

(Courtesy translation from the French)

REPORTING BY FRANCE ON ACTIONS 5, 20 AND 21 OF THE 2010 NPT REVIEW CONFERENCE FINAL DOCUMENT

As provided in the 2010 Nuclear Non-Proliferation Treaty (NPT) Review Conference Action Plan, the Governments of the five NPT nuclear-weapon States, or “P5”, are working to implement Action 5 to “further enhance transparency and increase mutual confidence” and to make national reports on our Action 5 and other undertakings to the 2014 NPT Preparatory Committee under a common framework, consistent with Actions 20 and 21. Action 21 states “As a confidence-building measure, all the nuclear-weapon States are encouraged to agree as soon as possible on a standard reporting form and to determine appropriate reporting intervals for the purpose of voluntarily providing standard information without prejudice to national security.” The framework we use for our national reports includes common categories of topics under which relevant information is reported, and it addresses all three pillars of the NPT: disarmament, non-proliferation, and peaceful uses of nuclear energy. We encourage all States Parties, consistent with Action 20, to make similar reports.

Section I: National disarmament measures

France is fully engaged in support of disarmament in accordance with the objectives of the NPT. Its approach is comprehensive, gradual and concrete:

- **Comprehensive and gradual because the nuclear disarmament objective cannot be dissociated from collective security. It can only develop by taking account of the strategic context and should be viewed as part of a gradual process guaranteeing undiminished security for all and the absence of a new arms race;**
- **Concrete, because taking action is what matters. In this regard, France has adopted highly significant unilateral measures and is making ambitious proposals for the determined continuation of nuclear disarmament at international level.**

i. National security policy, nuclear weapons-related doctrine and activities

The French doctrine is regularly explained publicly. Its basic principles, in particular, are contained in the French President's public speeches and in the White Papers on national defence and security, the latest of which was released in 2013. These statements reaffirm the validity and the principles of nuclear deterrence as conceived by France and help build confidence. It is necessary to make these public statements regularly, even in the absence of new developments. The confirmation of earlier-stated principles constitutes valuable information and provides a form of predictability that is likely to strengthen stability.

In general, the role of nuclear weapons in France's defence and security doctrine is **strictly limited to defending vital interests, in the extreme circumstances of legitimate self-defence.**

The present reporting is intended to explain certain basic principles of our nuclear deterrence. It supplements the aspects discussed in the White Paper.

1. **Political control of nuclear weapons.** France insists on the political conception of those weapons, whose use can only be decided by the President of the Republic. This implies strictly political control.
2. **Nuclear weapons should be viewed as part of a deterrence concept, not as part of a logic towards the use of nuclear weapons.** Under the French deterrence doctrine, nuclear weapons are not battlefield weapons but a means to *deter* a potential adversary from attacking our vital interests. In order for deterrence to work, instances in which nuclear weapons would be used are not, and should not be accurately described in order to prevent potential aggressors calculating risks inherent in an attack.
3. **Nuclear deterrence is strictly defensive.** France does not threaten any state, its nuclear deterrence is not targeted. France announced this in 1997 and has since recalled it on various occasions. Nonetheless, potential adversaries should be aware that nuclear deterrence is designed to protect our vital interests from any state-led aggression, whatever its origin and its form.
4. **The use of nuclear deterrence is solely limited to the extreme circumstances of legitimate self-defense.** French nuclear deterrence is governed by a threshold approach, regardless of the nature of the threat. Conversely, some other doctrines are based on policy governed by the nature of the threat. Those who are concerned about the possibility of the use of nuclear weapons are reassured by these concepts. Yet, a deterrence threshold approach does not confer a greater role on nuclear weapons if the threshold is high, as it is clearly the case in the French doctrine in which the use of nuclear weapons would only be conceivable in the extreme circumstances of legitimate self-defense, a right enshrined in Article 51 of the Charter of the United Nations.
5. **France applies the principle of strict sufficiency.** France adjusts the level and characteristics of its arsenal to the strategic context and to the minimum level compatible with its security. Our strict sufficiency level is determined by a national analysis of the strategic context.
6. In response to the aspirations of non-nuclear-weapon States, **France has given security assurances to all non-nuclear-weapon States parties to the NPT which comply with their non-proliferation commitments.** These security assurances stem from:
 - the French deterrence doctrine, first of all, insofar as it affirms unequivocally and constantly the strictly defensive vocation of deterrence. In this sense, the **French doctrine is in itself an initial security assurance** for non-nuclear-weapon States;
 - the Statement of 6 April 1995, by which France reaffirmed for all non-nuclear-weapon States parties to the NPT the security assurances it gave in 1982; these were endorsed by Security Council Resolution 984. France considers this commitment as **legally binding** and has said so. **It therefore considers itself fully bound by this commitment which it intends to implement in good faith;**
 - the signing of the Protocols to the treaties establishing nuclear-weapons-free zones (NWFZs) that cover more than one hundred States.

These commitments do not affect the right to self-defence as enshrined in Article 51 of the Charter of the United Nations.

ii. *Nuclear weapons, arms control (including nuclear disarmament) and verification*

France attaches the utmost importance to disarmament and confirms this through actions and concrete achievements. This implies considerable financial and human efforts on its part.

A) *Status and reduction of nuclear arsenals and forces*

1) Reduction of the format of French deterrence

a) By virtue of the principle of strict sufficiency, the French arsenal is maintained at the lowest possible level compatible with the strategic environment and the foreseeable development of the threat. To date, the status of French nuclear forces is as follows:

- Two components: a sea-based and an airborne component;
- Sea-based component: four ballistic missiles nuclear submarines (SSBNs) based at L'Île Longue and fitted out with M51 intercontinental ballistic missiles (ICBMs) which ensure continuous at-sea deterrence.
- Airborne component: it is implemented by the air force, from the French territory and the Charles de Gaulle aircraft carrier, with Mirages 2000N and Rafale aircrafts carrying improved medium range air-to-surface (ASMPA) missiles.

