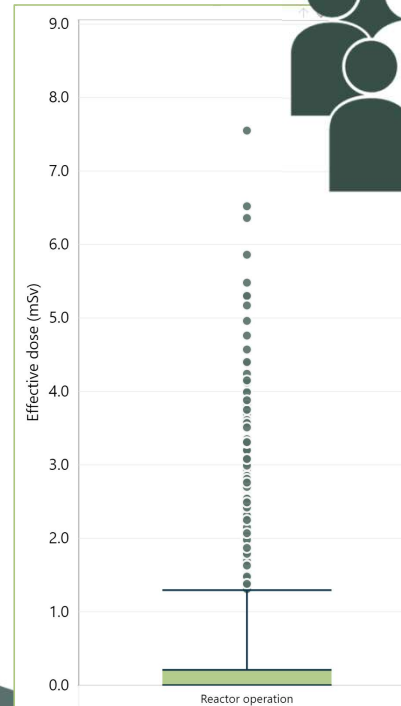


Doses in 2022: remarks

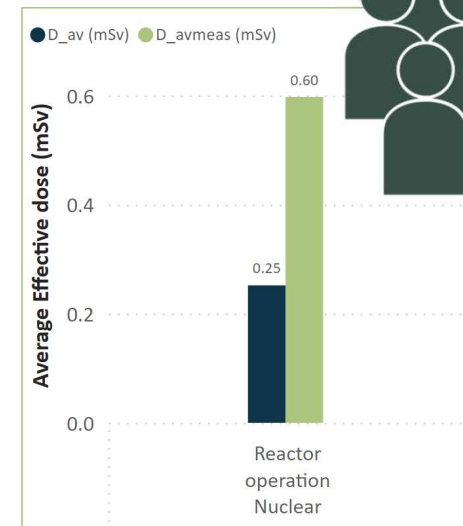
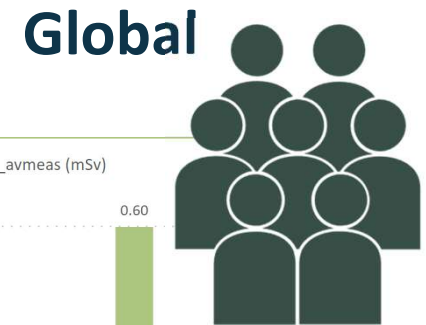
- Campaign to upload aircrew data
- Global information available
- Individual information
 - Comparison to 'peers'
 - Some sectors: very unlikely to have 0.00mSv/year



NDR-application:
<https://dxf.fanc.be/NDR>



vs.



Thank you



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