



# Annual Report 2020

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# Foreword

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On 1 June 1960, the newly established Supply Agency of the European Atomic Energy Community (Euratom) started operations, ensuring that all users in the Community received a regular and equitable supply of ores and nuclear fuel.

In 2020, the Agency celebrated 60 years of continued operations, demonstrating its resilience, its ability to adapt and its determination to modernise itself.

When the COVID-19 crisis hit in March, we protected ESA's most valuable asset: its staff. The lockdown united us in keeping the spirit of a common effort focused on the Agency's core objectives and values.

The transition to remote working was accompanied by introduction of new working methods, which allowed us to deliver in this challenging time on all the critical core processes: managing nuclear fuel contracts, facilitating the supply chain of medical radioisotopes and analysing market data.

The meetings of the Advisory Committee and of the European Observatory on the Supply of Medical Radioisotopes, which were for the first time ever conducted in a remote format, enabled efficient communication and decision-making, as did many meetings with our partners and stakeholders.

Our response to the limitations created by the coronavirus pandemic was to take it as an enforced opportunity to accelerate the adoption of new technologies to cut red tape. We expedited investment in the NOEMI application that will, for years to come, securely host data from contracts for the supply of nuclear materials and related services. This new IT system will also greatly improve monitoring of the nuclear energy market and production of reports from aggregated data. In the medium term, NOEMI will enable the Agency to electronically exchange documents and data with its counterparts.

As another opening into the future, the constructive dialogue with the Commission throughout 2020 led to the adoption on 15 January 2021 of the new Rules determining how the Agency is to balance demand and supply in the market. This milestone development will provide more process-driven transparency and clarity for Member States, operators and suppliers.

You will also notice the new format of our publications and website. We hope this will facilitate a more user-friendly access to information and data.

My wholehearted thanks and appreciation go to my colleagues at the Agency. Their dedication, flexibility and hard work fuelled our achievements in a year of unprecedented challenges.

**Agnieszka Kaźmierczak**

Director-General of the Euratom Supply Agency



# Executive summary

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The Euratom Supply Agency (ESA), established by Article 52 of the Euratom Treaty, has the exclusive right to conclude contracts for the supply of nuclear materials in the EU and has the right of option on nuclear materials coming from inside the Community. ESA's strategic objective is the short, medium and long-term security of supply of nuclear materials, particularly nuclear fuel, for power and non-power uses, by means of the common supply policy. ESA has a duty to monitor the market in order to identify trends likely to affect the Union's security of supply of nuclear materials and services.

Exercising its prerogatives, ESA continued to conclude nuclear materials and fuel supply contracts, and to acknowledge notifications of contracts for small quantities of nuclear materials and notifications of transactions for the provision of services in the nuclear fuel cycle.

In line with the European Commission's policies, the Supply Agency strives for diversification of sources of supply in the nuclear fuel cycle for power and non-power uses – an important means for security of supply in the medium and long term. A large number of Europeans rely on nuclear electricity. Nuclear power plants generate a quarter of all electricity. This share rises above 50% in some countries. Disruptions in supply would have acute consequences for households, hospitals and industries. To prevent excessive dependence of Community users on any single external design or supplier, ESA continued to closely follow the situation as it evolved and encouraged efforts to diversify the supply of nuclear fuel.

ESA invariably scrutinised the security of supply of high-enriched uranium (HEU) and high-assay low-enriched uranium (HALEU), required to feed the production of medical radioisotopes and to fuel research reactors.

In 2020 ESA's Nuclear Fuel Market Observatory issued several market reports and analyses, published price indices and interacted with other international market analysis organisations.

The European Observatory on the Supply of Medical Radioisotopes, in close cooperation with the industry association of nuclear medicine (NMEu), monitored the continuous supply of Mo-99/Tc-99m. The Observatory discussed COVID-19 pandemic-related concerns, Brexit preparedness and contingency actions. Europe's Beating Cancer Plan was also presented at the autumn meeting along with the European Commission's SAMIRA initiative (Strategic Agenda for Medical, Industrial and Research Applications of nuclear and radiation technology). The Observatory continued in 2020 to liaise with relevant stakeholders, mainly the EANM, the British Nuclear

Medicine Society and the Irish Nuclear Medicine Association, to raise awareness and discuss Brexit contingency actions.

This Annual Report provides an overview of nuclear fuel supply and demand in the EU. Quantitative analysis shows that EU utilities are well covered until 2025 under existing contracts, in terms of both natural uranium and enrichment services. Natural uranium supplies, as well as provisions of services to the EU, continued to come from diverse sources. However, full reliance on a single design for VVER fuel remains a matter of concern.

ESA observed that uranium prices in 2020 remained closer to average production costs compared to previous years. Therefore, it remains concerned by the oversupply of uranium in the market, which depresses prices and delays investments in key segments. Such circumstances could prevail until late in the decade, hampering necessary strategic investments. Demand for natural uranium in the EU represented approximately one quarter of global uranium requirements.

To ensure security of supply, ESA recommends that operators apply best practices in the field of security of supply risk management, including an assessment of their risk exposure and implementation of the resulting action plans to address it. Furthermore, ESA sets out a number of specific recommendations regarding contractual terms, inventories, diversity of procurement options, investment, general market and contractual behaviours.

In 2020, in response to the COVID-19 pandemic, nuclear installation operators and national regulatory authorities in the EU implemented exceptional measures to maintain essential operations, while prioritising nuclear safety.

As several companies announced in the second quarter of 2020, the COVID-19 pandemic has significantly influenced the uranium market, leading to a significant decrease in uranium production and related services. Spot  $U_3O_8$  prices have risen substantially and are expected to continue rising. The conversion market, which has experienced price increases over the past 2 years due to supply reductions and inventory drawdowns, is likely to experience the same situation.

Suppliers have also been seeing their inventories decline as a result of the pandemic, while utilities may be trying to revise their supply contracts or build the stock to ensure the security of their supplies and protect themselves from future price increases.

The Report presents the overview of Euratom activities. In 2020, special attention was given to safety, in particular with respect to long-term operations and to new safe



reactor technologies, such as small modular reactors (SMRs) and their licensing. Similarly, the Euratom research and training programme was mainly aimed at improving the safety of nuclear technologies by supporting research on all aspects of nuclear safety and at advancing solutions for the management and disposal of spent fuel and radioactive waste and for the decommissioning of nuclear facilities. The Euratom perspective is complemented with an overview in the

EU Member States of the major actions, events, decisions and announcements in the nuclear field.

Finally, the Report highlights some worldwide nuclear developments and examines nuclear fuel market trends.

The Annual Report concludes with an overview of ESA's management, administration and finances. The 2021 work programme is provided in annex.