France has less than 300 nuclear warheads. It possesses no non-deployed weapons. All its weapons are operational and deployed.

b) This figure shows a **very significant reduction in the format of French forces** as a result of developments in the strategic context which have led **France to reduce its arsenal by half in almost 10 years.**

Indeed, in the context of the Cold War, France gradually acquired three nuclear components. Subsequently, **France reduced its nuclear posture** in accordance with developments in the strategic context:

- **Reduction of the sea-based component by one third:** the number of sea-based component ballistic missile nuclear submarine (SSBNs) in service was reduced from six to **four**.

France has started dismantling its M4 type SSBNs. The *Redoutable* SSBN has been open to the public at the *Cité de la Mer* in Cherbourg since May 2002. A series of complex operations were of course carried out beforehand under optimum nuclear security conditions. The other SSBNs will follow the normal cycle leading to their total elimination.

- **significant reductions in the airborne component** involving:
 - early withdrawal from service and dismantling of the AN-52 nuclear bombs carried by Jaguar and Mirage III aircraft, announced in 1991;

- withdrawal of Mirage IV strategic aircraft from nuclear missions in 1996. Strategic missions were then taken over by the three M2000N squadrons which joined the French Strategic Air Forces at the time.

In addition, in 2008, France was able to announce the decision **to reduce its airborne component by one third**. This **reduction was completed in 2013**, which means that, as announced in 2008, France possesses a total of less than 300 warheads. **All decommissioned weapons have been dismantled.**

- **abandonment of the surface-to-surface component:**

In 1991, France announced several decisions leading to a reduction in its surface-to-surface component, involving early withdrawal of the Pluton short-range missiles (completed in 1993), a cut in the Hadès missile programme from 120 to 30 units (Hadès missiles were intended to replace Pluton missiles), and abandonment of the S45 missile programme, which had been intended to replace the S3D missiles at the Plateau d'Albion site. In 1992, the Hadès missile program intended to replace Pluton missiles was stopped. In 1997, the dismantling of the 30 Hadès missiles that were produced was completed. This meant that the **pre-strategic land component had been abandoned.**

In 1996, France gave up the strategic surface-to-surface component by announcing the final withdrawal and dismantling of the surface-to-surface missile system from the Plateau d'Albion. Two years later, in 1998, the dismantling of all S3D missiles was completed. **France is hence the only State to have fully dismantled its nuclear surface-to-surface component.**

2) Reduction of alert levels

Alert levels were reduced as significantly as the format of nuclear forces. Thus, France reduced the permanent alert level of its nuclear forces twice, in 1992 and 1996. **These alert level reductions concerned both force response times and the number of weapons systems.**

In particular:

- Since 1996, France only maintains one ballistic missile nuclear submarine (SSBN) permanently at sea;
- Since the missiles of the Plateau d'Albion site were eliminated, **France no longer has capabilities on permanent high alert status;**
- In 1997, France also announced that it **no longer had permanently targeted forces** (“detargeting”). It has consistently reaffirmed this since then.

The French nuclear posture is not a matter of “launch on warning” or “launch under attack”, nor is it on the so-called by a number of commentators “hair-trigger alert”. Strict procedures have been put in place to guarantee that no weapon can be used without the order of the President of the Republic. Decisions on alert status and posture are under the responsibility of the President of the Republic.

B) Activities concerning the cessation of production of fissile material for nuclear weapons and efforts to promote a Treaty banning the production of fissile material for use in nuclear weapons and other nuclear explosive devices (Fissile Material Cut-Off Treaty – FMCT)

1) Moratorium on the production of fissile material for nuclear weapons

France ceased to produce fissile material for its nuclear weapons programmes in 1992 (plutonium) and 1996 (highly enriched uranium). It announced a moratorium on the production of those materials in 1996.

2) Dismantling of former facilities for the production of fissile material for nuclear weapons

In 1996, alongside the moratorium, France decided to immediately **dismantle its production units** in Marcoule and Pierrelatte. France wanted **total and irreversible dismantling**.

Dismantling operations represent a considerable financial effort of **EUR 6 billion, of which two billion have already been used**.

The Pierrelatte enrichment plant is now fully dismantled. The operations, which required six years of preparation from 1996 to 2002, involved disassembling of 4,000 diffusers, 1,300 tonnes of diffusion barriers and 1,200 kilometres of pipeline. **The dismantling of the Marcoule reprocessing plant started in 1997 and is scheduled to continue until 2035.**

In addition, the first phase of clean-up and dismantling of Marcoule G1, G2, G3 plutonium-producing reactors is now completed and the second dismantling phase is scheduled to start in 2020 and will continue until 2035.

3) Action in support of a FMCT

France considers that **launching negotiations** on a Treaty banning the production of fissile material for nuclear weapons and other nuclear explosive devices (FMCT) at the Conference on Disarmament is a **priority**. These negotiations constitute the **next logical step at multilateral level, with a view to creating the conditions for a world without nuclear weapons** in accordance with the NPT objectives, as part of a realistic approach based on concrete and gradual gestures.

From the French view, a FMCT should make it possible to **limit arsenals quantitatively** by ceasing to produce fissile material for manufacturing nuclear weapons. It is the key complement to the Comprehensive Nuclear Test Ban Treaty (CTBT). Therefore, it appears essential for the FMCT to encompass all possessing nuclear weapons States.

Prior to its entry into force, **all States concerned should, as France has done, declare a moratorium on the production** of fissile materials for nuclear weapons.

France participates in the Group of Governmental Experts established by UNGA Resolution 67/53 and considers that it could usefully contribute to preparing future negotiations on an international legally binding instrument.

C) Activities to put an end to nuclear testing and to promote the CTBT

1) Complete cessation of nuclear testing

France put a complete stop to nuclear testing in 1996.

It signed the **CTBT** on 24 September 1996 and ratified it on 6 April 1998.

France conducts activities designed to guarantee the safety and reliability of its nuclear weapons. Those activities include in particular a simulation programme and hydrodynamic experiments to model the performance of materials under extreme physical conditions and, more broadly, the functioning of nuclear weapons. They scrupulously comply with the obligations under the CTBT which prohibits all nuclear explosions whatever their yield and puts an end to the development of advanced new types of nuclear weapons. In other words, the simulation programme is designed only to ensure the safety and reliability of nuclear weapons and in no way allows the development of advanced new types of nuclear weapons.

