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The range of nuclear installations regulated by ASN is one of the world's largest and most diverse. ASN therefore devotes considerable efforts to international relations with its foreign counterparts.

This international activity is carried out within an explicit legal framework, since article 9 of the TSN Act states that "The Nuclear Safety Authority sends the Government its proposals to define the French position in international negotiations in the fields of its competence" and that "it participates, on request by the Government, in the French representation in the bodies of international organisations and of the European Community competent in these fields". Finally, the article states that "To implement international agreements or European Union regulations relative to radiological emergency situations, the Nuclear Safety Authority is empowered to warn and inform the authorities of third States or to receive their warnings and information". These legislative arrangements underpin the legitimacy of ASN's international actions.

ASN is thus required to devote considerable resources to cooperative work, both in a multilateral and EU context, and as part of bilateral agreements with its foreign counterparts, with the aim of contributing to strengthening the culture of safety and radiation protection around the world and of becoming recognised as an "international benchmark".

1 ASN OBJECTIVES IN EUROPE AND WORLDWIDE

1 Action in Europe

Europe is the main focus of international action by ASN, which thus aims to contribute to building a Europe that is at the forefront of nuclear safety, the safe management of waste and spent fuel and radiation protection.

As a result of the work of the Western European Nuclear Regulators' Association (WENRA), an informal club created in 1999 at the initiative of the ASN Chair, the safety rules for reactors operating in Europe should become effectively harmonised in 2011. In 2010, WENRA also reached an important consensus on safety objectives for new reactors (see point 2|1|5).

In 2008, ENSREG (European Nuclear Safety Regulator Group, previously known as the High-Level Group - HLG), comprising the heads of the European Union's nuclear regulators, was created at the initiative of the European Council in March 2007. Its work, notably, opened the way for the adoption of a directive on nuclear safety, on 25 June. ENSREG has also worked on a proposed directive on the management of waste and spent fuel; the results have been forwarded to the European Commission and, at the time of writing, the directive is being examined by the EU Council of Ministers.

In the field of radiation protection, the work done by the Heads of European Radiation Control Authorities (HERCA) has strengthened European cooperation. Significant progress has been made by this committee and its working groups since it was created in 2007.

In the European bilateral context, ASN strengthened its ties with countries which announced their intention of building new plants in order to provide safety and radiation protection assistance with future decisions and those already taken. ASN therefore makes efforts to share its experience of licensing new EPR type reactors with the nuclear regulators of such countries and to support countries that do not yet have such a regulator during the essential process of creating one. It maintains close ties with a large number of countries, in particular neighbouring countries.

1 2 Harmonisation of nuclear safety worldwide

Outside Europe, a large number of initiatives have been taken to harmonise nuclear safety practices and regulation.

Within the International Atomic Energy Agency (IAEA), ASN plays an active part in the work of the Commission on Safety Standards (CSS) which drafts international standards for the safety of nuclear installations, waste management, the transport of radioactive materials and radiation protection. Although not legally binding, these standards do constitute an international reference, including in Europe.

The Multinational Design Evaluation Programme (MDEP) was launched several years ago by the U.S. Nuclear Regulatory Commission (NRC) and ASN, with the aim of joint evaluation of new reactor design. It then expanded its scope to take in numerous partners from around the world. The initiative eventually aims to harmonise the safety objectives, the codes and the standards associated with the safety analysis of new reactors. Its secretariat is hosted by the OECD's Nuclear Energy Agency (NEA).

3 Assistance requests

In 2008, the ASN Commission defined the policy of the French nuclear regulator with regard to the assistance requests it receives. ASN analyses the nuclear safety situation in each country that contacts it for assistance with the regulatory infrastructure and the regulation of safety.

Table 1: table of areas of competence of the main civil nuclear activity regulating authorities

	Status		Activities							
	٨٠٠٠٠٠	Coursement	-	Safety of civil installations	Radiation protection		Safety (protection against vandalism and malicious acts)			
Country/ Safety authority	tration	agency	agency		BNI	Other installations	Patients	Sources	Nuclear materials	safety
Europe										
Germany/ BMU + Länder	•				•	•	•	•	•	•
Belgium/ AFCN		•		•	•	•	•	•	•	•
Spain/ CSN			•	•	•	•	•	•	•	•
Finland/ STUK		•		•	•	•	•	•		•
France/ ASN			•	•	•	•	•	•***		•
United Kingdom/ HSE/ND		•		•	•			•	•	•
Sweden/ SSM		•		•	•	•	•	•	•	•
Switzerland/ ENSI			•	•	•				•	•
Other countries										
Canada/ CCSN			•	•	•	•	•	•	•	•
China/ NNSA	•			•	•	•		•	•	•
Korea/ MOST	•			•	•	•			•	•
United States/ NRC			•	•	•	•	•	•	•	** •
India/ AERB		•		•	•	•	•	•	•	•
Japan/ NISA + NSC + MEXT	•			•	•	•	•	•	•	
Russia/ Rostekhnadzor	•			•	•			•	•	•

This table gives a schematic, simplified representation of ASN's current knowledge of the main areas of competence of the entities (administration, government agency or independent agency) responsible for regulating nuclear activities in the world's leading nuclear countries.

**Domestic transport only.

*** The certification process is underway.



In 2010, ASN received numerous requests from countries engaging for the first time in a nuclear power programme as well as from countries wishing to know what actions would be necessary in the area of safety if they were to choose this energy source. ASN, in line with its policy, responds to requests as part of its bilateral actions or via instruments that are either European (EU Instrument for Nuclear Safety Co-operation) or international (IAEA's Regulatory Cooperation Forum). The purpose of this cooperation is to enable the countries in question to acquire the independence and the safety and transparency culture essential to a national system of nuclear safety and radiation protection regulation that will guarantee effective protection of people and of the environment.

2 EU AND MULTILATERAL RELATIONS

2 European Union

The Treaty setting up the European atomic energy community (Euratom) and the laws derived from it, together with the work of WENRA and HERCA, today place the European Union at the very heart of regulatory work on nuclear safety and radiation protection. The European Union is therefore one of ASN's main priorities, which is why, in 2010, ASN dedicated the 189th issue of its *Contrôle* review to the creation of a European arena for nuclear safety and radiation protection.

2 | 1 | 1 The Euratom Treaty

The Euratom Treaty enabled harmonised European development of a strict system of regulation of nuclear safety (chapter 7) and radiation protection (chapter 3). In an Order of 10 December 2002 (aff. C-29/99 Commission of European Communities against Council of the European Union), the Court of Justice, ruling that no artificial boundary could be established between radiation protection, covered by chapter 3, and nuclear safety, recognised the principle of the existence of community competence in the field of nuclear safety, as well as in that of management of radioactive waste and of spent fuel. ASN's actions at European level fit firmly into the framework of development of this new area of European Community competence.

2 | 1 | 2 The European Nuclear Safety Regulators' Group

At the invitation of the European Council in March 2007, a "High-Level Group" (HLG) on nuclear safety and waste management, subsequently renamed ENSREG, was created. ASN, which believes that nuclear safety principles and standards must be harmonised throughout Europe, is participating actively in this work in order to strengthen the extent to which nuclear safety and the safe management of radioactive waste and of spent fuel are taken into account in Europe. The ASN Chairman is a member of ENSREG. Three working groups were created, devoted to the safety of installations, to the safe management of radioactive waste and of spent fuel, and to



Publication of the European Commission on 50 years of the Euratom Treaty

transparency in the nuclear sector. ASN occupies the position of Vice-Chair of the "safety of installations" group.

ENSREG was a key player in Europe's adoption of a first directive on safety of nuclear installations. The consensus arrived at by its members regarding the broad outline of such legislation helped to relieve the tensions that arose from an initial Commission proposal in 2003 and to achieving passing of the directive in June 2009.

