Evaluation of Member States' strategies and plans for the transposition of the Basic Safety Standards Directive (Council Directive 2013/59/EURATOM)

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The new Basic Safety Standards Directive (BSS Directive) entered into force on 6 February 2014 and requires that European Union Member States (MS) bring into force the laws, regulations and administrative provisions necessary to comply with the BSS Directive within four years. Considering that the transposition and implementation of this comprehensive piece of legislation constitutes a major challenge for the respective national legislators and regulators in MS, Candidate States, and EFTA States, the European Commission (EC) decided to organise actions and activities to monitor the transposition of the BSS Directive into MS' national legislation and to support its implementation.
RISKAUDIT IRSN/GRS International bringing together a consortium consisting of the French, German and Belgium technical support organisations (IRSN, GRS and Bel V) was entrusted with the implementation of EC's actions and initiatives. The objective of the project is to evaluate MS' strategies and plans for the transposition and implementation of the BSS Directive.
The consortium developed surveys to collect information on MS' strategies and plans for the transposition of the BSS Directive. The survey results were analysed and presented at workshops as a basis to discuss MS' strategies and plans for the transposition of the BSS Directive, to highlight good practices and to identify issues, which need further attention and activities.
The paper highlights findings of the surveys on the MS' strategies and plans for the transposition of the BSS Directive and will point out some aspects that deem challenging to transpose, as discussed during the workshops.
The presented findings are preliminary reflections on an ongoing contract between the EC and RISKAUDIT IRSN/GRS international (Contract: No. ENER/2015/NUCL/SI2.701749), which have been produced exclusively by the contractor. Any opinions expressed/analysis of the findings are those of the contractor and do not represent the contracting authority's official position.

The initial survey revealed that as of December 2015 the degree of achievement was quite heterogeneous among the different countries (Figures 1 and 2 hereafter).

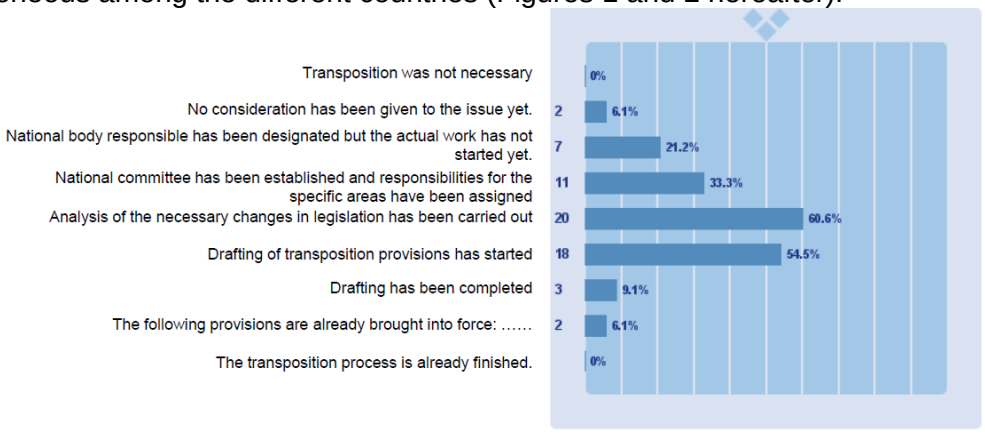

Figure 1: Stages of achievement of the transposition of the BSS Directive

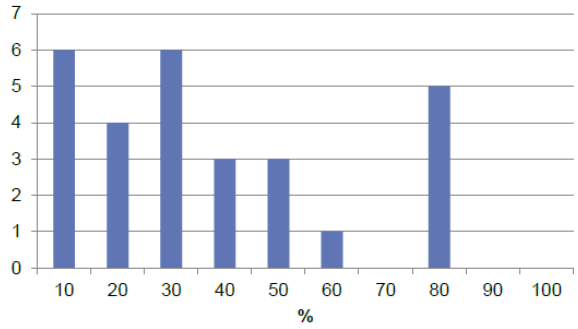

Figure 2: Average percentage of achievement of the transposition of the BSS Directive and number of countries concerned

Some MS explained that the transposition of the BSS Directive into their national legislation requires a time consuming legislative process. It has been necessary to adopt a new Radiation Act or Radiation Decree and some specific decrees and orders of the regulatory body and thus, the approval process at governmental level may delay the transposition.
The workshop discussions led to a decision on the topics to be covered during the three remaining topical workshops, apart from the topical workshop on emergency preparedness and response (EP&R), which was agreed on during the inception meeting of the project, being:

1. NORM, radon, building material
2. Reference levels, dose constraints
3. Regulatory requirements and infrastructure (authorities, graded approach, education and training…)

During the topical workshop on EP&R it was stated that the transposition process of EP&R related provisions is progressing in all MS. It is expected that the implementation of the BSS Directive into national regulations will be achieved by 6 February 2018. Nevertheless, the Directive requires cooperation amongst MS, for addressing emergencies that may affect other MS, and there is a lack of harmonisation of EP&R measures especially in case of a nuclear accident affecting neighbouring countries. That concerns the harmonisation of countermeasures for both the early phase after a severe accident (within some hours) and also in the intermediate period. It was highlighted that the HERCA-WENRA approach for better cross-border coordination of protective actions during the early phase of a nuclear accident is intended to be applied by all MS.