2) Complete and irreversible dismantling of the former Pacific Testing Centre

In 1996, at the same time as it ended nuclear testing, France decided to carry out the **complete and irreversible dismantling of the sites** of the Pacific Testing Centre (CEP) on the Mururoa and Fangataufa atolls in the South Pacific.

Dismantling was completed in 1998 following the destruction of all infrastructures and virtually all buildings, and clean-up operations were conducted to eliminate all radiological risks. An experts' mission under the aegis of the International Atomic Energy Agency (IAEA) carried out an independent, comprehensive and objective evaluation of both the present and expected radiological conditions at the Mururoa and Fangataufa atolls and concluded that there were no such risks in its report *The Radiological Situation at the Atolls of Mururoa and Fangataufa* published in 1998. Today, France still maintains radiological and geomechanical surveillance of the atolls.

3) Support for the CTBT

France actively supports efforts at universalization of the CTBT among Annex II States and the other States which have not yet acceded to the Treaty. At national level, it has launched and conducted demarches, notably in French-speaking countries. France participates in the work to promote the Treaty conducted by the Group of Eminent Persons (GEM) created in September 2013 by the CTBTO Executive Secretary. France has also joined the demarches conducted on a regular basis by the European Union. It fully backs the EU's support for the CTBTO, which was given concrete shape by the EU Council Decision on the Union support for the activities of the Preparatory Commission of the CTBTO.

France also provides **technical support to the CTBTO**, particularly for the **finalization of the verification regime** provided by the CTBT. The following actions have thus been launched:

- Regarding the International Monitoring System (IMS), France ensures the deployment and operation of 17 stations in its territory and provides technical assistance to operate and maintain 8 foreign stations.

Furthermore, France contributes significantly to the engineering work needed to establish the IMS, particularly as regards new technologies such as infrasound technology (sensors, station engineering, calibration techniques) and the measurement of noble gases.

Through its National Data Centre, France supports the development of the CTBTO's International Data Centre by providing software (analysis of infrasound data, tools for monitoring the stations network) and searching for innovative solutions. France hence actively contributes to evaluating verification regime performance, maintains close relations with many National Data Centres and contributes to their development.

- Regarding the On-Site Inspections Regime, France also puts its expertise at the service of on-site inspections either directly to develop the inspections regime (inspectors, inspection techniques, participation in major exercises such as the Integrated Field Exercise 2014 (IFE14), particularly by helping work out scenarios) or through research work.

iii. Transparency and confidence-building measures (CBMs)

France is committed to transparency efforts among the P5 and vis-à-vis non-nuclear-weapon States. It contributes to them at national level and on a voluntary basis through:

- Regular efforts at **transparency on its deterrence doctrine** and its underlying basic principles. France views this as an important contribution to the stability and predictability of relations among nuclear-weapon States and between nuclear-weapon States and non-nuclear-weapon States.
- **Efforts at transparency on its forces.** In this regard, we should recall in particular:
 - The **announcement that France has less than 300 nuclear weapons** (this is a total figure which is not limited to deployed operational strategic weapons);
 - The announcement that France has **no nuclear non-deployed weapons**;
 - The announcement and reminder that weapons are not targeted;
 - The **pre-notification of all space and ballistic missile launches in the framework of the HcoC**: since January 2010, France has given 36 launch pre-notifications corresponding to all the space and ballistic launches carried out in the past four years. This effort is followed up with the annual publishing, under the Transparency and Confidence-Building Measures (TCBMs) provided for by the HcoC, of a statement setting out French

ballistic missile and space policy. Finally, for the first time in the history of the HcoC and pursuant to one of its measures, in 2011 France hosted a visit of international observers to the *Centre Spatial Guyanais – CSG* (French Guiana Space Centre) in Kourou.

- **Efforts at transparency on concrete disarmament measures** launched by France, regarding in particular the dismantling of nuclear testing facilities in the Pacific and the production of fissile material for nuclear weapons at Pierrelatte and Marcoule. In this connection, France organized a visit of its former fissile material production plants for representatives of more than 40 Member States of the Conference on Disarmament on 16 September 2008, for non-governmental experts on 16 March 2009, and for the international press on 3 July 2009.
- In addition to this national initiative, France has been involved in the China-led efforts within the P5 to develop a **nuclear terminology glossary**. Nuclear definitions and terminology are essential in enhancing reciprocal understanding and facilitating dialogue among the P5.

iv. Other-related issues

Nuclear disarmament only makes sense provided that it does not lead to an arms race in other areas. There is therefore also the need to view it as part of **general and complete disarmament** in accordance with Article VI of the NPT.

France's determined action therefore also focuses on other disarmament areas, in particular the Biological and Toxin Weapons Convention (BTWC). France is the depositary State of the 1925 Geneva Protocol and also the country where the Chemical Weapons Convention (CWC) was signed in 1993. Its commitment to the fight against chemical weapons, and alongside the Organization for the Prohibition of Chemical Weapons (OPCW), has been recognized. At the political level, France has played its role to secure the universalization of the Convention through demarches at national and European level.

France abides by its international commitments and gives itself the means to comply with them.

France supports the OPCW's action to address the exceptional challenge represented by the dismantling of Syria's chemical arsenal. It has made its best experts available to the OPCW and mobilized to ensure that the EU soon contributes to the destruction process.

A proposal for a peer review mechanism was put forward by France some years ago now within the Biological and Toxin Weapons Convention (BTWC). Contrary to other organizations, the BTWC does not have a verification mechanism. The French proposal is an innovative approach designed to strengthen the principal counter-proliferation instruments.

Thus, in December 2013, France organized a pilot "peer review" exercise on the national implementation of the BTWC.

In the area of conventional weapons, the year 2013 saw the adoption on 2 April at the United Nations of the Arms Trade Treaty (ATT), which is the first major universal treaty of the 21st century in the area of international security and arms control. France signed it on 3 June and wanted to be among the first to accede to it. It has completed its national ratification procedure and deposited its ratification instrument at the end of March 2014, concertedly with some 10 other European States.