ENSREG met three times in 2010 discussing, in particular, the content of the directive on management of waste and spent fuels. It also initiated consideration of the organisation of the first European Conference on nuclear safety, to be held in Brussels in June 2011. The Chair of ASN, who first suggested such a conference, is also involved in the discussions on the future "waste" directive.

2113 The European Directive on the safety of nuclear installations

The debate initiated in November 2008, under the French presidency of the EU, on a directive "establishing a Community framework for the nuclear safety of nuclear installations" (2009/71/EURATOM) continued until 25 June 2009, when the Czech presidency of the EU concluded the debate on this important directive. The EU therefore now has a regulatory framework for nuclear safety enshrined in community law. In particular, the directive obliges all EU member States (present and future) to develop a legislative framework for nuclear safety (Article 4) and to set up an independent regulatory authority (Article 5). It also defines the obligations of nuclear installation licensees (article 6), stresses the question of the availability of skills and expertise (article 7) and public information (article 8). It further makes provision for a "peer review" system (article 9) which, in accordance with the principles of nuclear safety, allows "continuous improvement" of practices in this field.

Although it takes the form of a framework directive laying down the broad outlines of nuclear safety, this regulatory text is of great importance in that it finally puts an end to an absurd situation in which there was no European legislation on nuclear safety even though the EU, with the Euratom Treaty, has enjoyed the most advanced nuclear legislation for more than 50 years and counts nearly 150 nuclear reactors within the borders of its 27 member states. The text has the additional advantage of making its requirements legally binding under the legislation of the 27 member states. Its transposition into law should be completed in July 2011.

ASN believes that the regulatory framework should now be completed by a European directive on management of waste and spent fuel. The Commission adopted a draft directive on this subject in November 2010. This directive, being discussed by the Council of Ministers, should have similar aims: to establish the general policy framework for management of waste and spent fuel in the 27 member states, notably requesting that each of them develop and adopt a national plan for management of nuclear waste and materials (see box).

2 |1 |4 The European working groups

ASN also participates in the work of the Euratom Treaty committees and working groups:

- scientific and technical committee (STC);

Towards a European directive on the management of waste and spent fuel

On 3 November 2010, the European Commission officially adopted a draft directive on the management of radioactive waste and spent fuel. The document will now be submitted to the EU Council of Ministers and to the European Parliament, which will study the terms of the proposal.

In line with the Commission, ASN is of the opinion that there is a need to establish a European regulatory framework devoted specifically to the management of radioactive waste and spent fuels. It therefore supports the steps undertaken at the European Community level aimed at the adoption of a directive in this area.

ASN has been closely involved in the preparatory work carried out within the European Nuclear Safety Regulators' Group (ENSREG) and which led to the proposal to the Commission of a draft directive on the management of radioactive waste and spent fuel.

ASN feels particularly that the setting up in each Member State of a competent regulatory authority in the field of safe management of waste and spent fuel, with sufficient financial and human resources to achieve its ends, would be an important step forward. Similarly, the conditions relating to transparency and peer review, and to the establishing of a national radioactive waste management plan would represent progress for the EU. On this latter point, ASN, which participates in the drafting of France's national plan for radioactive waste and spent fuel management (PNGMDR), is of the opinion that the introduction of such a plan in each Member State would be a major development.

The 27 Member States and European Parliament are now beginning negotiations on the text in Brussels. ASN, whose competence in the area of safety of management of waste and spent fuel is recognised by the Act of 28 June 2006 (known as the "Waste" Act), will follow developments closely.

- Article 31 experts group (basic radiation protection standards);
- Article 35 experts group (checking and monitoring radioactivity in the environment);
- Article 36 experts group (information concerning regulation of radioactivity in the environment);
- Article 37 experts group (notifications concerning radioactive effluent discharges).

In 2010, ASN's experts were particularly involved in the activities of the Article 31 Group of which the expert members worked actively on the future "basic standards" European directive. This aims, notably, to revise five existing directives: "basic standards" (96/29/Euratom); "medical exposure" (97/43/Euratom); "sealed radioactive sources" (2003/122/Euratom); "outside workers" (90/641/Euratom); and "informing the general public" (89/618/Euratom). It could also include new elements, in particular protection of the environment, protection from natural radiation (radon) and from radiation from building materials, and measures for emergency situations.

The "basic standards" directive

In 2010, ASN engaged in widespread consultation with stakeholders on a draft directive on basic safety standards for radiation protection (BSS Euratom), placed online on the European Commission's website. Following this consultation exercise, ASN forwarded proposals to the government with the aim of preparing the position that France would maintain within the Atomic Questions Group during the discussion to come in 2011.

More generally, regular contacts with the European Commission (and in particular with the Directorate General for Energy, DG/ENER; the Directorate General for Research, DG RTD; and the Joint Research Centre, JRC) provide a means of reviewing progress and upcoming regulatory work in the areas of nuclear safety and radiation protection: notably, the transposition of directives into national legislation and the functioning of Euratom Treaty committees.

2115 The Western European Nuclear Regulators Association

WENRA was officially created in February 1999, the founding members being the heads of the nuclear regulatory bodies of Belgium, Finland, France, Germany, Italy, Netherlands, Spain, Sweden and the United Kingdom, joined a little later by Switzerland. The ASN Chairman was its first Chair for four years. Ms Judith Melin (Sweden) succeeded him from 2003 to 2006, followed by Ms Dana Drabova (Czech Republic) from 2006 to 2009. Mr Jukka Laaksonen (Finland) is currently the Chair.

Since 2003, the heads of the regulatory bodies of Bulgaria, the Czech Republic, Hungary, Lithuania, Romania, Slovakia and Slovenia have become members of the association.

In 2009, the heads of the regulatory bodies of the ten countries which do not have a NPP were, at their request, invited to take part in the association's meetings.

The objectives defined by the WENRA members when the association was created are:

- to provide the European Union with an independent appraisal capability for examining the issues of nuclear safety and its regulation in the countries applying for membership of the European Union;
- to develop a common approach to nuclear safety and regulation, in particular within the European Union.

The first of these tasks was successfully completed during the EU enlargements of 2004 and 2007.

With regard to the second task (harmonisation of national approaches to safety), WENRA has created two working groups:

- the NPP group (see chapter 12) which, after being run by the British regulatory body, is now chaired by one of ASN's Deputy Directors General;
- the group dealing with spent fuel and radioactive waste management and decommissioning operations (see chapter 16), chaired by a member of the Swiss regulatory body.

In each of these fields, the groups began by defining the reference levels for each technical topic, based on IAEA's most recent standards and on the most demanding approaches employed within the European Union (and therefore, for all practical purposes, in the world).

In 2006, the members of WENRA developed national action plans for power generating reactors, designed to ensure that for all technical areas in which differences had been identified, national practices were brought into line with the reference levels defined in 2005. The members had set themselves the target of reaching a harmonised situation by 2010. A major effort was made by the regulatory bodies in the countries in question. In France, for instance, the order currently being drafted on BNI regulation ("régime INB") draws directly on WENRA's work. Elsewhere work on "transposition" of reference levels is continuing.

In 2008, in addition to continuing the work already under way, the association launched new work to harmonise safety objectives for new reactors. The resulting report was adopted by a consensus of WENRA members in November 2010. Discussions are continuing on the topic, to develop more detailed objectives.

WENRA's adoption of safety objectives for new reactors

During the meeting held in Bratislava (Slovakia) on 9-10November 2010, WENRA's 17 members adopted a common statement establishing safety objectives for new reactors. In issuing this statement the WENRA members have made a *de facto* commitment to requiring that the power reactors they examine in the future meet the objectives specified in the statement. ASN played a determining role in the preparation and adoption of this report.

Although the safety objectives for new reactors do not allow "classification" of the safety levels of reactors currently proposed throughout the world, they do have the major advantage of setting far-reaching safety requirements for all of the reactors that will be built in Europe.