Furthermore, the participants stated that for food and feed maximum contamination levels for its international trade already exist since their implementation after the Chernobyl accident. On the other hand, for non-food related articles or equipment, no harmonised levels in terms of surface contamination or activity concentration have been agreed among MS.
It is very important for a coherent response following a severe nuclear accident to achieve a better consistency in EP&R with the involvement of expert groups, civil society, and other stakeholders. The dialog with MS is ongoing where the transposition strategies, plans and problem areas have been identified. The next step will be focused on the implementation of the BSS Directive
The contractor's recommendations from the topical workshop on EP&R were:

- The information exchange between MS as well as between MS and EC should continue to support the ongoing national transposition process.
- Cooperation between MS on arrangements for emergencies should be emphasized because currently each country makes separate arrangements. ENSREG is in the process of reviewing the situation of involvement of civil protection services in national EP&R arrangements, and their review should be taken into account to help a process for better integration of all parties involved.

- In case of a cross-border nuclear accident, all countries are fully sovereign in preparing for the emergency situation. Consequently, the types of protective actions, criteria for intervention levels for introducing protective actions, operational intervention levels, and methods for assessing source terms are national responsibilities, but which should be harmonised as much as possible at the regional level.
- Regarding cross-border protective actions a more pragmatic approach is necessary with focus on:
    - Alignment of reference levels,
    - Common operational intervention levels, emergency action levels and observables as trigger levels for specific protective actions,
    - Consideration of monitoring strategies/concepts and “general principles” for the extension of planning zones in response.
- MS should be aware of specific transboundary issues related to the handling of contaminated non-food products which has not been addressed yet from a regulatory point of view. This topic should be considered for further common approaches through guidance, recommendations or regulations.
- Nuclear safety authorities should continue to promote compatible response arrangements and protection strategies in the EU, in view of the need under the nuclear safety directive for consistency and continuity between the on-site EP&R arrangements and those under the BSS Directive.
- HERCA initiatives and the EC initiatives related to EP&R issues could be coordinated in order to avoid, as much as possible, the duplication of work.
- There is a need for more detailed discussions and guidance regarding transition from emergency exposure to an existing exposure situation. A strategy for this phase should be developed and all the authorities and stakeholders should be involved. Further work on this issue is on-going at the international level.
- There was reference to the obligation borne by MS to notify draft legislation to the EC according to the Euratom Treaty Article 33 and the subsequent 3 months period for the Commission to issue recommendations if necessary. MS timing to prepare their final transposing measures should take account of this requirement.

During topical workshop on NORM It was stated that the transposition process of NORM, radon, and building materials related provisions is progressing in all MS. It is expected that the implementation of the BSS Directive into national regulations will be achieved by 6 February 2018. Nevertheless, there is a need for further guidance for the transposition of NORM, radon and building materials related issues documented below the legislative level.
That concerns e.g.:

- The practical use of clearance/exemption levels in a NORM context,
- The guidance on establishing criteria and limits for discharge of NORM, and
- A methodology for the dose assessment to the public from authorised NORM practices including the definition/selection of exposure scenarios.

Regarding building materials guidance is also needed for:

- The implementation of a sound dose assessment methodology,
- Of sampling and measurement strategies, and
- On the development of a common understanding for imported building materials.

Regarding the establishment of reference levels for radon in public buildings and at workplaces, the recommended value of 300 Bq/m3 will be transposed into national regulation in most countries. There is an urgent need to inform the public on planned actions at an early stage for it to become aware of the risk. For measures to minimise or prevent the ingress of radon into buildings, training for architects is necessary, as they are often not fully aware of the public health risk regarding radon.

During the topical workshop on reference levels and dose constraints the discussions concerned the following issues:

- Dose constraints for occupational exposure,
- Dose constraints for the public,
- MS strategies for dose constraints for carers, comforters, volunteers in (bio-)medical research,
- MS strategies for dose constraints for non-medical imaging.
- MS strategies for reference levels for existing exposure situations,
- MS strategies for reference levels for emergency exposure situations,
- Strategies for the transition from emergency exposure situations to existing exposure situations,
- Import of contaminated products.

During the topical workshop on regulatory requirements and infrastructure the following issues were discussed:
Concerning justification, it was discussed, which type of consumer products fall under these requirements and which restrictions might apply. The process of justification in the MS was discussed and a need for further information exchange recognised.
With respect to competent authorities, it was discussed whether or not the regulatory authorities have adequate resources and skills to fulfil their tasks.
The possibilities to transparently publish the results of inspections were discussed and whether this transparency has consequences for the level of detail of the inspection reports.
Within the area of the graded approach, the meaning of moderate amounts of radioactive material was discussed.
It was discussed whether the provisions of the BSS Directive concerning the notification of workplaces also apply to practices dealing with NORM. Also the International Commission on Radiological Protection (ICRP) is expected to publish new dose coefficients for radon still in2017, MS stated that this might be too late to be considered in the transposition process.
Criteria for the registration were briefly discussed as well as the meaning of significant amounts of discharges needing licensing.
Clearance of NORM residues was discussed, as well as possibilities to track specific cleared materials.
With respect to the recognition of RPE, three elements, i.e. education, training, and expertise were highlighted. It was pointed out that an RPO needs to be provided with means to fulfil his/her tasks, which might be easier if the position is within the undertaking.