The Arms Trade Treaty is a further step towards the ultimate objective of general and complete disarmament. The threat of the spread of conventional arms involves a great number of actors and is a challenge to the authority of States. It can only be resolved through sustainable and global action.

France, together with its European partners, made its utmost efforts for this Treaty to be adopted on the basis of high requirements. During the Elysée Summit in December 2013, we obtained a commitment on the part of the African States to accede to it rapidly. We stand ready today to provide assistance for its implementation.

France is party to the 1980 Convention on Certain Conventional Weapons (CCW) which remains the preferred framework for conventional disarmament within the United Nations insofar as it brings together the principal countries that manufacture and use weapons.

France is also party to the 1997 Ottawa Convention which prohibits the use, stockpiling, production and transfer of anti-personnel mines and ensures the destruction of their stockpiles and depollution of mined areas; and to the 2008 Oslo Convention which contains similar provisions on cluster munitions. It has completed the implementation of its obligations under the Ottawa Convention prior to the deadlines imposed by the latter. Furthermore, France scrupulously complies with its obligations under the Oslo Convention by devoting almost EUR 20 million to the destruction of its cluster munitions stockpiles.

France regularly makes demarches to promote these different instruments among non-signatory States. It did so in particular during its ongoing 2013-2014 Chair of the CCW conference.

In the framework of this Chair, France secured the adoption of a mandate for discussion of Lethal Autonomous Weapons Systems (LAWS). The purpose of those informal meetings will be above all to inform all States Parties about the challenges posed by those weapons and to clarify the terms of debate. Should States find it useful, this exercise may be renewed, in this format or in a more formal framework, during the next Assembly of States Parties in November 2014.

Section II: Reporting on national non-proliferation measures

The proliferation of nuclear weapons and their delivery means is a threat to international peace and security; it is also a threat to the regions concerned. Therefore, France feels that it is imperative to oppose proliferation resolutely. France's action in the fight against nuclear proliferation for the implementation of the NPT and the 2010 Review Conference Action Plan is focused on three main lines: strengthening the non-proliferation regime, responding to proliferation crises and stepping up practical efforts to prevent and curb proliferation.

i. Implementation and Support for Safeguards

France is committed to the IAEA Safeguards system, which is a key element of the non-proliferation regime and to the strengthening of this regime. France is subject to many inspections by the IAEA and Euratom.

A) French commitments with regard to Safeguards

- Voluntary Offer Agreement: With a view, in particular, to helping to strengthen the Safeguards system, France offered to submit certain civil nuclear material to IAEA Safeguards. The Safeguards are applied under the terms of a trilateral agreement between France, Euratom and the IAEA (INFCIRC/290) that came into force in 1981.
- France also made a voluntary commitment to submit additional information to the IAEA:
 - Notification of imports and exports of nuclear material (INFCIRC/207/Add. 1, 1984)
 - Notification of imports and exports of concentrates of uranium and thorium (INFCIRC/415, 1992)
 - Annual figures for holdings of civil irradiated and unirradiated plutonium and highly enriched uranium (INFCIRC/549, 1998)
- Additional Protocol: To enhance the capacity of the IAEA to detect clandestine nuclear activity by non-nuclear-weapon States, France signed a protocol additional to its Safeguards agreement in 1998. The Protocol came into force on 30 April 2004. The Additional Protocol is a key instrument for France's commitment to nuclear non-proliferation.

Several points in the French Additional Protocol warrant special attention:

- **Complementary access**: IAEA inspectors may request access to any location in France – hence to any nuclear installation – with at least 24 hours' notice in order to resolve any questions relating to the correctness or completeness of information provided for the purposes of the Protocol, or to resolve an inconsistency relating to such information, and to use comparisons to detect any indication of clandestine nuclear activity by a NNWS. Complementary access methodology and the activities that inspectors may engage in during such access (environmental sampling, measurements, etc.) are similar to the activities specified in the Model Additional Protocol proposed by the IAEA.
- Providing the **IAEA with information about cooperation with NNWS** relating to all aspects of the fuel cycle. For example, France informs the IAEA of its plans for nuclear cooperation involving the fuel cycle with non-nuclear-weapon States over the next 10 years.

B) Euratom safeguards

Like its EU partners, **France is subject to Euratom safeguards inspections of all civil nuclear material** covered by the Euratom Treaty. Consequently, **all French facilities where**

civil nuclear material is present are inspected by Euratom. The objective is to verify that the use of such material complies with that declared by the installation operators.

C) Implementation of these inspections has made the French civil nuclear fuel cycle one of the most comprehensively inspected in the world

Because of the number and diversity of nuclear installations in France, the country is subject to major inspection efforts covering all of the installations involved in civil nuclear activities. For example, Euratom conducted 336 inspections in 2013. This **huge effort makes France one of the most closely inspected countries in the world.**

Sensitive nuclear fuel cycle facilities in France have also been placed under IAEA Safeguards: the new Georges Besse II enrichment plant has been subject to **inspections equivalent to those that the IAEA conducts in similar facilities located in European non-nuclear-weapon States**; some areas of the Hague processing-recycling plant and Melox MOX fuel fabrication are also covered by the Safeguards. These facilities are also subject to Euratom safeguards. **The Hague reprocessing plant is the European facility that Euratom inspects most thoroughly.**

The verification activities of Euratom in France in 2013 involved: 336 inspections; 1,475 man/days of inspections and submission of 214,320 accounting items. For the same year, the verification activities of the IAEA in France involved: 26 inspections; 113 man/days of inspections; submission of 80,000 accounting items; 18 reports submitted for the purposes of the Additional Protocol (15 for France and 3 for the EU).

D) Political, technical and financial support for the Safeguards

- *Political support:* France led or participated in actions to promote the Additional Protocol within the G8 framework. France has also given active support to EU initiatives relating to the promotion of the Additional Protocol (financial contributions and targeted actions).

At the relevant meetings of the IAEA Board of Governors and the General Conference of the IAEA, France has regularly called for universalization of the Comprehensive Safeguards Agreement and the Additional Protocol as the verification standard. France has demonstrated its commitment to on-going reinforcement of the effectiveness and efficiency of the IAEA Safeguards system, particularly through the implementation of Safeguards at the State level.