Furthermore, the WENRA statement also embodies the notion that these objectives should be used as a baseline for identification of improvements to safety that could reasonably be achieved during reviews of the safety of existing reactors.

WENRA is planning to continue with its technical work in this area in 2011, with a view to specifying the objectives.

ASN, convinced that these far-reaching safety objectives should be applied to the building of new reactors throughout the world, will make efforts in 2011 to disseminate and advocate them both within Europe and internationally.

WENRA has also begun to consider the issue of safety of research reactors and extension of reactor operation. In 2010, the association amended its statutes to take on an international role and to be able to better associate safety authorities outside of the EU. As a result, the Armenian, Russian and Ukrainian safety authorities took part in a WENRA meeting in November 2010.

ASN considers that all this work confirms WENRA's ability to carry out "bottom-up" technical harmonisation of nuclear safety, to complement any Community "top-down" initiatives of a political nature and more general scope (see points 2|1|1 and 2|1|2 above).

Lastly, it is worthy of note that, in 2010, ASN made use of the WENRA and ENSREG networks of correspondents to ensure rapid and uniform communication to all of its European partners on events the authority saw as important and, in particular, of the Commission's position on the building of nuclear reactors around the world and the risk of the emergence of two-tier safety.

2116 Meeting of the Heads of the European Radiological Protection Competent Authorities (HERCA)

The national regulations constituting practical implementation of European radiation protection directives comprise significant differences for the same uses of ionising radiation sources, or in the vicinity of the same nuclear installation. This is for example the case for provision of iodine tablets for populations living near a nuclear installation.

Moreover, ASN is convinced that if progress is to be made on harmonisation in Europe, close collaboration is needed between the heads of European authorities controlling radiation protection, in the same way as for nuclear safety.

ASN organised an initial meeting of the heads of the European radiation protection regulatory authorities in Paris on 29 May 2007, followed by a second meeting on 19 May 2008. Given the success of these two meetings, the participants decided to meet more frequently. Most of the EU member states are represented in this group; a delegate from the European Commission participates systematically in plenary sessions.

At present, HERCA's activities are carried out by five working groups in the following areas: outside workers and the radiation passbook; justification, optimisation of sources and non-medical practices; medical applications of ionising radiation; management of emergency situations; and reference levels and collective doses from medical exposures. An additional special working group was created at the fifth association meeting to examine optimisation of HERCA's activities and to consider the association's future.

The fifth and sixth plenary meetings were held in 2010. On 30 June and 1 July 2010, the Norwegian radiation protection authority (NRPA) hosted the association's fifth meeting in Oslo. With Mr Ole Harbitz (General Director of the Norwegian authority and Chair of HERCA since 2008), in the chair, the meeting was attended by 37 delegates from 19 countries.

Discussions centred on the results of work of the five HERCA working groups and, notably, saw the emergence of a consensus on a proposal for harmonisation of the contents of a European radiation passbook. The group created specially to consider optimisation of HERCA's activities and its future also presented proposals on working methodology, governance and communication. The proposals were approved.

The association's sixth meeting was held on 1 December 2010, in Paris, in ASN's offices. Amongst other matters, the meeting allowed approval of the association's new terms of reference and operating rules as well as a joint statement on the justification for body scanners using X-rays in airports.

2 | 1 | 7 Multilateral assistance actions

After the Chernobyl disaster of 26 April 1986 and the fall of the Soviet bloc, the G7 Summit, held in Munich in July 1992, defined three priority areas for assistance with nuclear safety for eastern European countries:

- contribution to improving the operating safety of existing reactors;
- provision of funding for short-term improvements to the least safe reactors;
- improvement in the organisation of safety regulation, making a clear distinction between the responsibilities of the different entities concerned and reinforcing the role and scope of local nuclear regulatory bodies.

The assistance programmes introduced initially by the European Commission (PHARE and TACIS) were succeeded in 2007 by the Instrument for Pre-accession Assistance (IPA) and the Nuclear Safety Co-operation Instrument (NSCI), extending to all countries of the world without geographical limit.

The European Commission set up the Regulatory Assistance Management Group (RAMG) to collect opinions and advice concerning the assistance requests submitted by third party countries. The nuclear safety and radiation protection regulatory bodies of the countries of the European Union, including ASN, are members of the group.

ASN is involved in providing assistance to national safety authorities, notably coordinating the programmes implemented in Egypt, Kazakhstan and Ukraine as well as participating, in 2010, in projects providing assistance with regulation to Egypt, Jordan and Ukraine.

These actions are supplemented by other international technical assistance programmes, in accordance with the resolutions

adopted by the G8 (G7 extended to include Russia) to improve nuclear safety in third party countries, and which are financed by contributions from donor States and the European Union.

ASN is thus a participant in the expert groups reporting to the European Bank for Reconstruction and Development (EBRD), responsible for managing multilateral funds to finance the following actions:

- delicensing of nuclear reactors in Bulgaria (Kozloduy 1 to 4), Lithuania (Ignalina 1 & 2), and Slovakia (Bohunice V1 1 & 2);
- installation of a new containment dome for Chernobyl Reactor No. 4, the origin of the April 1986 disaster, and construction of interim storage and treatment installations for the spent fuel and waste still present on the site;
- dismantling of decommissioned Russian nuclear submarines and radiological clean-out of the White Sea naval bases.

Lastly in the area of nuclear safety, ASN advises the French delegation to the Nuclear Safety and Security Group (NSSG) of the G8, chaired in 2010 by Canada.

ASN has observed that significant progress has been made in the three priority areas defined by the G8. It also notes that eight Bulgarian, Lithuanian and Slovakian reactors were decommissioned between 2006 and December 2009, in compliance with their treaties for accession to the EU.

In addition, ASN is examining assistance with the creation of safety infrastructure in emerging countries with its main counterparts, especially within the International Nuclear Regulators Association (INRA) (see point 2 | 8) with, once again, a concern to promote high levels of safety.

2 The International Atomic Energy Agency

The International Atomic Energy Agency (IAEA) is a United Nations organisation based in Vienna, Austria. In December 2009, it comprised 151 member States. IAEA activities of particular relevance to covering ASN's fields of competence consist in:

– Organising discussion groups at different levels and preparing texts known as "Safety Standards", describing safety principles and practices which can then be used by Member States as a basis for national regulations.

This activity is supervised by the Commission on Safety Standards (CSS) set up in 1996. The CSS is made up of 24 representatives from the highest level of safety authorities, appointed for 4 years. It is tasked with final approval of safety standards that have been subject to a long and rigorous process of validation by member states and with proposing these to the IAEA's Director General. France is represented on this Commission by a Deputy Director General of ASN. At the beginning of 2008, the ASN Chairman was given a second term as Chair of the CSS. The 27th and 28th meetings of the CSS were held in 2010.

The CSS coordinates the activities of four committees tasked with supervising the drafting of documents in four areas: NUSSC (NUclear Safety Standards Committee) for installations safety, RASSC (RAdiation Safety Standards Committee) for radiation protection, TRANSSC (TRANsport Safety Standards Committee) for the safe transport of radioactive materials and WASSC (WAste Safety Standards Committee) for safe radioactive waste management. France, represented by ASN, is present on each of these committees, which meet twice a year. Representatives of the relevant French organisations also participate in the work of the technical groups drafting the documents.

The "Safety Standards", approved by the CSS and published under the responsibility of the Director General of IAEA, are contained in three types of documents: Safety Fundamentals, Safety Requirements and Safety Guides. In 2006, a single document laying out the fundamental principles for the four areas of safety was published, after approval by the CSS and adoption by the Board of Governors. In order for lower-level documents (requirements and safety guides) to eventually become a consistent whole without overlaps, the CSS drew up a road map in 2008, fixing the objectives for the development of all safety standards. Two points in particular are worth mentioning: the integration of the ongoing revision of the "Basic Safety Standards", which constitute the radiation protection specifications and the integration of nuclear security aspects. On this latter point, a "think tank" was set up in 2009. Its members are CSS Chairs and those of the AdSec, a committee dedicated to safety in nuclear installations, as well as three members from each entity. The think tank met twice in 2010. Its work concentrates primarily on the establishing of short-term objectives to strengthen synergies between safety standards and safety guides.