### E-meeting during COVID-19



# 1. ESA operations

## 1.1. Mandate and strategic objectives

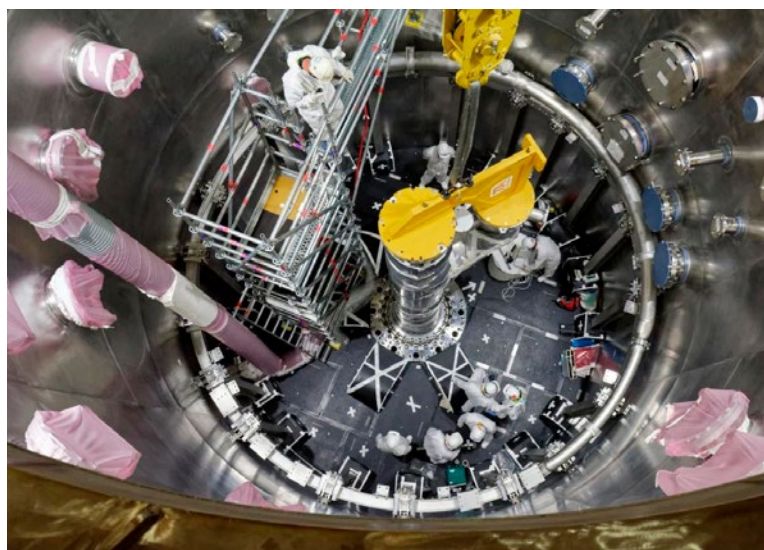
The Supply Agency of the European Atomic Energy Community (Euratom Supply Agency, ESA) was established by Article 52 of the Euratom Treaty <sup>1</sup> ('the Treaty') to further the common supply policy for ores, source materials and special fissile materials in the nuclear common market set up by the Treaty, based on the principle of regular and equal access of all users in the Community to sources of supply.

The prerogatives of the Supply Agency stem from the Treaty and secondary legislation, in particular its statutes and rules. It has the exclusive right to conclude contracts relating to the supply of nuclear materials coming from inside or outside the Community, and has a right of option on nuclear materials coming from inside the Community. It also monitors transactions related to services in the nuclear fuel cycle, including by acknowledging the notifications that market players are required to submit to it, giving details of their commitments.

To that end, the Treaty endows ESA with legal personality and financial autonomy, enabling it to make independent decisions on matters within its remit. It operates under the supervision of the European Commission <sup>2</sup> and is assisted by its Advisory Committee, which acts as a link between ESA and producers and users in the nuclear industry <sup>3</sup>.

ESA's strategic objective is the short, medium and long-term security of supply of nuclear materials, particularly nuclear fuel, for power and non-power uses, by means of the common supply policy.

### On-site installation of the reactor core vessel



© CEA

## 1.2. Core activities

In the interest of its strategic objective, ESA pursues the following core activities:

- managing contracts related to the supply of nuclear materials and/or services in the nuclear fuel cycle, in line with the applicable provisions, for power and non-power uses;
- facilitating future supply by promoting diversification in the nuclear fuel cycle, as a contribution to security of supply in the medium and long term;
- facilitating the continued supply of medical radioisotopes;
- monitoring and analysing developments in the nuclear fuel market and in relevant R&D fields, including publishing its Annual Report and providing information, including on the European and global nuclear markets;
- cooperation with stakeholders and partners.

<sup>1</sup> <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:12012A/TXT>

<sup>2</sup> Article 53 of the Euratom Treaty.

<sup>3</sup> Article 13.1 of the statutes.

During 2020, the coronavirus outbreak hugely affected the EU. The Agency has made every effort to reduce the pandemic's effect on its staff and stakeholders. ESA took all necessary steps to continue its duties and stayed fully operational. It demonstrated it can respond swiftly to challenges arising from the COVID-19 crisis. The statutory deadlines were met for the core activities of the Agency as well as the final accounts and the report on budget and financial management. The whole of ESA's annual report was published on 1 September 2020. The spring 2020 meetings of the Advisory Committee and of the European Observatory on the Supply of Medical Radioisotopes had to be postponed but were successfully organised and held in the autumn in a virtual format.

### 1.2.1. Contract management

The Supply Agency's activities in this field encompass:

- concluding nuclear materials and fuel supply contracts, pursuant to Article 52 of the Euratom Treaty;
- acknowledging notifications of contracts for small quantities of nuclear materials, pursuant to Article 74 of the Euratom Treaty<sup>4</sup>;
- acknowledging notifications of transactions related to the provision of services in the nuclear fuel cycle, pursuant to Article 75 of the Euratom Treaty.

Nuclear materials coming from inside the Community may be exported only with the authorisation of the Commission.

In 2020, in its contractual management activities, 269 new registration references were recorded, 49% of which corresponding, pursuant to Article 52, to new contracts or to amendments or supplements to existing contracts and the remaining 51% corresponding to notifications relating to contracts covered by Articles 75 and 74 of the Treaty.

### 1.2.2. Security and diversification of the nuclear fuel supply chain

In line with its strategic objective and the European Commission's policies, the Supply Agency strives for diversification of sources of supply in the nuclear fuel cycle for power and non-power uses.

Diversification of supply sources – which also contributes to the viability of the domestic nuclear industry – is an important means for security of supply in the medium and long term.

Diversification of supply sources – which also contributes to the domestic nuclear industry's viability – is an important means for security of supply in the medium and long term and, as such, is strongly acknowledged by the European Energy Security Strategy<sup>5</sup> and confirmed by the 2020 report on the State of the Energy Union<sup>6</sup>.

#### Security of energy supply

ESA monitors the situation of EU producers who export nuclear material produced in the EU, as it has option rights over such material under Article 52 of the Euratom Treaty. Where the material is exported from the EU, ESA may require the contracting parties to accept certain conditions relating to the security of supply on the EU market.

Throughout the year, the Agency continued its dialogue with Community fuel manufacturers interested in diversification solutions, in particular for the hexagonal fuel assemblies and components market. These were manufacturers in Germany, France, Spain and Sweden. Several meetings were also held with interested operators.

In its 2019 report, the Supply Agency recommended that Community utilities operating nuclear power plants apply best practices to security of supply risk management. This includes assessing their risk exposure and implementing the resulting action plans to address it.

In general, multiannual contracts with diverse sources of supply are considered appropriate for utilities to cover most of their current and future requirements for uranium and

<sup>4</sup> Commission Regulation (Euratom) No 66/2006 provides details of how transactions involving small quantities of nuclear materials are handled.

