



**INTERNATIONAL SAKHAROV
ENVIRONMENTAL UNIVERSITY**



HARMONIZATION OF NATIONAL AND REGIONAL EDUCATION AND TRAINING IN RADIATION PROTECTION IN CASE OF BELARUS

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To put in consideration



- Short-term history: Why Belarus, Why ISEU
- New opportunities for co-operation
- Possible ways to realize

Short-term history: FSU

- In Former Soviet Union Radiation Protection had played a subsidiary role in nuclear and radiation technologies as the non-nuclear applications of ionizing radiation at all
- Chernobyl had switched attention of many of specialists only on environmental consequences and their impact on health



Short-term history: CIS

- New independent states had been appeared – lack of funds and experience
- the demand in application of radiation sources is increasing – versus lacks
- It was convenient for a long period of time to complain on Chernobyl disaster and, therefore, to appeal to the World Community to provide some help (Belarus, Ukraine, Russia to some extent)
- Other countries of FSU have been faced in front of multiple problems with organizing and maintenance of radiation protection system at all

Short-term history: CIS (c'd)

- Problem – training adequate specialists
- In lack of real financial support the looking through CIS bodies had shown that ISEU would interested much more than other ones
- It was convenient to nominate ISEU to be responsible for co-ordination in education on radiation protection among CIS



Short-term history: Belarus

- But real opportunity to respond on this challenge has appeared just now
- Do not loosing the Chernobyl problem out of the focus Belarus has turned now to developing the nuclear energy industry and to widen the use of radiation sources at all, especially in public health

Short-term history: EAES

- Nuclear renaissance has led to restoration of unified system of education and training in nuclear and radiation field in Russia – Federal Nuclear University – former MEPHI
- The International Nuclear Innovation Consortium between EAES countries had been created in 2008 by the initiative of MEFHI

Short-term history: Belarus

- ISEU in Belarus has focused training on nuclear and radiation safety – new speciality except former Radioecology
- Taking into account the formal status of ISEU in CIS it can be a platform to launch the harmonization in the field

Short-term history: ISEU - IAEA

- During the period in view ISEU starts to convert into Regional Training Centre on Radiation Protection and Safety of Radiation Sources
- There were 6 PGEC courses since 2001 that have provided the firm platform for E&T in RP in Belarus for the region



PGEC status in Belarus

- National programme of re-training – speciality **1-33 01 71 Radiation protection and safety of radiation sources** (6 month) with qualification “Radiation Protection Specialist”
- Introduced and recognized since 2006
- Licensed in ISEU since 2008



In years passed

No	Country	No of participants, year						Total
		2001	2002	2005	2006	2007	2008	
1	Azerbaijan	4		3	3		1	11
2	Armenia	1		1		1	1	4
3	Belarus			3	1	2	3	8
4	Bulgeria	2		1	1	1	1	6
5	Bosnia and Hertzegovina	1						1
6	Hungary		1					1
7	Georgia	2	2	1	1	1		7

In years passed (c'd)

No	Country	No of participants, year						Total
		2001	2002	2005	2006	2007	2008	
8	Kazakhstan	1	2	1	2	2	2	10
9	Kyrgyzstan				2	2	2	6
10	Latvia	1	3					4
11	Lithuania	2	3		1	1	1	8
12	Moldova	5	2	2	2	1	1	13
13	Russia			1	1	1		3

In years passed (c'd)

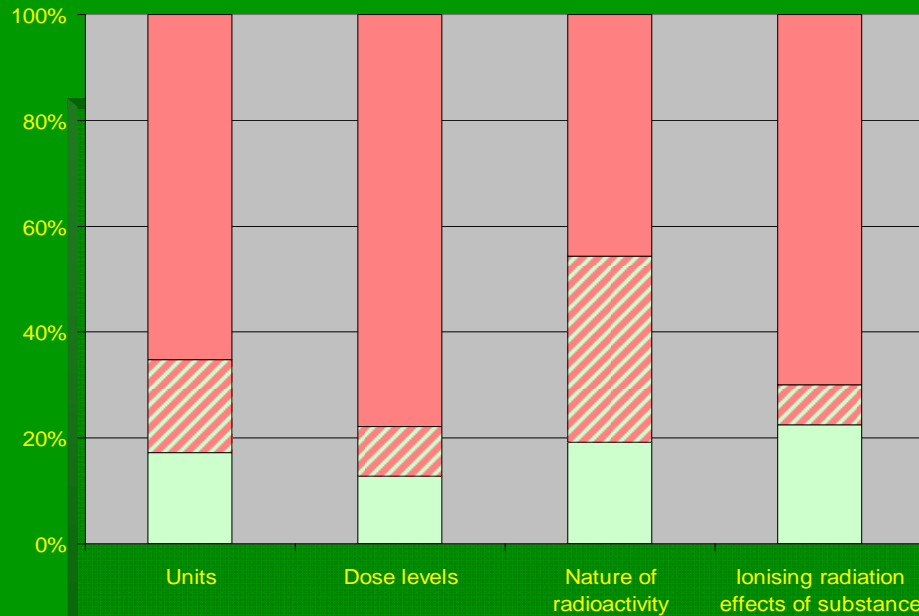
No	Country	No of participants, year						Total
		2001	2002	2005	2006	2007	2008	
14	Romania	3	1					4
15	Slovenia	1						1
16	Tajikistan		2	2		3	2	9
17	Uzbekistan	2		2	3	1		8
18	Ukraine			2	1	1	3	7
19	Estonia	1	2		1			4
	Total	26	18	19	19	17	17	116