- Setting up "services" made available to Member States and designed to give them opinions on specific aspects related to safety and radiation protection.

This category includes the OSART (Operational Safety Review Team) and IRRS (Integrated Regulatory Review Service) missions.

The Saint-Alban NPP received an OSART mission from 21 September to 6 October 2010. This was the 22nd mission of this type conducted in France. The report, drafted by the team of IAEA inspectors, will be published on the ASN website. Previous reports on OSART missions conducted in France are also available on the website. The Cruas plant audit follow-up mission took place from 13 to 17 December, subsequent to the OSART mission in 2008.



Technical meeting on the coordination of the review of the bases of the regulation of radioactive material transport, organised with the IAEA and held from 11 to 15 October 2010 at ASN in Paris

IRRS missions provide an opportunity for safety authorities to subject their safety systems to analysis by other authorities, under the aegis of the IAEA. In 2010, ASN participated in two missions, in China and in the United States. ASN believes that generalised use of these peer reviews will help to create a network of experts from the regulatory bodies and contribute to harmonising of practices.

Finally, ASN takes part in radiation protection courses in the regions and in the appraisal missions organised by IAEA, the main beneficiaries being French-speaking countries. In 2010, ASN participated in radiation protection training in Algeria.

The Douai, Paris, Marseille and Nantes Divisions welcomed interns from French-speaking African countries for four weeks of training during which they attended presentations on experience and practices in the area of radiation protection inspections outside of BNIs.

- Harmonisation of communication tools

Since 2002, ASN has been looking to develop a communication tool for dealing with radiation protection events. ASN therefore contributed energetically to relaunch the process of international collaboration to complete the International Nuclear Event Scale (INES) by addition of a radiation protection criterion. This effort led to adoption by the IAEA Member States of a new part of the INES scale concerning radiation protection events, which takes account of radioactive sources and the transport of radioactive materials. The new version of the INES User's Manual was published in June 2009, in English; it has been applicable in France since May 2010.

ASN would like to see the scale eventually extended to include radiation protection of health-care patients. The ASN/SFRO scale, produced in collaboration with SFRO (see chapter 4) received a favourable assessment by the working group on the classification of events involving patients, created at France's request. This working group comprises the IAEA Member States aware of the stakes involved in radiation protection of patients: Belgium, Finland, France, Germany, Hungary, Japan, Spain, Ukraine and United States. A draft technical document on the "applicability to patients" part of the INES was proposed to this working group in November 2010, at the third meeting.

Lastly, on 15 October 2010, the IAEA and the NEA celebrated the INES' 20th anniversary at a conference that brought together the 69 INES member countries. The event traced the history of the INES and provided an opportunity to consider the outlook for development of this communication tool.

2 3 OECD's Nuclear Energy Agency (NEA)

The NEA, set up in 1958, comprises all the OECD member countries, except for New Zealand, or 29 countries. Its main objective is to promote cooperation for the development of nuclear power as an energy source that is reliable and acceptable from the environmental and economic points of view.

Within NEA, ASN takes part in the work of the Committee on Nuclear Regulatory Activities (CNRA), the Committee on Radiation Protection and Public Health (CRPPH), the



Conference on the 20th anniversary of INES, October 14, 2010 at the IAEA in Vienna

Radioactive Waste Management Committee (RWMC), the Nuclear Law Committee (NLC) and in other working groups of the Committee on the Safety of Nuclear Installations (CSNI).

In 2010, NEA hosted an international conference, organised at France's initiative, on the topic of access to civil uses of nuclear energy. At the conference, ASN's Chair spoke on the issue of nuclear safety.

2 4 Multinational Design Evaluation Program (MDEP)

The NEA also handles the MDEP secretariat. The MDEP is an international cooperative initiative to develop innovative approaches to pooling of the resources and know-how of the regulatory bodies, which have responsibility for regulatory assessment of new reactors.

The programme, which is built around safety, is a multinational cooperative forum working within the framework of power reactor safety cases and aimed at ensuring the harmonisation and implementation of safety standards. Its ultimate goal is to improve protection of the public and the environment. An ASN agent was seconded to NEA and is responsible for part of the secretarial duties for the MDEP.

The MDEP organisation

The MDEP Policy Group and Steering Technical Committee are responsible for implementing the MDEP. The work of the MDEP is performed by the Design Specific Working Groups for nuclear reactors and the Issue Specific Working Groups.

Two Working Groups have been set up. One, of which Canada, China, Finland, France, United Kingdom and United States are members, is devoted to work on the EPR. The other group, of which China, United Kingdom and the United States are members, works on the AP1000. In November 2010, an EPR Working Group meeting was held in Shenzhen, China. As a side event to the meeting, a visit was organised to the Taishan work site for the two EPR type reactors currently under construction.



ASN's Chairman, André-Claude Lacoste, visits the EPR1 reactor construction site in Taishan (Guangdong province, China) on 10 May 2010

Also within the framework of the MDEP, three working groups were set up focusing on harmonisation of multinational inspection of nuclear component manufacturers (Vendor Inspection Cooperation Working Group – VICWG), on standards and codes for pressure vessel design (Codes and Standards Working Group – CSWG), and on design standards for digital I&C (Digital Instrumentation and Control Working Group – DICWG).

MDEP activities

The MDEP Policy Group, comprising leaders of nuclear regulators from the ten participating countries and chaired by the ASN Chair, met in March 2010. During this meeting, the decision was taken not to increase either the number of participating countries or the number of subjects dealt with, in order to maintain the effectiveness of this initiative. More specifically, the Group reviewed and validated the different working groups' short-term, mid-term and long-term work programmes.

The MDEP's 2009 activity report was published in June 2010, providing information about the MDEP to stakeholders, i.e. the regulatory authorities not participating in the MDEP, industry and the public.

Several joint inspections were performed in 2010, based on the work of the VICWG. "Common Positions" were also established on different subjects; their publication is planned for 2011 (see also chapter 12).

In order to establish long-term dialogue with these stakeholders, a first MDEP conference on new reactor design was organised on 10–11 September 2009, in Paris. A further conference is planned for 2011.

2 5 The United Nations Scientific Committee on the Effects of Atomic Radiation (UNSCEAR)

The United Nations Scientific Committee on the Effects of Atomic Radiation (UNSCEAR) was created in 1955. It examines all scientific data on radiation sources and the risks these radiations represent for the environment and for health. This activity is supervised by the annual meeting of the national representations of the Member States, comprising high-level experts, and at which ASN is represented. The reports published by this scientific body, which constitute the international reference, cover subjects such as the hereditary effects of ionising radiations and the consequences of the Chernobyl accident.

2|6 International Radiation Protection Association (IRPA)

An ASN delegation headed by ASN's Chair took part in the third European IRPA Meeting, held on 14–18 June in Helsinki, Finland. ASN's Chair presented the meeting with a proposed radiation protection action plan for patients in the area of medical imagery, a plan that could be implemented worldwide.

2 7 World Health Organisation (WHO)

ASN Commissioner Michel Bourguignon participated in the WHO consultation meeting on the subject of "Referral Guidelines for Appropriate Use of Radiation Imaging", held on 1–3 March 2010, in Geneva, Switzerland. The meeting examined the work of experts from 23 agencies and professional organisations who pooled their experience to move, eventually, to the establishment of worldwide guidelines on good practices for justification of radiological examinations, under the aegis of the WHO.