<sup>5</sup> COM(2014) 330 final, of 28.5.2014 <https://www.eesc.europa.eu/resources/docs/european-energy-security-strategy.pdf>

<sup>6</sup> Report from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions, COM(2020) 950 final.

To prevent excessive dependence of Community users on any single external design or supplier, ESA continued to follow attentively and encouraged efforts to diversify the supply of nuclear fuel.

services. Parties engaging in contracts that bundle supplies of fuel assemblies with other transactions, conditions or stages of the cycle were advised to negotiate clauses expressly providing for unbundled procurement by the operator of uranium and services from other suppliers, without penalties. Utilities were advised to maintain sufficient inventories of nuclear materials (including fabricated fuel) to cover future requirements and to use market opportunities to increase them. Ideal security of supply means at least two alternative suppliers for each stage of the fuel cycle.

To prevent excessive dependence of Community users on any single external supplier, ESA continued to follow attentively, and encouraged efforts to diversify, the supply of nuclear fuel for reactors for which appropriate alternative offers were not available. Operators dependent on single suppliers for fuel assemblies and components were advised to step up engagement with industry and cooperation with ESA and other players to bring about alternative solutions. ESA continued to follow the steps towards supply diversification of fuel for VVER-1000 reactors in Czechia and Bulgaria as well as the medium/long-term plans of major EU fuel manufacturers in this respect.

ESA addressed issues related to security of supply in the final national energy and climate plans (NECP) prepared by Member States for 2021-2030<sup>7</sup> and gave recommendations relating to security of supply of nuclear materials and diversification policies.

### *Supply of nuclear materials for non-power uses*

In line with its strategic objective, ESA continued to scrutinise security of supply of high-enriched uranium (HEU) and high-assay low-enriched uranium (HALEU), which are required to feed the production of medical radioisotopes and to fuel research reactors. These strategic materials are currently not produced in the Community and must be imported from the US or the Russian Federation.

In cooperation with the Member States concerned, ESA continued to facilitate the supply of HEU to users who still need it until their conversion to HALEU, in line with international nuclear security and non-proliferation commitments. In 2020, in close cooperation with the Euratom Member States concerned, ESA renewed the Memorandum of Understanding (MoU) it had signed in 2014 with the US Department of Energy-National Nuclear Security Administration (DoE-NNSA) for the exchange of HEU needed to supply European research reactors and medical radioisotope production facilities. Renewal of the MoU was the Euratom Supply Agency's first deliverable on the SAMIRA action plan supporting Europe's Beating Cancer Plan (see Chapter 3.3.2).

A dedicated Working Group on HALEU was reinstated at the October meeting of the ESA Advisory Committee, with the objective to explore possible specific industrial and commercial options for building a European capacity for producing HALEU metal responding to EU needs for the research reactors' fuel and medical radioisotopes production (see Chapter 1.3.1).

ESA continued to scrutinise security of supply of high-enriched uranium (HEU) and high-assay low-enriched uranium (HALEU), which are required to feed the production of medical radioisotopes and to fuel research reactors.

<sup>7</sup> Regulation on the governance of the energy union and climate action (EU/2018/1999).



### 1.2.3. Market monitoring

In the interest of its Treaty missions, the Supply Agency's statutes entrust it with a market observatory role. In particular, ESA has a duty to monitor the market in order to identify trends likely to affect the Union's security of supply of nuclear materials and services. ESA has to provide the Community with expertise, information and advice on any subject connected with the operation of the nuclear market.

In 2020, in line with these obligations, ESA's Nuclear Fuel Market Observatory issued several market reports and analyses, published price indices and cooperated with other international market analysis organisations.

ESA's annual report continues to be its main reporting tool. As in previous years, ESA conducted a survey of EU nuclear power operators. The survey provided detailed analysis of the supply and demand for natural uranium, conversion and enrichment services in the EU. The Supply Agency published three natural uranium price indices with calculated weighted averages of the prices paid by EU utilities within multiannual and spot contracts. Its analysis contained forecasts of future demand for uranium and enrichment services and assessed security of supply of nuclear fuel to EU utilities. ESA provided detailed analysis of future contractual coverage for natural uranium and enrichment services and diversification of supply. It gave an analysis of EU inventories of nuclear material.

In 2020, ESA issued four quarterly uranium market reports<sup>8</sup>, covering global and specific Euratom developments on the nuclear market. The reports include general data about natural uranium supply contracts concluded by ESA or notified to it, a description of activity on the natural uranium market in the EU, and the quarterly spot price index for natural uranium whenever three or more spot contracts have been concluded.

To create greater transparency in the EU natural uranium market, reduce uncertainty and help improve security of supply, ESA regularly publishes reports and price trends<sup>9</sup> on its website. ESA also issues a weekly nuclear news brief for European Commission readers.



### 1.2.4. European Observatory on the Supply of Medical Radioisotopes

In the light of the Council Conclusions 'Towards the secure supply of radioisotopes for medical use in the EU' dated 2010<sup>10</sup> and 2012<sup>11</sup>, ESA's market observatory role was widened in 2013 to cover aspects of the supply of medical radioisotopes in the EU.

In the Council Conclusions on 'Non-power nuclear and radiological technologies and applications'<sup>12</sup> adopted in June 2019, the Council further supported 'the continuing monitoring of the production chain of medical radioisotopes through the European Observatory on the Supply of Medical Radioisotopes and the ESA's efforts and actions in ensuring the secure supply of source material'.

In 2020, ESA continued to coordinate activities to improve the security of supply of Mo-99/Tc-99m and to chair, jointly with the industry association of nuclear medicine (NMEu)<sup>13</sup>, the European Observatory on the Supply of Medical Radioisotopes<sup>14</sup>.

<sup>8</sup> [https://ec.europa.eu/euratom/observatory\\_quarterly.html](https://ec.europa.eu/euratom/observatory_quarterly.html)

<sup>9</sup> [https://ec.europa.eu/euratom/observatory\\_price.html](https://ec.europa.eu/euratom/observatory_price.html)

<sup>10</sup> <https://ec.europa.eu/euratom/docs/118234.pdf>

<sup>11</sup> [https://ec.europa.eu/euratom/docs/2012\\_council\\_radioisotopes.pdf](https://ec.europa.eu/euratom/docs/2012_council_radioisotopes.pdf)

<sup>12</sup> [https://ec.europa.eu/euratom/docs/2020\\_Security\\_report\\_2.pdf](https://ec.europa.eu/euratom/docs/2020_Security_report_2.pdf)

<sup>13</sup> <http://nuclearmedicineeurope.eu>

<sup>14</sup> [https://ec.europa.eu/euratom/observatory\\_radioisotopes.html](https://ec.europa.eu/euratom/observatory_radioisotopes.html)

## Transport



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The Observatory assesses, monitors and supports the EU supply of widely used medical radioisotopes, focusing on Molybdenum-99/Technetium-99m (Mo-99/Tc-99m). The Observatory is composed of representatives of the European Commission services, international organisations and various industry stakeholders, most of which are grouped within the NMEu.