France supports the IAEA's activities to make States aware of how important the principles of universality and reinforcement of Safeguards are. More specifically, in 2013, France made a financial contribution to the holding of training seminars in preparation for the ratification of the Additional Protocol. The seminars took place in Burma/Myanmar and Laos.

- *Technical and financial support:* France is committed to the central role played by the IAEA Safeguards system and makes sure that the Agency has human, financial and technical resources to fulfil its mandate from the international community, thus ensuring the credibility of its verification mission.

For example, a French Support Programme for IAEA Safeguards (PFSG) was set up in 1983

as a practical measure to express France's political support for the IAEA's verification activities. Under the programme, technology transfers, financial contributions and expert advice are provided to help the IAEA Safeguards Department improve the implementation methods for its verifications and make them more technically and economically efficient.

The French Support Programme for IAEA Safeguards **is one of the four largest national support programmes** and the total value of its actions estimated at some **EUR 1.5 billion per year**.

France has also contributed to the EU efforts to support the IAEA's verifications, including:

- Council Decisions on EU support for IAEA activities in the areas of nuclear security and verification;
- Contributions to the renovation of the IAEA's Safeguards laboratories ("ECAS project").

E) Nuclear transfers provided for as part of France's civil nuclear cooperation are subject to permanent Safeguards

The intergovernmental agreements (IGAs) underlying France's civil nuclear cooperation with third countries contain specific clauses that make the material, supplies and equipment subject to IAEA Safeguards, which apply under the agreements that these countries have with the IAEA. In the event that the Safeguards cannot be applied, the parties shall set up a mutually agreed Safeguards system that is equivalent in effectiveness and scope to the IAEA Safeguards. Finally, IGAs usually stipulate that the provisions on Safeguards continue to apply even after the agreement is terminated or expires.

ii. Export controls

- *France plays an active role in international nuclear control regimes*

As a member of the Zangger Committee and the Nuclear Suppliers Group (NSG), France contributes to international efforts to fight proliferation, including efforts to:

- update control lists and ensure that they are relevant in light of contemporary technological developments (taking part in the work of the Dedicated Meeting of Technical Experts (DMTE) and the Technical Experts Group (TEG));

- raising non-member States' awareness of the need to strengthen their export controls (outreach).

- *Implementation of export controls at the national level*

- **Bilateral agreements** governing France's civil nuclear cooperation with third countries incorporate France's commitments as a member of the NSG (assurances to be obtained from recipients in the event of transfers and retransfers, etc.)

- **Control lists** set out in European Regulation (EC) No 428/2009 are **directly applicable at the national level** and include the dual-use goods and technology control lists of all of the

export control regimes (NSG, MTCR, Australia Group and Wassenaar Arrangement). These lists are updated periodically to keep pace with technological change and new proliferation issues.

Finally, the French export control authorities rely on a “**catch-all**” clause in the Regulation that allows them to control exports of any unlisted item. It can be used when there is a serious risk that the item concerned may have an application related to weapons of mass destruction.

- *Contribution to relevant national capacity-building efforts*

France provides active support for the European Union’s action to disseminate a European non-proliferation culture, particularly with the implementation of the **New Lines for Action in combating the proliferation of weapons of mass destruction and their delivery systems adopted by the EU in 2008 and renewed at the end of 2013**.

A substantial share of the budget of the **European Union Chemical, Biological, Radiological and Nuclear Risk Mitigation Centres of Excellence** (out of a total of more than EUR 20 million per annum) is devoted to financial, technical and operational assistance to third countries to help them strengthen their export control systems. France Expertise Internationale (FEI) is the leading coordinator of French experts for projects undertaken within this framework.

iii. Nuclear security

- *Ratification of international agreements*

France is a **party to all of the relevant international instruments** since it ratified the 2005 Amendment to the Convention on the Physical Protection of Nuclear Material (CPPNM) on 1st February 2013 and the International Convention for the Suppression of Acts of Nuclear Terrorism (ICSANT) on 11 September 2013.

- *Implementation of IAEA recommendations*

France has made very good progress on implementing INFCIRC/225/Rev. 5 (Nuclear Security Series (NSS) No 13). French regulations incorporate virtually all of the points in the IAEA Circular and go even further in some cases. An IAEA peer review mission by the IPPAS in France (Gravelines) in November 2011 upgraded the quality rating of the French nuclear security system, particularly with regard to physical protection of nuclear material.

- *Action plan to support the IAEA’s action signed with the Agency*

In April 2005, France and the IAEA signed an action plan (renewed in 2013 until 2015) to support the IAEA's activities related to nuclear and radiological security, particularly in areas related to cyber-security, strengthening national nuclear security systems, physical protection of nuclear material and nuclear material accounting, security of radioactive sources, detection and intervention. This support has amounted to EUR 730,000 each year since 2011, for a total of EUR 2.8 million since 2010. In this framework, France carried out work to identify and secure French radioactive sources that have been exported.

- *Support for IPPAS missions*

In addition to hosting an IPPAS mission in November 2011, France organized, in cooperation with the IAEA, a seminar on IPPAS missions in Paris on 4 and 5 December 2013 which was attended by 43 States and international organizations. The seminar was an opportunity to share the lessons learned from the missions and to encourage the States that had not yet done so to host such missions. Finally, the French authorities have provided support personnel for preparations for the missions and the IAEA's training activities.

- *Efforts to minimize highly enriched uranium (HEU)*

Since 2010, France has worked with several partner States to minimize the use of HEU in the production of medical radio-isotopes and in the manufacture of fuels for research reactors.

- *Efforts to secure radioactive sources*

The possible diversion of radioactive sources for malicious purposes is a genuine threat to international security. Therefore, France and the IAEA signed an agreement in 2011 to identify sources exported by French companies in order to secure them in the countries where they are now located or, when that is impossible, to bring them back to France so that they can be processed there. This work has already led to the identification of 300 exported high-activity sources. However, just under 200 of these sources require action. The decision to repatriate them will be made on a case-by-case basis for each of them. Several repatriation operations have already been completed in recent years and exploratory visits mean that more repatriation operations to new countries may be considered in the future.