2 8 The International Nuclear Regulators' Association

The International Nuclear Regulators' Association (INRA), which comprises the heads of nuclear regulatory bodies from Canada, France, Germany, Japan, South Korea, Spain, Sweden the United Kingdom and the United States, met in April and September 2010, with Dr Mike Weightman, Head of the UK's nuclear safety regulator, in the chair. The meetings highlighted the level of attachment the members of this club feel towards it and stressed their will to be audible in the major debates on nuclear safety in the world. The meetings provided a forum for INRA members to exchange viewpoints on regulators' responsibilities in a context of stated renewed interest in nuclear energy, on subjects that would warrant INRA's intervention and on the model for its position statement of 2008 in the development of nuclear energy in countries wishing to acquire a nuclear generating capacity for the first time. The association also amended its statutes, notably to optimise its mode of operation.

In 2011, the INRA meeting will be in Stockholm, under the Chairmanship of the head of the Swedish nuclear regulator.

2 9 The Association of nuclear regulators of countries operating French designed nuclear power plants (FRAREG)

The FRAREG (FRAmatome REGulators) association was created in May 2000 at the inaugural meeting held in Cape Town at the invitation of the South African nuclear regulator. It comprises the nuclear regulators of Belgium, France, the People's Republic of China, South Africa and South Korea.

Its mandate is to facilitate transfer of operating experience gained from regulation of the reactors designed and/or built by the same supplier and to enable nuclear regulators to compare the methods they use to manage generic problems and evaluate the level of safety of the Framatome type reactors they regulate.

The Association's latest meeting was held in South Africa. The next meeting will be in 2011 in France.

2 10 The European ALARA Network and the European Radiation Protection Authorities Network

ASN took part in two six-monthly meetings of the European ALARA Network (EAN), on 8 June and 14 December 2010. On 7 June ASN hosted the annual meeting of the European Radiation Protection Authorities Network (ERPAN), a subnetwork of EAN. The meetings provided fora for dialogue between counterparts on radiation protection in the networks' 20 member countries and, in particular, addressed the principle of optimisation.

3 BILATERAL RELATIONS

ASN works with many countries within the framework of bilateral agreements signed at different levels:

- governmental agreements (Belgium, Germany, Luxembourg, Switzerland);
- administrative arrangements between ASN and its counterparts (about twenty).

3 1 Staff exchanges between ASN and its foreign counterparts

Better understanding of how foreign nuclear safety and radiation protection regulators actually work is a means of learning pertinent lessons for the working of ASN itself and enhancing staff training. One way to achieve this goal is to develop the staff exchange system.

The nuclear safety and radiation protection regulators with whom staff exchanges have been arranged to date are those of Belgium, China, Finland, Germany, Hungary, Ireland, Japan, Spain, Switzerland, the United Kingdom and the United States.

Provision is made for several types of exchange:

- very short term actions (one to two days). These are a means of offering our counterparts cross-inspections and joint nuclear and radiological emergency exercises. In 2010, more than thirty joint inspections in the field of nuclear safety and radiation protection were organised. ASN inspectors participated in inspections of NPPs in China, Finland, Germany and the United Kingdom and inspectors from abroad (China, Germany, Japan, Spain, Switzerland and the United States) participated in inspections in French plants. Some of these joint inspections also related to radiation protection in the medical and industrial sectors in Belgium, France, Germany, Ireland, Spain and Switzerland. In addition, the U.S. authority took part in an emergency exercise at the Penly NPP in September;

- short-term assignments (2 weeks to 6 months) aimed at studying a specific technical topic. The Douai and Châlons Divisions received three inspectors from the Belgian regulatory authority AFCN, to compare the process of development of a programme of inspections and of monitoring of BNIs and the regulations applying in the two countries on nuclear safety and radiation protection requirements;
- exchanges giving an overview of all of a counterpart's activities. It was in this context that the deputy head of the Nantes Division was seconded to the Radiation Protection Institute of Ireland (RPII) between 21 June and 2 July 2010. This assignment confirmed the advantage of pursuing exchanges with ASN's Irish counterpart. In addition a member of RPII staff participated as an observer in an emergency exercise at the Civaux NPP, organised by ASN on 17 June 2010;
- long-term exchanges (about one to three years) in order to become fully familiar with the ways in which foreign nuclear safety and radiation protection regulators work, to gain indepth knowledge. Whenever possible, this type of exchange should be reciprocal.

Since late 2006, a French inspector from the Lyons Division has been seconded to the British nuclear safety regulator, where he is working on the fuel cycle plants, while a British inspector was seconded to ASN until mid-2009, working in the Nuclear Power Plants Department on the evaluation and licensing of the EPR in Flamanville.

In exchange for the secondment to the Spanish Consejo de Seguridad Nuclear (CSN) of an engineer from the Research Facilities and Waste Department, for a three-year period starting on 1 February 2009, a CSN engineer was seconded to the Nuclear Power Plant Department until 2011. She also takes part in inspections.

In April 2009, a member of the DEP joined the Nuclear Reactor Regulation (NRC) office for three years. In exchange, a member of the same NRC office worked at DEP from August 2009 until August 2010. A new assignment of a member of NRC staff to ASN is currently being considered.

Staff exchanges are also organised with international organisations. For instance, a member of ASN has been working at IAEA since the autumn, in the team tasked with organising Integrated Regulatory Review Service (IRRS) assignments. Another ASN engineer, now recruited by IAEA, is working at the Agency on safety standards, providing the scientific secretariat for the CSS (Commission on Safety Standards).

These exchanges will continue to enrich practices at ASN, which will thus be able to make use of the proven methods and good practices observed and which are employed by its counterparts. Furthermore, the experience acquired by ASN and its counterparts over nearly ten years now, indicates that inspector exchange programmes are an important factor in stimulating bilateral relations between nuclear safety and radiation protection regulators.

It is also worth underlining the appointment of representatives of foreign safety regulatory bodies to the Advisory Committees of experts. ASN employs this practice enabling experts from other countries to not only take part in the Advisory Committees but also, on occasion, to act as Chair or Deputy Chair.

3 2 Bilateral cooperation between ASN and its foreign counterparts

Bilateral relations between ASN and its foreign counterparts are built around an approach that integrates nuclear safety and radiation protection for each of the countries with which ASN maintains priority relations. The following can be offered as examples.

Germany

The thirty-sixth meeting of the Franco-German Commission on nuclear installation safety issues (Deutsch-Französische Kommission für Fragen der Sicherheit kerntechnischer Einrichtungen – DFK) took place on 16–17 June 2010 at the Neckarwestheim NPP, near Stuttgart. The meeting provided the opportunity for a round-up on nuclear policy and on the evolution of regulations in France and Germany. The meeting was presented with a report on safety in the NPPs on the borders (Neckarwestheim and Philippsburg for Germany, Fessenheim and Cattenom for France), as well as on the progress made by the DFK's four working groups. In particular, the presentations allowed comparison of the practices addressing organisational and human factors and occupational exposure.

Belgium

Relations with the Belgian Federal Nuclear Regulatory Agency (AFCN) and its technical support subsidiary BEL V cover all of ASN's areas of competence: safety, waste management, transport and radiation protection. Three Belgian inspectors were received for short assignments in the Douai and Châlons regional divisions. The management committee bringing together ASN, AFCN and BEL V met on 21–22 January 2010 in Caen, France. As a side event to the meeting, a Belgian delegation visited the EPR construction site at Flamanville, France.

A meeting was also organised with AFCN on 31 March 2010 in Brussels, to discuss the methods and means employed for human resources management within the two organisations.

China

With renewal of the administrative arrangement between ASN and its Chinese counterpart, the National Nuclear Safety Administration (NNSA), cooperation between the two authorities has been revitalised. An ASN delegation led by the Chair and accompanied by delegates from IRSN visited China on 9-14 May 2010, notably, to take part in a management committee with NNSA and its technical support body the Nuclear Safety Centre (NSC). Topics of mutual interest covered by both Chinese



Bilateral Franco-Chinese meeting between ASN-IRSN and NNSA-NSC, on 11-12 May in Beijing

and French presentations included monitoring of construction of the EPRs at Flamanville, France, and Taishan, China; monitoring of manufacture of pressure equipment; the EPR's instrumentation and control system and that of the Chinese CPR1000 reactor; and safe management of radioactive waste. The discussions concluded with a more strategy-oriented meeting to establish an action plan for cooperation between ASN and its Chinese counterpart. Two site visits were organised alongside these meetings: one to the construction site of the Taishan EPR, the other to the site of the AP1000 reactor at Sanmen.