The European Observatory's spring 2020 meeting – chaired jointly by ESA and NMEu – had to be postponed due to the difficult circumstances and travel restrictions caused by the COVID-19 situation. The Observatory's first e-meeting since its creation in 2012 was held in the autumn. The agenda included the standard points of discussion and other updates from the NMEu, the OECD/NEA and the European Association of Nuclear Medicine (EANM) as well as a presentation of Europe's Beating Cancer Plan and its follow-up action, the European Commission's SAMIRA initiative (Strategic Agenda for Medical, Industrial and Research Applications of nuclear and radiation technology). The COVID-19 impact on the supply of medical radioisotopes was a major point of discussion.

The meeting also assessed Brexit-related supply issues and mitigation measures and discussed the state of play in the UK and Ireland and the stakeholders concerned. Through ESA, the Observatory continued in 2020 to liaise with relevant stakeholders, mainly the EANM, the British Nuclear Medicine Society and the Irish Nuclear Medicine Association to raise awareness and discuss the Brexit contingency actions.

In September, before the Observatory's e-meeting, ESA presented the Observatory's activities to the Council Working Party on Atomic Questions, focusing on the response to the COVID-19 pandemic. The presentation included the topics dealt with during the 2019 Observatory meetings. The 2019-

2020 supply disruptions for medical radioisotopes and the related mitigation measures taken by the Observatory were also presented.

### 1.2.5. Annual Report 2019

In its 2019 Annual Report, ESA gave an overview of its own activities and developments in the EU and world nuclear fuel markets and nuclear energy during the year. It set out ESA's findings and recommendations on the supply of and demand for nuclear fuels, reflecting ESA's diversification policy and security of supply. It also discussed issues relating to the security of supply of medical radioisotopes. ESA's work programme for the following year was part of the report.

Due to the COVID-19 emergency and measures to mitigate its impact, publication of the ESA 2019 Report was delayed. The analysis of supply and demand, which is the statutory part of the annual report, was posted on the ESA website in June. The text of the whole report was published on ESA's website in September and the final layout was published in November<sup>15</sup>. In September, the report was presented to the Council Working Party on Atomic Questions and in November sent to the European Commission, the Council of the EU and the European Parliament.



15 <https://ec.europa.eu/euratom/ar/last.pdf>

### 1.2.6. Outreach activities

Throughout 2020, ESA pursued contacts with the EU and international authorities, utilities, industry and nuclear organisations to further its objectives, engaging in continuous dialogue with suppliers, industry and utilities. It monitored market developments and EU demand. It provided advice and follow-up to ensure appropriate implementation of the common supply policy.

The Supply Agency responded to queries about the UK's withdrawal from the EU and Euratom from individuals or undertakings with commercial relations with companies in the UK.

## 1.3. Advisory Committee

In line with ESA's statutes, the Advisory Committee <sup>16</sup> assists it in carrying out its tasks by giving opinions and providing analyses and information. The Advisory Committee also acts as a link between ESA, producers and users in the nuclear industry, and Member State governments. ESA provides the Advisory Committee and its working groups with the secretariat and with logistical support.

Due to the COVID-19 situation and related travel restrictions, the Advisory Committee met only once in 2020 and its meeting took place in a virtual, instead of the usual face-to-face, form. Before the Advisory Committee's e-meeting, a new Chairperson and Vice-Chairpersons were elected for the new term of office from 2020 to 2023. At the October meeting, the Committee delivered its opinions on ESA's 2019 Annual Report, ESA's budget amendment 2020, the work programme and draft budget for 2021 and the budget estimate for 2022. The Committee discussed a follow-up to the two reports by the Advisory Committee's Working Groups - on Prices and Security of Supply <sup>17</sup> and on European Supply of LEU 19.75% <sup>18</sup>. During the meeting, the Committee also discussed how ESA is to handle contracts for the long-term storage and/or disposal of spent fuel.

### 1.3.1. Advisory Committee's Working Groups

At the Advisory Committee's e-meeting in October, the future of its two Working Groups was discussed in the context of the Committee's new term of office. For both Working Groups: on Prices and Security of Supply and on European Supply of

LEU 19.75%, the Committee decided to reinstate them and asked Members to express their interest in participating. The Committee also gave instructions to begin work on the draft terms of reference and work plans of both Working Groups.

The report by the Advisory Committee's Working Group on Prices and Security of Supply was published in March 2020. It is the third report of its kind and updates the previous 2015 edition, the first report being published back in 2010. Its conclusions were included in ESA's 2019 Annual Report. The Working Group's report was sent to stakeholders and the European Commission and was presented at the Council Working Party on Atomic Questions in September. ESA was pleased to see that the report was widely acknowledged by the industry and international institutions.

## 1.4. International cooperation

The Agency has long-standing and well-established relationships on nuclear energy with two major international organisations: the International Atomic Energy Agency (IAEA) and the OECD Nuclear Energy Agency (NEA).

In 2020, the ESA continued its cooperation with these organisations by participating in working groups: the joint NEA/IAEA Uranium Group (UG) and the NEA Expert Group on Uranium Mining and Economic Development (UMED).

The NEA/IAEA UG is responsible for publishing the biennial report 'Uranium resources, production and demand' (known as a 'Red Book'), to which ESA contributes its analysis of EU supply and demand for nuclear fuel. The 28<sup>th</sup> edition of the 'Red Book' was published in December 2020 <sup>19</sup>. It offers updated information on established uranium production centres and mine development plans as well as projections of nuclear generating capacity and reactor-related requirements through 2040.

The NEA UMED analyses uranium mining's potential contribution to economic and social development, and explores whether uranium activities are managed to ensure that local and national economies benefit. The expert group examines case studies in various countries in order to understand how uranium mining affects economic development, jobs, infrastructure, education and medical care <sup>20</sup>. ESA contributes to such examinations and analyses.