France maintains a firm commitment to securing and repatriating radioactive sources within the Nuclear Security Summit framework and the G8 Global Partnership Against the Spread of Weapons and Materials of Mass Destruction (GPWG).

During the Nuclear Security Summit in The Hague on 24 and 25 March 2014, the President of the French Republic announced the launch of an initiative to reinforce the security of high-activity radioactive sources (HARS) by implementing three key working priorities:

- Deepen the applicable international framework;
- Minimize the use of such sources; and
- Create a "Radiological Sources Suppliers Group".

iv. Nuclear-weapon-free zones

France has long supported the establishment of nuclear-weapon-free zones (NWFZs). The regional approach is an important means of promoting disarmament and non-proliferation.

- *Ratification of protocols to Treaties creating nuclear weapon free zones*

France is party to the **protocols to the Tlatelolco, Rarotonga and Pelindaba Treaties**.

By this means, France has **reiterated to more than 100 States the security assurances that it gave unilaterally in its declaration of 6 April 1995**.

In 2012, **France and Mongolia signed two parallel political declarations** on Mongolia's nuclear-weapon-free status.

- *Outlook for the signature of new protocols*

France is in favour of continued development of NWFZs. After resuming discussions with Central Asian countries, **France and its P5 partners will sign the protocol to the Semipalatinsk Treaty on the sidelines of the upcoming P5 Preparatory Committee.**

In the case of the Southeast Asia Nuclear-Weapon-Free Zone established by the Bangkok Treaty, **France and its P5 partners have resumed discussions with the Association of Southeast Asian Nations (ASEAN)** to find solutions, to all identified problems, that are acceptable to all stakeholders. To this end, France joined the consensus achieved at the latest session of the United Nations General Assembly regarding the resolution on creating a nuclear-weapon-free zone in Southeast Asia.

- *Middle East zones free of nuclear weapons, other weapons of mass destruction and their delivery systems*

From the outset, France has supported the plan to create a **Middle East Zone free of weapons of mass destruction and their delivery systems.** France has been calling for all of the States concerned to implement the resolution adopted by the 1995 NPT Review Conference in order to make progress towards lasting peace in the Middle East. At the meetings of the First Committee of the United Nations General Assembly, France consistently votes in favour of documents supporting this objective.

One of the major measures called for in the Action Plan that the 2010 NPT Review Conference adopted by consensus was the organization of a conference on the Middle East. The announcement made at the end of 2012 about the postponement of the conference was a source of legitimate disappointment. However, the cycle is not over yet and France supports the facilitator, Jaakko Laajava.

Furthermore, France intends to contribute to creating the right conditions for achieving the objectives of the 1995 Resolution. It has made **unrelenting efforts to resolve regional tensions, particularly with regard to the Middle East peace process.** France also works to ensure that **all of the States parties to the NPT comply with their nuclear non-proliferation undertakings.** Together with its partners in the Six, France is working to reach a negotiated settlement of the Iranian nuclear crisis, which is a threat to regional peace and security. As stated by the Security Council in its Resolutions 1747, 1803 and 1929 on Iran's nuclear programme, **a solution to the Iranian issue would contribute to global non-proliferation efforts and to achieving the goal of a Middle East zone free of weapons of mass destruction and their delivery systems.**

France is also participating in the implementation of the 1995 Resolution through its **unwavering support for the universalization of the main non-proliferation instruments,** which contribute to our collective security, within the framework of its bilateral relations with the countries in the region and in the relevant multilateral forums. France calls on all States that have yet to accede to the NPT to do so, and to implement its provisions fully in the meantime. France also urges all of the States in the region to accede soonest to the other

existing agreements and instruments on non-proliferation of weapons of mass destruction and their delivery systems.

v. *Compliance with non-proliferation commitments and other matters*

Proliferation crises are **serious threats to international and regional security and stability**. They are **obstacles to the development of civil nuclear cooperation**. They undermine mutual confidence and **impede disarmament**. The exacerbation of such crises makes it more necessary than ever to make decisions about the consequences of non-compliance with the Treaty and abusing the right to withdraw.

A) *Proliferation crises*

- *Iran*

In the case of the Iranian proliferation crisis, France and its partners in the E3+3 Group mandated by the Security Council negotiated an interim agreement in 2013 aimed at halting the main proliferation aspects of Iran's nuclear programme. A joint plan of action was approved in Geneva on 24 November 2013 and came into force on 20 January 2014. France played its part fully, alongside its partners, to convince Iran to accept substantive non-proliferation measures. So far, Iran has implemented the agreement satisfactorily, as testified by the IAEA. France will ensure that Iran continues to do so throughout the implementation of the agreement.

France is determined to continue working on achieving a long-term diplomatic solution, based on rebuilding confidence in the exclusively peaceful purposes of the Iranian programme. The November 2013 joint plan of action, along with the Security Council Resolutions, will form the foundation for negotiating a long-term solution with Iran. In this context, along with other issues, it is very important to resolve all of the outstanding issues about the Iranian programme, including its possible military aspects. This is the responsibility of the IAEA, but such a resolution is an important prerequisite for a long-term agreement. Where necessary, it will be critical for Iran to apply an Additional Protocol so that the IAEA can assure the international community that there are no undeclared nuclear material or activities in Iran.

- *North Korea*

France is deeply concerned by North Korea's continuing nuclear and ballistic missile programmes, which the United Nations Security Council has condemned again and again. The objective is still the comprehensive, verifiable and irreversible dismantling of North Korea's facilities related to these programmes and the unconditional return of IAEA inspectors. In this respect, France will be particularly vigilant that the ballistic missile aspects of North Korea's proliferation activities are not overlooked. France firmly condemned the ballistic missile test in December 2012 and the nuclear test in February 2013, both of which violated the relevant Security Council Resolutions.

France actively supports the resumption of discussions within the framework of the six-party talks, to which it is not a party. However, a return to the negotiating table would mean that North Korea has to take practical and binding measures to demonstrate its willingness to cooperate in achieving the goal of a denuclearized Korean peninsula, in order to rebuild

confidence. Instead, North Korea is making provocative declarations about its determination to step up the development of its nuclear programme.