Spain

In addition to the staff exchanges with the Consejo de Seguridad Nuclear (CSN) described above (see point 3 | 1), ASN held a bilateral meeting with its Spanish counterpart on 7 May 2010, in Madrid, Spain, on the subject of human resources policy. This meeting formed part of the exchanges of information with CSN on the policy of the two regulatory authorities regarding career development and staff training. The ASN Chair was also invited to the CSN's 30th anniversary celebrations on 28 June 2010.

The United States

The common aim of ASN and of the U.S. regulatory authority, the NRC, to maintain close ties results in numerous actions in all areas of cooperation and at all levels. For example, the ASN Chair presented the work of the MDEP at the Regulatory Information Conference (RIC) in March 2010 and, at the same meeting, the General Director gave a presentation on the feedback on monitoring of France's installed base of NPPs. An ASN Deputy General Director also spoke at the Fuel Cycle Information Exchange (FCIX), a conference organised by NRC and focusing on the fuel cycle. In 2010, ASN received a number of American delegations from NRC and other bodies such as the Department of Energy (DoE). These delegations held discussions with ASN, notably on regulation of fuel cycle installations and visited several installations (Georges Besse II, La Hague, MÉLOX and ATALANTE). Representatives of NRC and of the Federal Emergency Management Agency (FEMA) were present as observers at a national emergency exercise at the Penly NPP, on 8 September. There were also opportunities to exchange ideas on the security of sources (meetings, ASN staff attending training given by NRC).

Lastly, the Chair of NRC, who had held discussions with the ASN Chair on several occasions and in several places, contributed an article to the issue of the review by *Contrôle* magazine on the topic of the construction of a European centre for nuclear safety and radiation protection, and two NRC commissioners met with ASN's senior management in November 2010.

The Russian Federation

In April 2010, ASN accompanied the French delegation within the framework of the Franco-Russian meeting on nuclear issues. During the meeting, ASN discussed areas of cooperation to be developed jointly with its counterpart organisation Rostekhnadzor. Following on from these exchanges of views, the ASN Chair and General Director visited Moscow on 19-20 October, meeting with Rostekhnadzor managers. This meeting provided the opportunity to propose resumption of cooperation between ASN and Rostekhnadzor. Resumed cooperation would focus on three topics: cooperation on assistance to countries acceding for the first time to nuclear power, the fuel cycle and continued operation of power plants. The need to clarify and complete the legal framework for floating power plants was also discussed. A decision was also made to work towards a new agreement.

Finland

There has been longstanding cooperation between ASN and its Finnish counterpart STUK, especially in the area of management of waste and of spent fuel. But cooperation has been significantly enhanced in recent years by the construction of an EPR type reactor at the Finnish site of Olkiluoto.

Under the terms of the special arrangement between ASN and STUK covering exchanges of information on the construction of new reactors, two meetings were organised in May and December 2010 between the ASN and STUK teams responsible respectively for the Flamanville 3 and Olkiluoto 3 projects. Based on technical exchanges and a construction site visit, the meetings helped to reinforce interaction between the two projects, in addition to the work carried out within the MDEP multilateral framework (see also point 2 | 4).

India

In response to an invitation from the Atomic Energy Regulatory Board (AERB), the Indian regulatory authority, ASN attended a technical seminar providing information on the safety of the EPR, organised in Mumbai on 22-23 November 2010. Discussions should continue within the framework of a technical seminar to be organised early in 2011 on the topic of integrity of materials and large components. In addition, in December 2010, ASN extended and enlarged the scope of the existing cooperation agreement with AERB.

Ireland

The annual meeting between the ASN Chair and *the Chief Executive or General Director* of the Radiological Protection Institute of Ireland (RPII), currently Ms Ann McGarry, took place on 31 August 2010 in Dublin, Ireland. The cooperation agreement between the two authorities was renewed and the meeting also provided the opportunity for discussions on the numerous radiation protection actions undertaken at the 2009 meetings and on the benefits of staff exchanges in 2010 (see point 3 | 1). On 1 September, the ASN Chair met the RPII Board, the equivalent of the ASN Commission. Also, in May and October 2010, the ASN's director for ionising radiation and health participated, as a permanent member, in one of RPII's advisory committees.

Italy

Against the background of an announcement by the Italian government of a new nuclear power programme, an administrative arrangement was signed between ASN and ISPRA, the current Italian regulatory authority, in April 2010. The agreement covers the rapid exchange of information in the event of an emergency as well as cooperation in the area of nuclear safety.





Bilateral meeting between ASN and its Japanese counterpart NISA and MEXT held on 1 and 2 November 2010 in Tokyo

The statutes of the future Italian national authority responsible for nuclear safety were published in Italy's official journal in July 2010 and the members of its board of directors were appointed in November 2010. Bilateral relations between ASN and the Italian safety authority will continue with this new body once it has taken up its activities.

ASN took part in a meeting of the joint France-Italy Committee on 19 February 2010 and, on 16 September 2010, received members of the Italian parliament serving on the Parliamentary Environmental Commission. On 22-23 September 2010, ASN attended a meeting in Rome with the VIA (environmental impact assessment) – VIS (strategic environmental assessment) technical commission which is consulted on projects that may have major impacts on the environment.

Japan

The administrative agreements linking ASN to Japan's two safety authorities, the Ministry of Education, Culture, Sports, Science and Technology (MEXT) and the Nuclear and Industrial Safety Agency (NISA), were renewed in March 2009 and April 2010.

Two bilateral committee meetings were held between ASN and its two counterpart organisations under the terms of these agreements, in Tokyo, on 1-2 November 2010. A cooperation action plan is being developed in several clearly identified areas such as addressing the issue of reactor ageing and extension of service life, monitoring of fuel cycle installations and monitoring of safety and security of radioactive sources. A schedule has been fixed for organisation of the next management committee meetings in Paris in the second half of 2012.

In addition to these bilateral meetings, intensive and fruitful in terms of information, there were also numerous contacts between the French and Japanese safety authorities within international bodies such as the IAEA, OECD/NEA and multilateral associations such as INRA (International Nuclear Regulators Association).

Within the framework of regular exchanges with the Lyons Division, three inspectors from the Japan Nuclear Energy Safety organisation (JNES) participated in the review inspection of the Chooz reactor, in July 2010. Following the inspection, the Japanese delegation gave a presentation to ASN Commissioner Ms Marie-Pierre Comets outlining the main points of interest and unexpected aspects when compared with Japanese practices.

Luxembourg

The ninth meeting of the Franco-Luxembourg Joint Commission on Nuclear Safety was held on 25 November 2010, in Luxembourg. A point of particular interest was the presentation by ASN of a report on monitoring of the EDF plant at Cattenom, located less than 40 kilometres from the border with Luxembourg. Management of emergency situations and the issue of releases of tritium into the environment were addressed.

Czech Republic

Alongside the general IAEA conference, ASN's Chair had a meeting with the head of the Czech Republic's safety authority (SÚJB), Ms Dana Drábová, on 20 September 2010. It was decided at the meeting that the agreement linking the two organisations would be extended. On 13 December 2010, an ASN delegation also participated in a working group on energy that, notably, addressed the issue of nuclear safety. The discussions confirmed the close positions of ASN and SUJB and the will on the part of the two authorities to work together in the future.