<sup>16</sup> <https://ec.europa.eu/euratom/committee.html>

<sup>17</sup> [https://ec.europa.eu/euratom/docs/2020\\_Security\\_report\\_2.pdf](https://ec.europa.eu/euratom/docs/2020_Security_report_2.pdf)

<sup>18</sup> [https://ec.europa.eu/euratom/docs/ESA\\_HALEU\\_report\\_2019.pdf](https://ec.europa.eu/euratom/docs/ESA_HALEU_report_2019.pdf)

<sup>19</sup> [https://www.oecd-nea.org/jcms/pl\\_52718/uranium-2020-resources-production-and-demand](https://www.oecd-nea.org/jcms/pl_52718/uranium-2020-resources-production-and-demand)

<sup>20</sup> [https://www.oecd-nea.org/jcms/pl\\_28160/expert-group-on-uranium-mining-and-economic-development-umed](https://www.oecd-nea.org/jcms/pl_28160/expert-group-on-uranium-mining-and-economic-development-umed)

## 5. ESA management, administration and finances

### Legal status

The Supply Agency was established directly by the Euratom Treaty <sup>119</sup>. It is endowed with legal personality and financial autonomy <sup>120</sup> and operates under the supervision of the European Commission on a non-profit-making basis. The statutes <sup>121</sup> address in more detail the governance of the Agency.

ESA's seat has been in Luxembourg since 2004. Together with the European Commission, ESA has concluded a seat agreement with the government of the Grand Duchy of Luxembourg.

### Financing

ESA derives revenue from a contribution from the EU general budget <sup>122</sup>.

The European Commission adopts ESA's budget, transfers the contribution, and directly covers some of its administrative needs.

For its financial operations, the Euratom Supply Agency applies the relevant provisions of its statutes and of the EU Financial Regulation <sup>123</sup> as well as the accounting rules and methods established by the European Commission.

ESA is 100% financed by the EU general budget.

### Financial accounts

In 2020, the assets owned by the Agency totalled EUR 963 505.

They were financed by EUR 71 933 (7%) in liabilities and EUR 891 572 (93%) in equity.

### E-meeting during COVID-19



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At EUR 191 937, the fixed assets have increased significantly (from EUR 18 879 in 2019) since the development of the IT project, NOEMI.

The Supply Agency has EUR 5 856 000 in capital. An instalment of 10% of the capital is paid at the time of a Member State's accession to the EU. On 31 December 2020, the amount of the instalments called up and reflected in ESA's accounts stood at EUR 585 600.



<sup>119</sup> Article 52 of the Euratom Treaty.

<sup>120</sup> Article 54 of the Euratom Treaty.

<sup>121</sup> Council Decision (2008/114/EC, Euratom) of 12 February 2008 establishing Statutes for the Euratom Supply Agency.

<sup>122</sup> ESA's present financial situation results from the 1960 Council decision to postpone indefinitely the introduction of a charge on transactions (contracts for the purchase of nuclear materials by EU utilities), which had been intended to cover ESA's operating costs.

<sup>123</sup> Regulation (EU, Euratom) 2018/1046 on the financial rules applicable to the general budget of the Union; Article 68 of the EU Financial Regulation stipulates its applicability to the implementation of the budget for ESA.



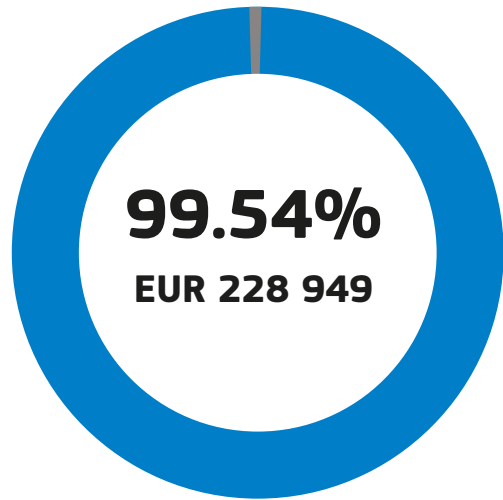
**Budget**

The Euratom Supply Agency’s 2020 adopted budget <sup>124</sup> amounted to EUR 230 000 in 2020 (a 3% increase compared to 2019). Its revenue and expenditure were in balance.

On 31 December 2020, ESA’s accounts showed a budget execution of EUR 228 949, or 99.54% of commitment appropriations. The budget and final annual accounts are published on ESA’s website (<http://ec.europa.eu/euratom>).

A part of ESA’s administrative expenses, including salaries <sup>125</sup>, premises, infrastructure, training, and some IT equipment, is covered directly by the European Commission budget, and is not acknowledged in ESA’s accounts. According to an internal estimate, the salaries of the Agency’s staff, covered by the Commission, were calculated at EUR 2 024 000. This off-budget expenditure and the underlying transactions are included in the Commission section of the EU annual accounts. ESA is also exempt from the charge-back of any services provided to it by the Commission <sup>126</sup>.

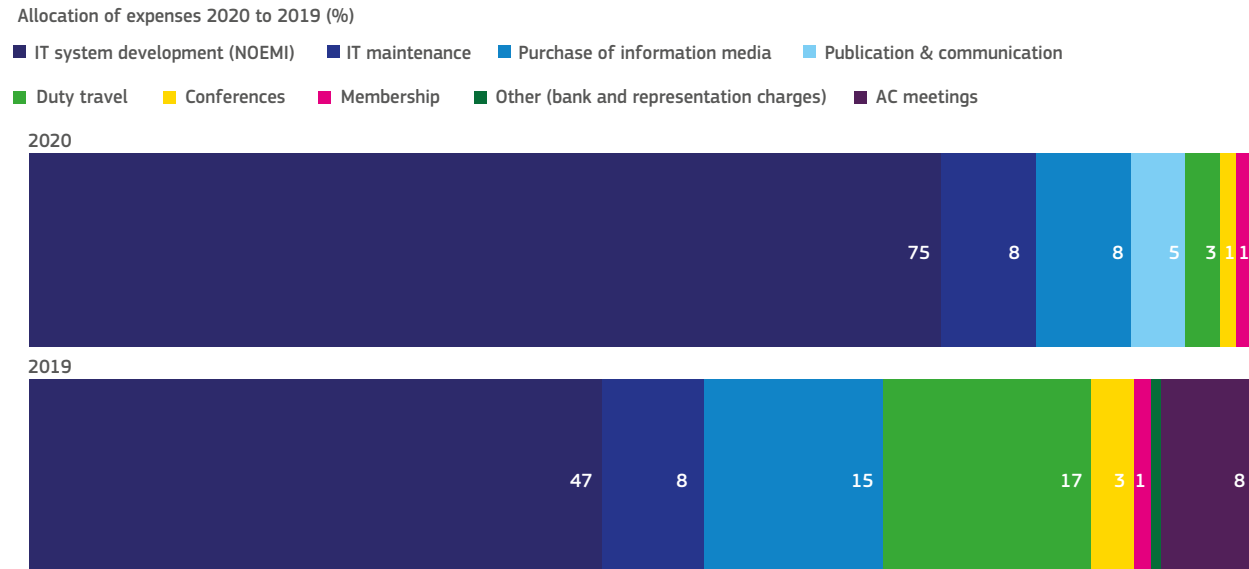
The other part of ESA’s operating costs is covered by its own budget; this includes duty travel, the IT system and its stand-alone computer centre, media subscriptions and communication activities.