Particular experience to conduct

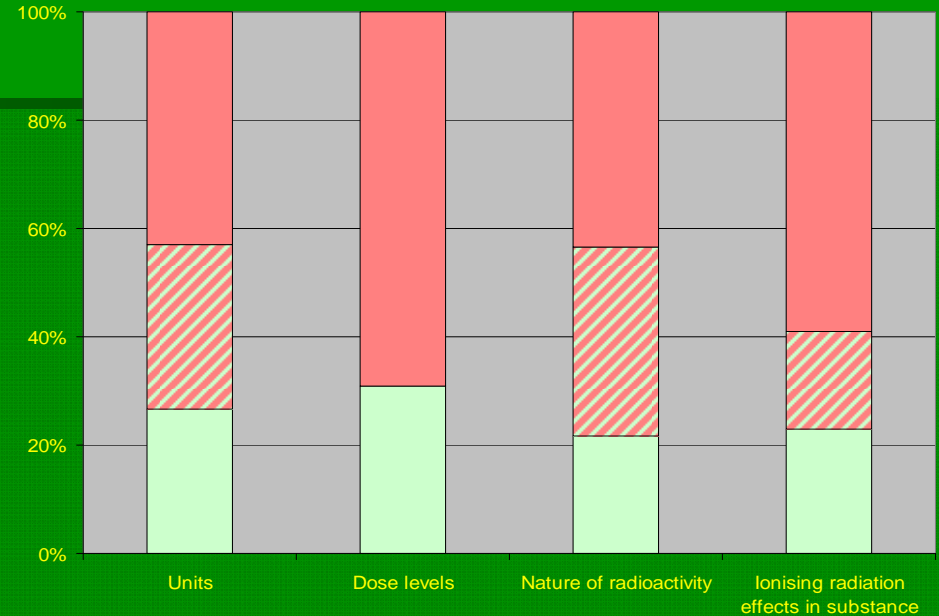
- Training material is based on the IAEA standard one and much developed
- Several topics are amended to meet needs of the region
- Preliminary and final quiz are applied
- Assessment tools – conventional + UniversTest