The United Kingdom

ASN and the British Health and Safety Executive / Nuclear Directorate (HSE/ND) have cooperated for many years and the arrangement has been enhanced and improved over time. In 2010, cooperation between these two organisations was focused on activities relating to evaluation of new reactors. Furthermore, in order to enable HSE/ND to benefit from its expertise, ASN seconded an agent to HSE from its Nuclear Pressure Equipment Department for two years, under the terms of an assistance contract (see point 3 1).

The annual meeting of the heads of the two entities was held in the U.K. on 8-9 September and was followed by a visit to the Hinkley Point installations. This meeting was an opportunity to review assistance and cooperation between the two regulatory bodies. The ASN-IRSN/ND Franco-British Steering Committee will meet in February 2011 in the United Kingdom.

Switzerland

A meeting took place on 30 April 2010 between ASN and the Swiss safety authority (ENSI) to discuss human resources management procedures in the two organisations.

The 21st annual meeting of the Franco-Swiss Commission (CFS) on Nuclear Safety and Radiation Protectiontook place on 25 June 2010, in Paris. The meeting discussed exchanges of information on the safety of nuclear installations and radiation protection in the two countries, coordination of emergency protection measures, the requirements applicable to new NPPs and radioactive waste management. ASN, notably, presented its monitoring activities on the construction of the EPR at Flamanville and the ongoing work on the ten yearly inspection of the Fessenheim NPP. ASN and ENSI exchanged views on the

requirements relating to extended plant service life and on the possibility of cooperation on the mechanical strength of reactor vessels. On 24 June, a Swiss delegation visited the EPR construction site at Flamanville.

On Monday 15 November 2010, ASN's Chair, acting on behalf of the French government, signed an agreement with the Swiss Federal Council and the CERN (the European organisation for nuclear research) on protection against ionising radiation and safety of the organisation's installations. The agreement forms a legal basis that is common to both host countries for monitoring of nuclear safety and radiation protection at the CERN.

Ukraine

ASN Commissioners Marie-Pierre Comets and Michel Bourguignon visited Ukraine on 6-8 September 2010. The visit allowed for a round-up of the radiological evaluation and epidemiological studies conducted since the accident at the Chernobyl power plant and on the management of radioactive waste. In addition to a meeting with the Ukrainian safety Authority (SNRCU), meetings were also arranged with the minister responsible in the event of emergency situations and the Information Commission (Mama86). Visits were also organised to the Chernobyl site and to the ICRSM-Vector industrial complex for management of radioactive waste.

In April 2010, ASN accepted the Ukraine authorities' invitation to participate in a bilateral meeting during which the regulatory framework of nuclear safety in France was presented to the authorities.

In addition, Ms Comets participated in SNRCU's ten-year celebrations on 2-3 December 2010.

3 ASN bilateral assistance

At a time when new projects for development of new nuclear power generating programmes are being announced and implemented, ASN is receiving increasing numbers of requests for assistance, with a view to creating a safety infrastructure that is in line with major international principles such as those expressed in the Convention on Nuclear Safety. Requests are coming primarily from countries which have not to date been users of nuclear energy, particularly in Asia and the Middle East.

ASN pays very close attention to nuclear installation projects in the "new nuclear countries", where the implementation of a safety plan requires a minimum lead time of fifteen years before a nuclear power reactor can come into operation under satisfactory conditions. Such countries need to develop and put in place a legislative framework and an independent and competent safety authority with adequate financial and human resources to be able to fulfil its mission, as well as building safety capacity and developing a culture of safety and of monitoring.

ASN undertook to establish a realistic and effective system for answering the requests it receives. Implementation of this system, with the corresponding human resources, will enable ASN to conduct this new mission so as to maintain a high level of nuclear safety, worldwide. The following countries figure amongst those that received assistance from ASN in 2010:

The United Arab Emirates

On 26–27 January 2010, ASN organised a workshop in Paris, with the United Arab Emirates Federal Authority for Nuclear Regulation (FANR) on the topic of regulation in the area of nuclear safety.

Jordan

ASN participated in a Franco-Jordanian seminar held on 8-9 June 2010 in Amman, Jordan, organised within the framework of the bilateral cooperation agreement between the two countries. The aim of the seminar was to present the French approach to nuclear safety, gather information on the situation regarding Jordan's projects in the nuclear safety field and identify possible areas of cooperation. This mission was preceded by a meeting in Paris between the ASN Chair and the President of the Jordanian Senate. The ASN Chair, accompanied by a representative of the European Commission, also visited Jordan on 16–17 October, at the invitation of the Jordanian authorities in order to stress the importance of putting in place a robust nuclear safety framework requiring, notably, the setting up of a competent safety authority having adequate resources to fulfil its mission.

Poland

In the context of the introduction of a nuclear power programme in Poland by 2022, ASN received a delegation from the Polish safety authority on 23-25 June 2010. Possible areas of cooperation were addressed. The Polish delegation, very interested by actions to provide the public with information, took part in a meeting of the SOMANU CLI on 25 June 2010.

In addition, the French delegation – made up of representatives from the Ministry of Ecology, Energy, Sustainable Development and the Sea, ASN, and IRSN – visited Warsaw on 18-19 October 2010 as part of a working group on energy and funding. When nuclear energy was addressed, the safety authority and its technical support were at the centre of discussions.

Vietnam

ASN received a delegation from the Vietnamese safety authority, VARANS, in June 2010. This provided the opportunity for ASN, which had already assisted with the drafting of Vietnam's legislation, to explain to VARANS how it was designing its national report in preparation for the 2011 review meeting for the Convention on Nuclear Safety. The ASN Chair also met his Vietnamese counterpart in July, in Paris, then in September, in Vienna. A cooperation agreement between the two organisations was signed at this second meeting.

The four countries mentioned above are those that are at the most advanced stages from amongst those wishing to start a nuclear power programme and that have no previous experience of nuclear power plants. They do not, however, account for all of ASN's cooperation with "new entrant" countries.

Overall, ASN responded to more than forty requests in 2010 from countries indicating an interest in nuclear energy for the



first time. In addition to its bilateral contacts, ASN is also involved in providing assistance to these countries via the Nuclear Safety Cooperation Instrument (see point 2|1|7).

The Authority also participates in the Regulatory Cooperation Forum (RCF), a forum for discussions between safety authorities under the aegis of the IAEA, intended to facilitate the sharing of experience by regulators. The ASN Chair took part in two plenary sessions, in June and September 2010, and the Authority attended a special working meeting in November 2010 on the assistance to be provided to Jordan's safety authority (JNRC).

4 INTERNATIONAL AGREEMENTS

In the aftermath of the Chernobyl accident (26 April 1986), the international community negotiated a number of conventions designed to prevent accidents linked to the use of nuclear power and mitigate their consequences should they occur. These conventions are based on the principle of a voluntary commitment on the part of the States, who retain sole responsibility for the installations placed under their jurisdiction.

Two conventions deal with the prevention of nuclear accidents (Convention on Nuclear Safety and Joint Convention on the Safety of Spent Fuel Management and the Safety of Radioactive Waste Management), while two others deal with management of their consequences (Convention on early notification of a nuclear accident and Convention on assistance in the case of a nuclear accident or radiological emergency). France is a contracting party to these four conventions. IAEA (see point $2 \mid 2$) is the depositary of these conventions and provides the relevant secretarial services.

4 1 The Convention on Nuclear Safety (CNS)

The CNS concerns civil nuclear power generating reactors. It was adopted in June 1994 and France signed it in September 1994 with ratification in September 1995. The convention came into force on 24 October 1996. As at 31 December 2010, it was ratified by 71 States.

In ratifying it, the contracting parties agreed to provide a report describing how the fundamental safety principles and good practices are implemented in their respective countries. The reports from the contracting parties are examined during a review meeting at which each party may ask questions of the others.

The four contracting party review meetings were held in April 1999, April 2002, April 2005 and April 2008.

The next CNS review meeting is scheduled for April 2011, at IAEA.