**Budget implementation**

The in-kind contribution and charge-back exemption has had a positive impact on ESA’s administrative capacity.

**Figure 14. Budget execution by expenditure type**



124 Commission Decision C(2020) 2.  
 125 Salaries are paid by the European Commission in line with Article 4 of ESA’s Statutes and are not charged to the Agency’s budget.  
 126 Commission Decision C(2018) 5120, Annex 21.

**Table 11. Budget execution by expenditure type**

Budget item	2020	%	2019	%
IT system development (NOEMI system)	170 759	75	104 337	47
Information media	17 386	8	18 279	8
IT maintenance	17 241	8	32 861	15
Publications & communication activities	10 701	5	0	0
Duty travel	6 500	3	37 600	17
Conferences (participation & organisation)	3 000	1	7 783	3
Membership in nuclear organisations	2 862	1	2 980	1
Bank and representation charges	500	0	1 397	1
Advisory Committee & working groups	0	0	17 452	8
<b>TOTAL</b>	<b>228 949</b>	<b>100</b>	<b>222 689</b>	<b>100</b>

**Table 12. Overview of expenditure financed directly by the European Commission**

<b>STAFF</b>	Salaries & allowances
	Socio-medical infrastructure
	Training
<b>INFRASTRUCTURE &amp; OPERATING EXPENDITURE</b>	Rental of buildings and associated costs
	— Buildings, infrastructure and associated costs
	Information and communication technology
	— EC software applications
	Movable property and associated costs
	Current administrative expenditure
	— Stationery and office supplies
	Postage/Telecommunications
	— Computer hardware (servers, PCs and equipment)
	— Telecommunications
	Information and publishing
	— Publication - Official Journal

### *Audit by the European Court of Auditors*

The European Court of Auditors (ECA) audits ESA's financial and budgetary accounts and the underlying transactions on an annual basis in line with internationally accepted public sector auditing standards. ECA's responsibility is to provide the European Parliament and the Council with a statement of assurance as to the reliability of the annual accounts and the legality and regularity of the underlying transactions.

ESA duly notes ECA's observations and takes the necessary measures as needed. It also follows carefully the observations

of a cross-cutting nature accompanying the annual report on the EU agencies <sup>127</sup>.

In 2020, ECA signed off the 2019 accounts and issued a clean opinion <sup>128</sup>, as they present fairly the financial situation, operations, and cash flows in line with the accounting rules. In addition, ECA provided a clean opinion on the legality and regularity of ESA's revenue and payment operations. Building on the audit outcome, ESA took further steps to more closely monitoring its budget execution in 2020.

127 <https://www.eca.europa.eu/en/Pages/DocItem.aspx?did={A61C7E9C-312D-4D33-9686-3C8DB2231D7F}>.

128 <https://www.eca.europa.eu/en/Pages/DocItem.aspx?did={5204F722-91A9-44A7-96CA-3607AC53AE53}>

**Discharge**

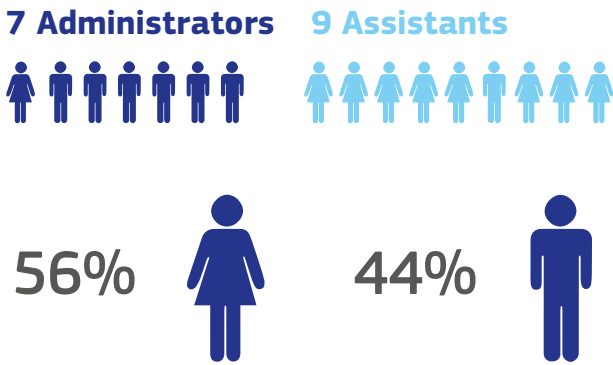
The European Parliament, acting on a Council recommendation, is the discharge authority for ESA. On 13 May 2020, the European Parliament granted ESA's Director General discharge for the implementation of the budget for the 2018 financial year <sup>129</sup>.

**Staff allocation**

ESA staff are European Commission officials and ESA's establishment plan is incorporated in the global staff numbers of the European Commission. For 2020, the number of authorised posts was 17 (7 administrators and 10 assistants). At year end, 16 permanent posts were occupied, one assistant post being vacant.

NOEMI will reinforce ESA's monitoring capabilities of the nuclear materials and fuel market whilst securely hosting sensitive nuclear contracts' data.

**Figure 15. Staff distribution**



measures have accelerated the deployment of secure digital solutions resulting in an overall increase of the digital knowledge and maturity of stakeholders. In 2021 ESA is planning to carry out a feasibility and security requirements study on the possibility of a fully digital processing of nuclear supply contracts and notification of nuclear service contracts.

**Communication and visibility**



**Equal opportunities**

ESA provides equal career opportunities for staff at all levels and promotes a gender-balanced workplace. Women make up 56% of ESA staff and men 44%. The equal opportunities policy is also reflected in management positions, which are also equally distributed.

In 2020, ESA engaged in a highly focused outreach to stakeholders in industry, research, and national administrations. This particular focus was deemed necessary in the light of the COVID-19 pandemic and ESA's assurance of business continuity. ESA was able to guide its stakeholders in the submission and remote completion of contracts, by using specific secure IT tools. Outreach continued with the successful organisation of the Advisory Committee's e-meeting in October.

**Information system innovation in NOEMI**

Initiated in 2019, the IT project NOEMI ('Nuclear Observatory and ESA Management of Information') consists of designing a new technological platform that will securely host sensitive nuclear contracts' data and will reinforce monitoring capabilities of the nuclear materials and fuel market.

In June 2020, ESA commemorated its 60th anniversary of operations with a press release that was published on all main platforms.

The project will be implemented during 2020-2021, at an estimated cost of EUR 355 000.

Work, already commenced in 2019 on ESA's visual identity, continued in 2020, with the launch of the newly approved ESA logo. A complete restructuring of the website was initiated. By mid-2021, it will have an updated look and feel and will operate from a more efficient platform.

A functional prototype, including the key features, was delivered in June 2020. In addition, the worldwide lockdown

<sup>129</sup> European Parliament decision of 13/5/2020 (P9\_TA-PROV(2020)0104; Decision 2019/2087(DEC), P9\_TA-PROV(2020)0121: Decision 2019/2098(DEC)), internal reference Ares(2019)3499364 - 3/7/2020.