Univers Test: Preliminary Quiz at PGEC

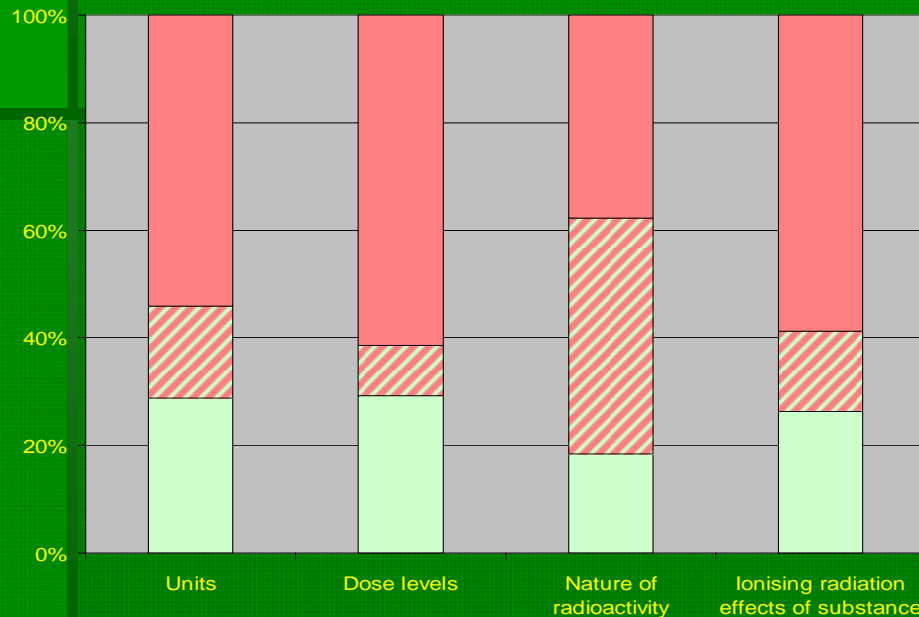
2001



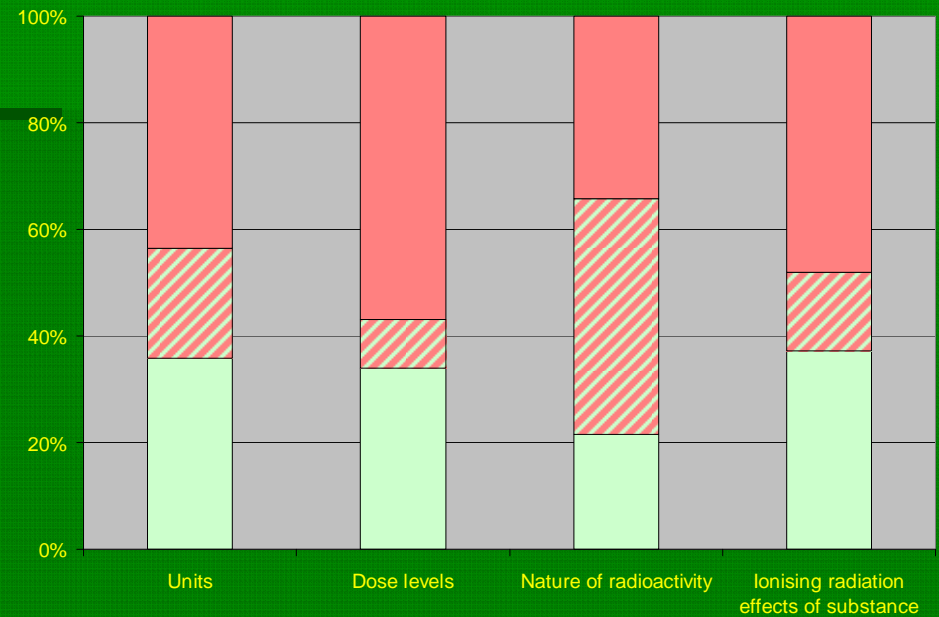
2004



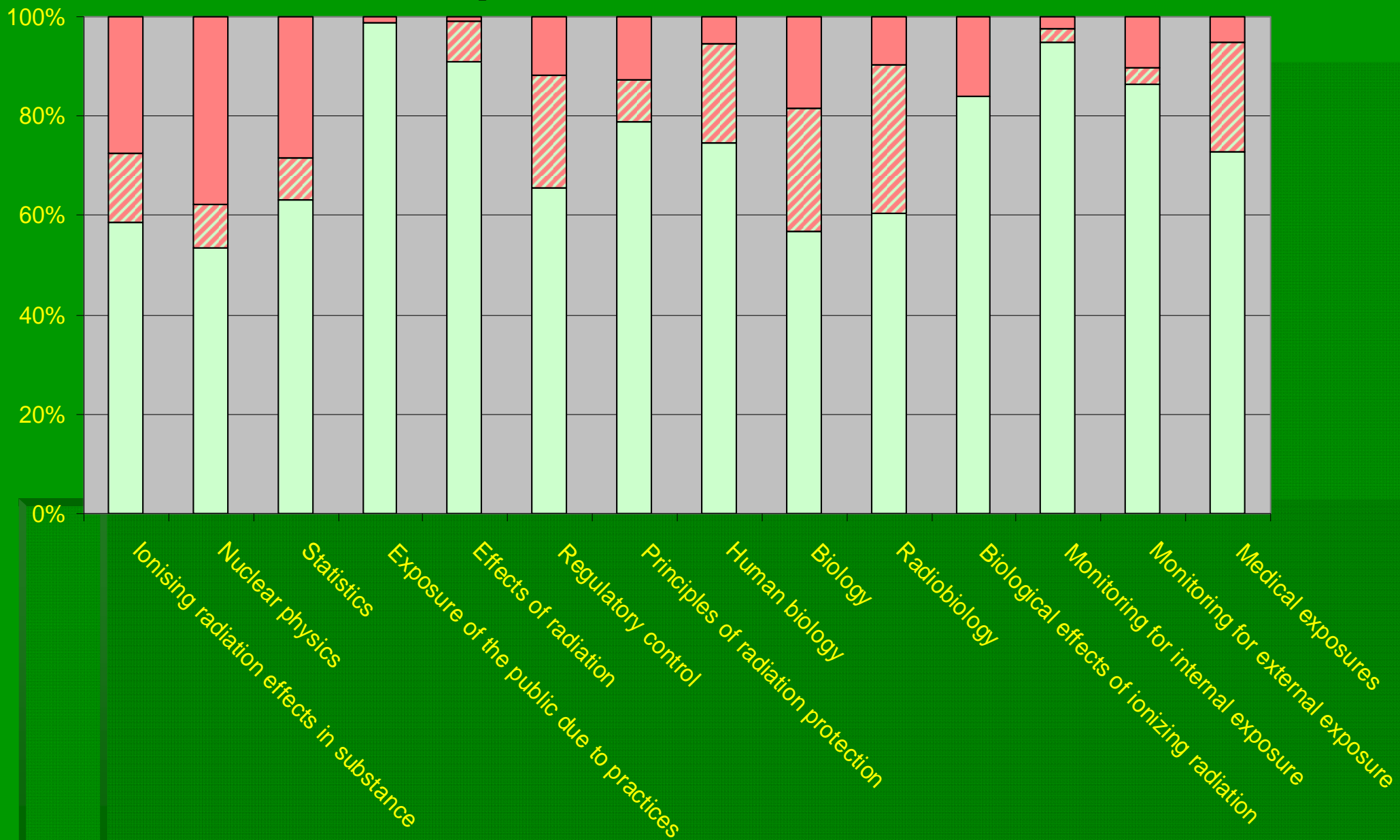
2006



2008



Final Results – Average for The Group



What to do

- to compare and harmonize the structure and content of training in RP
- to produce the description of a draft procedure of recognition diplomas
- to exchange by advanced teaching methodologies
- to be ready to provide to d- & e-learning
- etc.

Topics of interest

- 3 topics of interest for Belarus
 - Radiation, transport and waste safety
 - Nuclear safety
 - Nuclear security

Levels of Education and Training

- All levels appropriate, focused at tertiary one, as
 - Higher Education (academic)
 - Master Courses (academic)
 - Re-training courses (academic and professional training)
 - Specialized Training Courses (professional training)

**Are aimed to reach harmonization
in the region**

The possibilities in view

- ISEU can be a bridge to meet Western European and Russian approaches to E&T in RP to make them closer and even to harmonise
- The goal:
 - to achieve applicability of the RP workforce in the countries of EU and CIS
 - to put the best practices in RP in place via appropriate harmonized education and training