This fifth meeting was prepared at a meeting held in Vienna on 29 September 2009. The contracting parties elected Mr Li Ganjie, China's deputy minister for Environment and general director of the Chinese safety authority, and Mr Bill Borchardt (General Director of the U.S. authority) and Mr Patrick Majerus (Minister of Health for Luxembourg) as vice chairs.

The countries were divided into six groups which will discuss the reports presented by the countries forming the group. Ms Marie-Pierre Comets, ASN Commissioner, will chair the discussions of Group 4.

The French report is available on the ASN website, in its French and English versions, in the "ASN à l'international" section (international texts).

4 2 The Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management

The "Joint Convention" as it is often called, is the counterpart of the CNS for management of the spent fuel and radioactive waste produced by civil nuclear activities. France signed it on 29 September 1997 and it entered into force on 18 June 2001.

There were 57 contracting parties to the Joint Convention as of 31 December 2010.

The third review meeting for the Joint Convention took place from 11 to 22 May 2009 at IAEA. The meeting observed that progress has been made on implementation of global national plans for management of radioactive materials and waste. Given its experience in these areas, and in order to maintain a degree of continuity between two Joint Convention review meetings,



Opening of the technical meeting on the establishment of a radioactive waste management organisation by Pierre-Franck Chevet (DGEC) and Soda Kunihisa (JAEA) on June 7, 2010

France proposed the organisation of technical meetings on these subjects prior to the holding of the next Joint Convention review meeting, scheduled for May 2012.

A first technical meeting on the establishment of a national organisation for management of radioactive waste was held in Paris on 7-9 June 2010. Organised by the IAEA with the support of ASN, the Directorate General for Energy and the Climate (DGEC) and ANDRA, the meeting brought together around 110 participants from more than 50 countries.

The meeting was open to all IAEA member countries and not only to the parties to the Joint Convention, in order to widen the benefit of the experience presented, to allow for dialogue and to promote the Joint Convention.

It provided a forum for fruitful exchanges of views on the topics of state responsibility in the management of radioactive wastes, with the French delegates – including ASN – arguing for a coherent policy under which each type of waste is subject to appropriate management solutions. Discussions also focused on the centralised waste management body model, on the statutes and resources of such bodies, on their independence, R&D programmes and policy on transparency. The meeting therefore provided the opportunity to highlight this model and to compare it with other approaches in the area.

4 3 The Convention on Early Notification of a Nuclear Accident

The Convention on Early Notification of a Nuclear Accident came into force on 27 October 1986, six months after the Chernobyl accident. It had 108 contracting parties as of 29 April 2010.

The contracting parties agree to inform the international community as rapidly as possible of any accident leading to uncontrolled release into the environment of radioactive material likely to affect a neighbouring State. To this end, a system of communication between States is coordinated by IAEA and regular exercises are held among the contracting parties. ASN is the competent national authority for France.

4 4 The Convention on Assistance in the Case of a Nuclear Accident or Radiological Emergency

The Convention on Assistance in the Case of a Nuclear Accident or Radiological Emergency came into force on 26 February 1987. As of 14 April 2010 there were 106 contracting parties.

Its purpose is to facilitate cooperation between countries if one of them were to be affected by an accident with radiological consequences. This Convention has already been used on several occasions for accidents due to abandoned radioactive sources. France's specialised services have already treated irradiated victims. This was once again the case in 2010, with treatment being given to a patient from Latin America. ASN is the competent national authority for France.

4|5 The other conventions linked to nuclear safety and radiation protection

Other international conventions, the scope of which does not fall within the remit of ASN, may be linked to nuclear safety.

Of particular relevance is the Convention on the Physical Protection of Nuclear Material, the purpose of which is to reinforce protection against malicious acts and against misappropriation of nuclear materials. The Convention came into force on 8 February 1987. It had 141 contracting parties in 2009.

Additional information on these conventions may be obtained from the IAEA's website: *www-ns.iaea.org/conventions/*.

In the post-accident field, ASN took part in the CORE Health international programme and the EURANOS programme (stakeholder training) financed by the European Commission. In 2009, with IRSN, it organised the COREX programme (analysis of feedback from actions taken in Belarus by the French teams), of which the last meeting took place at Gomel, Belarus, in October 2010.

5 INTERNATIONAL CONFERENCES

In 2010, ASN played an important role on the international stage, taking part in the major conferences and workshops within its fields of competence. Table 2 summarises the events in question.

Table 2: events in which ASN took part in 2010

Date	Place and organiser	Subject
8-9 March	Paris (MEEDDM)	Conference on Accession to Civil Nuclear Energy
8-12 March	Athens (IAEA-EU-GAEC)	Conference on Individual Monitoring of Ionizing Radiation
9-11 March	Washington (NRC)	RIC 2010 - Regulatory Information Conference
25-26 May	Bratislava (EU)	European Nuclear Energy Forum
14-16 June	San Diego (ICAPP)	ICAPP 2010 - International Congress on Advances in Nuclear Power Plants
21-25 June	Vienna (IAEA)	International Conference on Operational Safety Experience and Performance of NPPs and Fuel cycle Facilities
16-17 September	Budapest (EU)	Conference on Nuclear Energy in Europe : From Acceptability to Appropriation
12-14 October	Washington (NEA)	Practices and experiences in stakeholder involvement for post nuclear emergency management
19-21 October	Växjö Sweden (KIKA)	Nuclear Cranes Seminar 2010
25-29 October	Tokyo (IAEA-JNES)	International Conference on Challenges Faced by TSO in Enhancing Nuclear Safety and Security
9-12 November	Vienna (IAEA)	International Symposium on Standards, Applications and Quality Assurance in Medical Radiation Dosimetry
17-19 November	Cambridge (NEA)	ISOE International ALARA Symposium
23-24 November	Mumbai (AERB)	Technical Meeting on EPR
24-26 November	Japan (IAEA)	Seminar on Seismic Risk and Nuclear Installations, after the Kashiwasaki Kariwa Earthquake of 2007
14-17 December	Rheims (NEA-ANDRA)	International Conference and Dialogue on Reversibility and Retrievability

In 2010, ASN also took the initiative of organising international meetings and conferences, or hosting them at its premises. The list is given below.

Table 3: international meetings and conferences organised or hosted in at premises by ASN

Date	Place and organiser	Subject
7 June	Paris (ASN)	ERPAN — European ALARA Network — European Radiation Protection Authorities meeting
7-10 June	Paris (ASN/IAEA)	Technical meeting on the establishment of a radioactive waste management organization
11-15 October	Paris (ASN/1AEA)	Technical meeting to facilitate and coordinate the review of the technical basis for the regulations on the safe transport of radioactive material
1 December	Paris (ASN)	6th Head of European Radiological protection Competent Authorities (HERCA) meeting

6 OUTLOOK

In 2011, in the field of international relations, ASN will endeavour to continue to make an active contribution to improving nuclear safety and radiation protection around the world. This aim will be pursued by maintaining strong and permanent ASN involvement in European and international bodies.

In Europe, the adoption of the Directive on the Safety of Nuclear Installations in June 2009 has paved the way for the creation of an EU regulatory framework going beyond radiation protection and which will be expanded in the near future. Particular attention will then be paid to the European situation with as a high point the negotiations in Brussels on the directives on "waste management" and "basic standards", without diverting attention from other areas of international action. Also worthy of note is the organisation in Brussels, on 28-29 June 2011, of the first European conference on nuclear safety, an idea suggested by ASN, and which will be held under the aegis of ENSREG. And lastly, it will be essential in 2011 to promote the safety objectives recently adopted by WENRA initially at the European level and then internationally, to ensure that a thorough and far-reaching benchmark for safety predominates in new nuclear power plants. Internationally, ASN will pursue its actions in favour of assistance to "new nuclear countries" so that they create for themselves an effective safety infrastructure. ASN will also very probably be called upon to intensify its relations with countries already using nuclear power that have announced major power plant construction programmes.