### *Internal control and risk management*

In 2020, the Agency adopted its internal control framework, designed to provide reasonable assurance in achieving five objectives set in Article 36 of the Financial Regulation:

- a) effectiveness, efficiency, and economy of operations,
- b) reliability of reporting,
- c) safeguarding of assets and information,
- d) prevention, detection, correction and follow-up of fraud and irregularities, and
- e) adequate management of the risks relating to the legality and regularity of the underlying transactions.

This framework supplements the EU's Financial Regulation and other applicable rules and regulations relevant in this context<sup>130</sup>, the aim being to align Euratom Supply Agency standards with the highest international standards as set by the COSO<sup>131</sup> principle-based system. A set of indicators was defined, which will be used to assess the effectiveness of the framework's implementation.

In January 2020, ESA performed a full-scale risk assessment workshop covering all areas of the Agency's work and its operational and administrative processes. ESA reviewed the controls in place and identified areas that required monitoring.

### *Management assurance*

In order to assess the effectiveness of internal controls, ESA uses the baseline requirements adapted to its environment. The annual assessment for 2020 did not reveal any risks that could lead to a reservation in the Annual Declaration of Assurance.

On the basis of elements of the internal control systems and the assurance they provide – the building blocks of

assurance – the Director-General was in a position, as the authorising officer, to sign the Declaration of Assurance which accompanies this Annual Report.

### *The United Kingdom's withdrawal from the European Union and Euratom*

As a Member State, the UK had subscribed a EUR 672 000 share in the capital of the Euratom Supply Agency. It paid 10% of its share, i.e., EUR 67 200, at the time of its accession to Euratom. Since then, this latter sum of money has been held with the Agency's bank account. In connection to the paid-off part of the UK's share, nothing is provided for in the Withdrawal Agreement (or in any other agreement or arrangement or legal act).

Until 31 December 2020 (i.e., the end of the transition period) the legal situation was not affected by the exit of the United Kingdom from the EU and Euratom. Therefore, there was no financial impact to be reported in the 2020 annual accounts.

### *The COVID-19 outbreak*

During 2020, the COVID-19 pandemic greatly affected the EU. The Agency has made every effort to reduce the effect on its staff and stakeholders. ESA stayed fully operational and demonstrated it can respond swiftly to challenges arising from the COVID-19 crisis.

In line with the Commission guidance and in order to minimise the risk to staff and to their families, ESA pursued teleworking as the default option. However, critical and essential staff who needed to access resources and work on the premises were able to do so on a rotational basis.

In parallel, ESA introduced changes in its spending pattern through a budget amendment to reduce expenses related to the organisation of meetings, participation in conferences and statutory missions. Instead, it invested in upgrading its core IT application.

<sup>130</sup> such as the Staff Regulations, governance arrangements and decisions relating to anti-fraud measures.

<sup>131</sup> Committee of Sponsoring Organizations of the Treadway Commission (COSO)

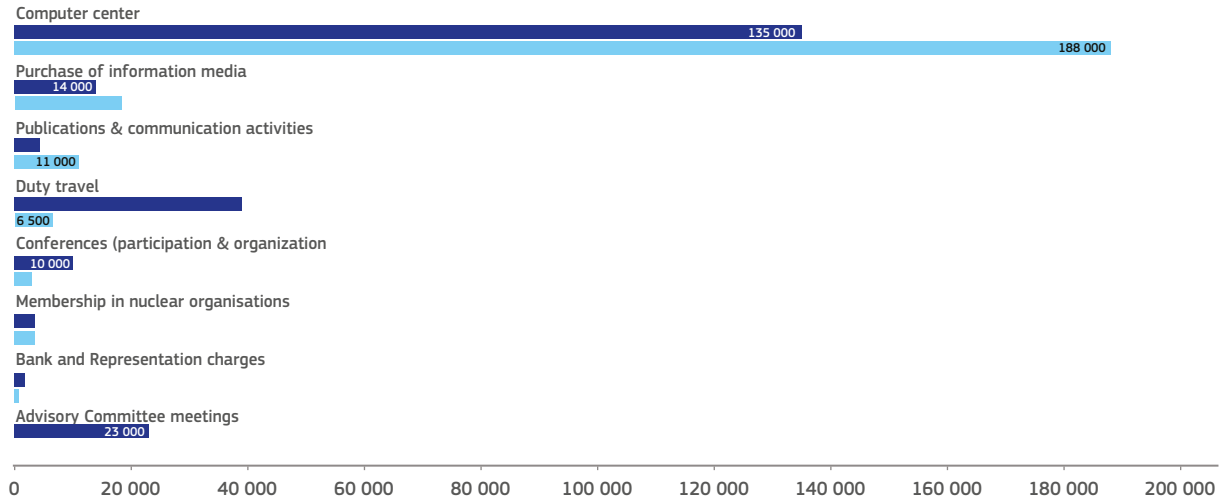


**Figure 16. Budget amendment in 2020 due to COVID-19**

**Budget Amendment No 1/2020**

A new spending pattern due to COVID-19

■ Budget 2020    ■ Amendment No 1/2020



For subsequent periods, where appropriate, ESA re-scoped its ongoing tasks and adjusted the approach and timeline to

take account of changing circumstances in its new 2021 work programme.

**ITER at night**



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## Annex 9

# Declaration of assurance

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*I, the undersigned, Agnieszka Kaźmierczak*

*Director-General of Euratom Supply Agency in 2020*

*In my capacity as authorising officer*

*Declare that the information contained in this report gives a true and fair view* <sup>132</sup>

*State that I have reasonable assurance that the resources assigned to the activities described in this report have been used for their intended purpose and in accordance with the principles of sound financial management, and that the control procedures put in place give the necessary guarantees concerning the legality and regularity of the underlying transactions.*

*This reasonable assurance is based on my own judgement and on the information at my disposal, such as the results of the self-assessment and the lessons learnt from the reports of the Court of Auditors for years prior to the year of this declaration.*

*Confirm that I am not aware of anything not reported here which could harm the interests of the Euratom Supply Agency.*

*Luxembourg, 22 March 2021*



*Agnieszka Kaźmierczak*

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<sup>132</sup> True and fair in this context means a reliable, complete and correct view on the state of affairs in the Agency.

# Annex 10

## Work Programme 2021

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### Mission and Objectives

In line with the Euratom Treaty and its own Statutes, the mission of the Supply Agency of the European Atomic Energy Community ('ESA') is to maintain regular and equitable supply of nuclear materials (ores, source material and special fissile material) for all users in the Community.

ESA's strategic objective is the short, medium and long-term security of supply of nuclear materials, particularly nuclear fuel, for power and non-power uses, by means of the common supply policy.