 - To assist new EU countries and the majority of CIS countries to establish a sustainable infrastructure of E&T in RP

Possible Counterparts to possible project(s)

- Strong university from a new EU country
- Strong partners from old EU members
- Strong partners from Russia
- ISEU, Belarus, bridging the gaps
- Several CIS universities and training centres (e.g. Kazakhstan, Uzbekistan, Tajikistan, Ukraine,?)

'Committed dose' from implementing project(s)

- Finding out the platform for uniform approach to professional requirements to RP staff in counterpart countries
- Harmonization of E&T approach:
 - **PRO**viding assurance of the same message to be delivered to the trainees
 - **PRO**ducing criteria for acceptance (adoption) diploma (certificates)
 - **PRO**spering competence of training personnel

Projects on what?

MC on R&N Safety

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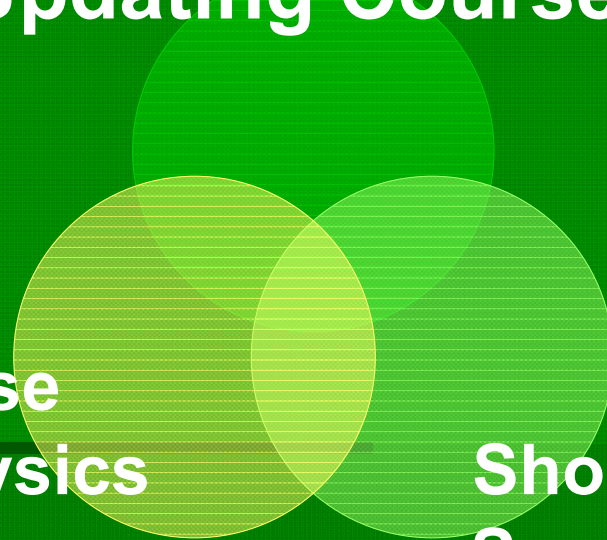
Updating Courses

**Master Course
on Medical Physics**

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Updating Courses

**Short time courses
Security of Sources**



Towards SWOT assessment

- 3 'PRO' are presented
- the 'CONTRA' to be taken into account
 - necessity to convince decision makers
 - organizational
 - lack of English
- How strong are they?

**WELCOME
TO TAKE YOUR PART!**





**THANK YOU FOR YOUR PATIENCE
AND ATTENTION!**