B) Withdrawal (Article X)

France played an active role in the debate about withdrawal from the Treaty (Article X) and its consequences. The debate started with North Korea's announcement on 10 January 2003 that it intended to withdraw from the NPT.

The adoption by the States parties to the NPT of measures related to this issue has been debated for more than ten years now and it is **critical for the credibility and the integrity of the NPT, and for the consolidation of the non-proliferation regime**. It would not be acceptable for a State, after using the provisions and the cooperation provided under Article IV to obtain nuclear material, facilities and technologies, to withdraw from the Treaty with impunity and use them for military purposes, nor to withdraw from the Treaty after diverting them from their civil uses to military purposes in violation of the Treaty.

The objective of the initiative is not to deny States their right to withdraw, which is provided for in Article X of the Treaty itself. The point is to uphold the procedures for exercising this right, which are defined by both the Treaty and international law and, most especially, to organize **the best response by the international community in the event of abuse of the right to withdraw**.

France has supported the proposals circulating in the various working papers submitted, including papers by the European Union, the United States, Russia and Ukraine, along with papers from other States parties. These papers take converging positions on a number of points, such as the need for rapid consultations between States parties, the central role of the IAEA in verifying compliance with international non-proliferation obligations before withdrawal and the value of maintaining effective control over the nuclear material and equipment of the State that gives notice of its withdrawal.

vi. Other contributions to non-proliferation of nuclear weapons

- *Financial vigilance*

France has engaged with the work of the FATF to establish international recommendations to criminalize proliferation financing in all forms, along with being an accomplice to such financing. France has contributed to the drafting of FATF Recommendation 7, which was adopted in February 2012. This Recommendation calls on States to implement targeted financial sanctions against persons who finance activities prohibited by the United Nations Security Council resolutions adopted under Chapter VII of the Charter of the United Nations.

For the purposes of this international recommendation, France's domestic law criminalizes the funding of proliferation (Act 2011-266 of 14 March 2011). This Act provides for criminal penalties of up to 20 years in prison and EUR 7.5 million in fines for anyone who provides, collects or manages funds, securities or financial assets of any kind for the purpose of carrying out proliferation activities. France urges the States that have not yet done so to strengthen their domestic laws along these lines.

- *Counter-proliferation policy*

France has participated in the interception of proliferation sensitive goods and was one of the founding States of the Proliferation Security Initiative (PSI) in 2003.

In April 2013, France proposed creating a “Mediterranean Section of the PSI” to make the PSI more effective. The Mediterranean is a major international trade route and one of the most often used by States proliferators to procure various prohibited goods.

- *Fighting intangible transfers and dissemination of knowledge and know-how*

Transfers of know-how and sensitive technology may be diverted and find applications related to the proliferation of weapons of mass destruction and their delivery systems.

To prevent the appropriation in France of this knowledge and know-how that could contribute to the development of proliferation programmes relating to nuclear, biological, chemical or ballistic weapons, France has supplemented its arrangement for the protection of French scientific and technical potential (PPST) governed by Decree 2011-1425 of 2 November 2011 with a section dealing with the fight against proliferation.

- *Support for the implementation of Resolution 1540*

France supports the implementation of Resolution 1540. Since 2004, France's assistance has taken the form of bilateral actions with States that request it and contributions to the 1540 “Voluntary Fund”.

Section III: Reporting on National Measures Relating to the Peaceful Uses of Nuclear Energy

For the purposes of Article IV of the Treaty, France plays an active role in the international community's efforts to share the benefits of civil uses of atomic energy, under the best safety, security and non-proliferation conditions.

i. Promoting Peaceful Uses

A) Support for the development of energy applications

- *Sharing nuclear know-how and technology*

There are currently 72 nuclear reactors under construction around the world and the OECD and the IAEA forecast that global nuclear electricity capacities will continue to grow in the coming decades. France feels that the implementation of a nuclear power programme calls for obtaining a comprehensive set of best knowledge and skills, and for fostering a strong nuclear safety and security culture.

In this respect, France has broad nuclear know-how that benefits many countries in the following areas:

- design and construction of third-generation reactors that meet the most demanding safety and security requirements for the entire life of the facility, based on a range of different reactors, with the benchmark EPR programme (1,650 MWe) and the ATMEA1 reactor (1,100 MWe);
 - safe and effective operation of reactors in the long term;
 - control of the entire fuel cycle and the related services, contributing to sustainable supply security and safe material management;
 - key contributions to the development of future nuclear systems (ITER project, designs for the ASTRID project for sodium-cooled fast neutron reactors, work on small- and medium-power reactors, the Jules Horowitz reactor now under construction, etc.)
- *Specific institutional support*

France cooperates with a growing number of countries and pays special attention to the needs expressed by developing countries.

France provides partners seeking to develop nuclear power programmes with coordinated assistance for preparing the necessary infrastructure (training and information, energy policy, feasibility and realization studies, regulatory framework, waste management, etc.) The Agence France Nucléaire International (AFNI) was created in 2008. It provides support in the examination phase (before making the decision to use nuclear energy) and the diagnosis phase. AFNI provides advice and training to help countries acquire the necessary skills to control their project under the best conditions, in coordination with the activities carried out

by the IAEA. The Agence France Nucléaire International (AFNI) relies on the expertise of all industrial and institutional actors in the French nuclear industry, including the Institute for Radioprotection and Nuclear Safety (IRSN), the National Agency for Radioactive Waste Management (ANDRA), AREVA and EDF.

- *Making training a priority*

France has developed a specific training system that is closely tailored to the needs of the nuclear industry and its oversight, and to the needs of research as well. The training provided covers all of the functions and skills required for the industry.

This training is open to foreign students: each year, some 20% of the nuclear energy master degrees in France are awarded to foreign nationals. The International Institute of Nuclear Energy (I2EN), which provides information on all of the training available in France, is the ideal entry point for any foreign student seeking such training.