In line with ESA's strategic objective, the following specific objectives have been defined:

#### Specific policy objectives

1. ensure continuous supply of nuclear materials for users in the Community;
2. facilitate the future supply and encourage the diversification and emergence of reliable alternative sources of supply;
3. facilitate the continued and equitable supply of medical radioisotopes, notably Technetium-99m;
4. provide the Community with expertise, information and advice on the nuclear materials and services market;

#### Specific supporting objectives

5. pursue contacts with EU and international authorities, international organisations, utilities, industry and nuclear organisations to further the objectives of ESA;
6. improve the effectiveness and efficiency of ESA's organisation and operations.

This work programme sets out the main activities to be pursued in 2021.

The strategic priority, general and specific objectives, and activities have been linked to ensure that all actions contribute to the achievement of these objectives and to the achievement of the high-level priorities. It takes due account of the priorities, policies and objectives set out by the Commission.

### Areas of activity

#### Contract management

Since its inception, ESA's main task has been to ensure regular and equal access to supplies of nuclear materials for all users in the Community. To this end, it uses its right of option on nuclear materials produced in the Community Member States and its exclusive right to conclude contracts for supply of nuclear materials, coming from inside or outside the Community and it monitors transactions related to services in the nuclear fuel cycle.

To facilitate the operations of the common market for the nuclear materials and fuels, ESA will:

1. assess and conclude, as appropriate, nuclear material supply contracts, pursuant to Article 52 of the Euratom Treaty, in line with the common supply policy, taking due account of the European Energy Security Strategy;
2. acknowledge notifications of transactions involving small quantities, pursuant to Article 74 of the Euratom Treaty;
3. acknowledge notifications of transactions relating to the provision of services in the nuclear fuel cycle, pursuant to Article 75 of the Euratom Treaty, in line with the common supply policy, taking due account of the European Energy Security Strategy;
4. support the European Commission's nuclear materials accountancy, on request, in verifying contract data contained in prior notifications of movements of nuclear materials;
5. implement the Rules that determine the manner in which demand is to be balanced against the supply of ores, source materials and special fissile materials, when the revised Rules enter into force;
6. contribute, on request, for matters within its purview, to the assessment of international agreements communicated to the Commission under Article 103 of the Treaty;
7. provide information and support to stakeholders on contract issues related to the nuclear common supply policy and/or the Agency's Rules.

### Facilitating future supply

ESA takes responsibility for the common supply policy with the strategic objective of security of supply in order to prevent excessive dependence of Community users on any single external supplier, in line with relevant decisions at political level.

To facilitate future supply, ESA will:

1. undertake measures to provide clarity to market actors on the common supply policy pursued by ESA;
2. facilitate emergence of alternative sources of nuclear fuel/services supply where such sources are presently not available, in particular for VVER reactors;
3. monitor the chapter 'energy security' of the national energy and climate plans (NECP).

### Facilitating the continued and equitable supply of medical radioisotopes

In order to enhance the security of supply of Mo-99/Tc-99m and possibly other radioisotopes that are indispensable for nuclear medicine procedures, the Supply Agency has been entrusted with the monitoring role for the supply chain of medical radioisotopes in the EU. ESA, jointly with the industry association Nuclear Medicine Europe (NMEu), chairs the European Observatory on the Supply of Medical Radioisotopes.

In line with the conclusions of the report 'Securing the European Supply of 19.75% enriched Uranium Fuel', ESA will also strive to facilitate the future supply of HALEU for production of medical radioisotopes and as fuel for research reactors.

ESA will:

1. lead and coordinate the activities of the European Observatory on the Supply of Medical Radioisotopes;
2. undertake measures that facilitate future supply of high-enriched uranium (HEU) and high-assay low-enriched uranium (HALEU);
3. contribute to the European Commission's SAMIRA initiative (Strategic Agenda for Medical Ionising Radiation Applications of nuclear and radiation technology);
4. encourage (particularly in the context of the Euratom Research and Training programme) projects to secure fuel supply for research reactors and the production of medical radioisotopes.

### Provision of expertise, information and advice on the nuclear materials and services market

Entrusted with the role of the Nuclear Fuel Market Observatory, ESA will continue to monitor the nuclear fuel and services market and relevant research and innovation activities to identify trends likely to affect the EU's security of supply. It will continue to produce analyses and reports.

The Supply Agency's ambition is to retain its position as a reliable and well-respected source of high-quality and neutral analyses of the Euratom nuclear fuel cycle market.

To deliver on its market monitoring responsibilities, ESA will:

1. monitor and analyse market conditions and technological developments which are likely to have an impact on the nuclear fuel market;
2. conduct the annual survey and deliver the market analysis as part of its Annual Report;
3. support the activities of the Advisory Committee's working groups;
4. continue monitoring the needs for HEU and HALEU which are required to produce medical radioisotopes and to fuel research reactors;
5. publish and disseminate information, including through yearly natural uranium price indices, reports, studies, newsletters, timely updates on ESA's website and through the Advisory Committee or other meetings.

### Cooperation with stakeholders and partners

To efficiently carry out its tasks and contribute to security of supply, ESA will actively pursue its relations with EU and Euratom institutions and agencies, Member State authorities, operators, the research community and industry, and international players.

In particular, ESA will:

1. cooperate with the European Commission on common supply policy matters;
2. liaise with the operators and other concerned parties to encourage and facilitate diversification;
3. in cooperation with the Euratom Member States concerned, coordinate the implementation and seek renewal of the 2014 MoU with the US Department of Energy - National Nuclear Security Administration, in order to facilitate HEU supply until full conversion and advance towards the minimisation of HEU;



4. engage with interested parties in and outside EU, both suppliers and users, to facilitate the continued supply of medical radioisotopes and meet the need of HALEU;
5. monitor the implementation of the Euratom cooperation agreements with non-EU countries as regards trade in nuclear materials;
6. maintain regular contact with:
  - a. international nuclear organisations such as the IAEA and the OECD NEA;
  - b. other international players on the nuclear fuel market, including through membership of the World Nuclear Association and the World Nuclear Fuel Market;
  - c. medical radioisotopes supply chain stakeholders (industry, research and user organisations).

### **Making ESA's internal organisation and operations more effective**

The Supply Agency keeps its procedures under review to further improve the management of the contracts it receives and the operations of its Nuclear Market Observatory. Given ESA's limited resources, it is of paramount importance to ensure that ESA remains effective and efficient.

To this end, ESA will focus its attention on:

1. ensuring compliance and effective internal control;
2. ensuring sound financial management;
3. keeping ESA's work practices under review and updating them where appropriate;
4. progressive implementation of ESA's document management and security policy;
5. progressive implementation of the IT system supporting the work of ESA (NOEMI - Nuclear Observatory and ESA Management of Information).



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