Survey on the implementation of the "justification", "optimisation" and "limitation of doses" radiological principles in national regulations in Europe

GEORGIA

1 The implementation of European Directives

1. *Since when have the European Directives 96/29 and 97/43 been implemented in your country?*

Unfortunately European Directives have not been implemented fully in legislation for radiation protection in Georgia.

2. *If they are not implemented, is it expected and when?*

Georgian legislation for radiation protection mainly based on IAEA BSS and ICRP recommendations. Frame law "On Nuclear and Radiation Safety" and Radiation Safety Limits RSL-2000 refers to BSS. It is supposed to implement the directives in new drafted laws: "On Transport of Radioactive Goods" and "On Radioactive Waste and Waste Storage". In close collaboration with EU experts a new TACIS project "Transfer of Western European Regulatory Methodology and Practices and Supply of equipment and software to the Nuclear Safety Authority of Georgia" is elaborated. The project aims to harmonize Georgian legislation with European. The project implementation is planned to begin in 2006.

2 Justification principle

1. *What is the exact wording of the justification principle in the Law?*

Frame law, article *5, paragraph.(d)* "No nuclear activity is allowed where the benefit to mankind and society does not exceed the presumed maximum damage caused by the activity"

2. *Which practices are explicitly named as unjustified or forbidden?*

Article *4, paragraph (b)* contains definition of "Nuclear and radiation-related activities". Justification principle defined by article *4, paragraph (d)* refers to this paragraph. RSL-2000 sets exclusion and exemption levels for ionization radiation and radioactive sources. Below the levels ionization radiation (as a natural radiation) is a free from regulation and accordingly unjustified.

3. *Which regulatory body(ies) is (are) responsible to determine if a practice is justified or not?*

According to Frame law (*article 8*) Nuclear and Radiation Safety Service of Ministry of Environment Protection and Natural Resources is defined as RB. Final conclusion for defining practise justification is belonged to his institute.

3 *Optimisation principle*

1. *Could you give is the exact wording (citation) of the optimisation principle (ALARA) as defined in the Law or national regulation?*

Frame law, *article 5, paragraph (i)*: "The number of persons exposed and personal radiation doses must be kept as low as possible, taking into account economic and social factors".

2. *Does the national regulation give a description on the practical way to implement the optimisation principle (e.g. need to perform dose prediction and to establish dose objectives, need to perform real-time dose follow-up, need to write feedback experience report, etc)?*

The regulations are under elaboration.

3. *Does it exist a specific guidance to help operators / end-users in implementing the optimisation principle?*

Specific guidance does not exist still.

4 Dose limits

1. *.Can you provide us with present regulatory dose limits established to reduce the probability of occurrence of stochastic effects?*

According to RSL-2000 occupational personnel is divided into two groups: (a) personnel having direct contact with sources of ionization radiation and (b) personnel not having direct contact with sources of ionization radiation. Dose limits are as following:

Dose type	Occupation personnel		Public
	Group (a)	Group (b)	
Effective dose	20 mSv per year averaged over five sensitive years. Not more 50 mSv in any single year	5 mSv per year averaged over five sensitive years. Not more 12.5 mSv in any single year	1 mSv per year averaged over five sensitive years. Not more 5 mSv in any single year
Equivalent dose per year			
Eye lens	150 mSv	125 mSv	15 mSv
Skin	500 mSv	125 mSv	50 mSv
Extremities	500 mSv	125 mSv	50 mSv

2. *What are the legal dose limits to prevent public and workers from deterministic health effects?*

RSL-2000 just only established dose limits for rescuers at emergency situation. the dose limits are the same as is in BSS : maximum – 500 mSv for activity aiming life rescuing and minimum to occupation exposure dose limit.

5 Dose constraints

1. *Here again, could you give is the exact wording (citation) of the Law or regulations where the concept of dose constraint is mentioned.*

RSL-2000 just only established worker and public exposure from radon and defined guidance levels same as is in BSS.

2. *In which domain (e.g. public dose, occupational dose, patient dose, etc) and by whom (regulatory body, operators, etc) are dose constraints implemented in your country?*

Implementation of all type of doses should be supported by RB.

3. *What are the corresponding values and rationales behind these values?*

The effective dose rate from Radon-226 for workers should not exceed 2.5 μSv/h and for public Radon concentration should not exceed 200 Bq/m^3.

4. *What is(are) the status(es) of dose constraint(s)?*

Values are established by RSL-2000 is obligatory to satisfy for all users of sources of ionization radiation. RB can set requirements for dose constraint as a condition of issuing of license, but special normative acts as a legal basement for this decision should be elaborated.

5. *What is effectively done if a constraint is exceeded?*

It is considered as an infringement of license condition. Systematic exceeding of established constraint should provoke license revoking.