In addition to educating foreign students in its universities, France hosts students and professionals who are IAEA bursary recipients for internships or study visits to hospitals (radiotherapy and nuclear medicine departments in particular), research institutes or industrial companies. In 2012, France hosted 47 interns from 18 different nationalities and 34 other interns of 16 nationalities on study trips.

As part of its collaborations, France shares its training experience with partner countries seeking to develop their nuclear power programmes.

- *Support for international initiatives relating to the nuclear fuel cycle*

During the French Presidency of the European Union, France and its European partners made a joint commitment to provide European Union financing (up to EUR 25 million) and technical resources to set up a low enriched uranium (LEU) bank under the aegis of the IAEA. The IAEA Board of Governors authorised the creation of the bank in November 2010. The bank will promote the development of economically viable nuclear power programmes, while mitigating proliferation risks. France has also supported other initiatives related to multilateral nuclear fuel assurances, such as the UK-led Nuclear Fuel Assurance (NFA) project or the LEU reserve in Angarsk proposed by Russia. The IAEA Board of Governors adopted both of these projects.

B) Nuclear applications for development

France supports the IAEA Technical Cooperation Programme and the development of nuclear applications for the benefit of all through its financial contributions, provision of technical expertise and hosting interns and professionals for training in varied fields such as, for example, agronomy, nuclear medicine and environmental protection.

ii. Technical assistance through the IAEA to its member States

- France actively supports activities of the Nuclear Infrastructure Development Section (NIDS), formerly the Integrated Nuclear Infrastructure Group (INIG) of the IAEA's

Department of Nuclear Energy, to develop the necessary infrastructure for setting up a nuclear electricity programme by providing experts, making financial contributions and organizing technical training courses and meetings in France.

- The IAEA Technical Cooperation Programme provides substantial support for the Member States' efforts to master nuclear technology. France supports the programme through the involvement of its experts in the projects and through **off-budget contributions** to finance "footnote-a/" projects, in addition to its contribution to the Technical Cooperation Fund. Between 2005 and 2013, France contributed **financing for 18 technical cooperation projects**.

Health is a priority for France's action, which includes, for example, regular contributions to the IAEA Programme for Action for Cancer Therapy, treatment for radiation accident victims in France's specialized hospitals, support for the Nuclear Sciences and Applications Department's research programmes on infectious diseases, and partnerships between the IAEA and French institutions, such as the Institute for Development Research or the National Cancer Institute.

France is also active in developing nuclear techniques to improve **agriculture** and the **environment**. For example, France participates in the financing of technical cooperation projects in Africa to improve crop yields by using advanced irrigation techniques.

iii. *Nuclear safety and civil nuclear liability*

A) Action to strengthen the safety framework

France feels that the scale of the accident at the Fukushima Daiichi plant and its consequences underline the need for an absolute liability policy relating to nuclear safety and transparency. The French authorities have consistently called for improving and maintaining the highest level of nuclear safety, everywhere in the world, and for fostering responsible nuclear development at the international level.

1) Action in France

- In 2011 and 2012, France carried out **additional safety assessments** of nuclear power reactors, as well as research facilities and nuclear fuel cycle facilities. The Nuclear Safety Authority published a **national plan of action** in December 2012 after the assessments were completed, which was then peer-reviewed at the European level.
- France also hosted **IAEA peer review missions** related to nuclear safety, with one OSART visit per year, and a new IRRS mission in 2014. All of these actions were carried out to demonstrate transparency with regard to other States and citizens: France published the IRRS and OSART peer review reports on missions to France, along with the calendar of past and planned visits.
- France worked to **strengthen its preparedness and response to nuclear and radiological crises**, by drafting and disseminating a National Crisis Management Plan. Nuclear facility operators also took part in this effort, with the **creation of emergency response forces** by EDF and AREVA.

2) International action

- *Support for the IAEA*

France contributed to shaping and implementing the **IAEA Action Plan on Nuclear Safety**. In December 2012, France published a paper on its implementation of the IAEA Action Plan.

Strengthening international cooperation relating to nuclear and radiological emergency preparedness and response is critical. Assistance by France included a summary of its work in the form of 9 practical proposals for redefining the operational role and means of action of the IAEA Incident and Emergency Centre (IEC) in the event of a nuclear crisis.

- *Strengthening the international safety framework*

France has worked to achieve universalization and strengthening of international agreements relating to nuclear safety. To this end, it played an active part in the “Effectiveness and Transparency” working group, which is responsible for drafting proposals to strengthen the Convention on Nuclear Safety.

- *Cooperation relating to regulatory assistance*

The French Nuclear Safety Authority provides regulatory assistance to third States through bilateral cooperation actions or through multilateral instruments in order to help the concerned countries establish a sound regulatory framework for safety, an independent safety authority and a safety culture.

B) Civil liability for nuclear damage

France supports the introduction of a global civil liability system for nuclear damage. An appropriate regime for the civil liability of nuclear facility operators in the event of an accident is a critical prerequisite for responsible and sustainable development of nuclear energy. A universal regime for civil liability for nuclear damage is one of the major objectives of the IAEA Action Plan on Nuclear Safety.

France and the United States started work on the foundations and conditions for establishing a global civil liability regime for nuclear damage. This work resulted in the signature of a joint statement in August 2013. The joint statement sets out our common priorities with regard to the vital issue of compensation for nuclear damage. The statement reaffirms our commitment to contributing to the development of a global nuclear civil liability regime based on treaty relations between States providing for fair compensation of nuclear accident victims, as recommended by the IAEA Action Plan on Nuclear Safety. The statement also urges States to join such a regime.

France feels that the amended Paris Convention (combined with the Supplementary Brussels Convention) and the amended Vienna Convention, along with the Joint Protocol on the Application of the Paris and Vienna Conventions, provide an appropriate basis for compensation for nuclear damage.

iv. Other matters

France has made **transparency** and **public information** key components of its nuclear policy:

- Through a rigorous policy for transparency and public involvement in the implementation of nuclear projects, upheld by the Nuclear Transparency and Security Act of 2006, which instituted the High Committee for Nuclear Transparency and Disclosure (HCTISN) and reinforced the role of the 53 Local Information Commissions (CLIs);
- And through a sustained communications effort relating to nuclear issues.