



REPORT
2016

Responsible Development
On AREVA's
Mining Activities

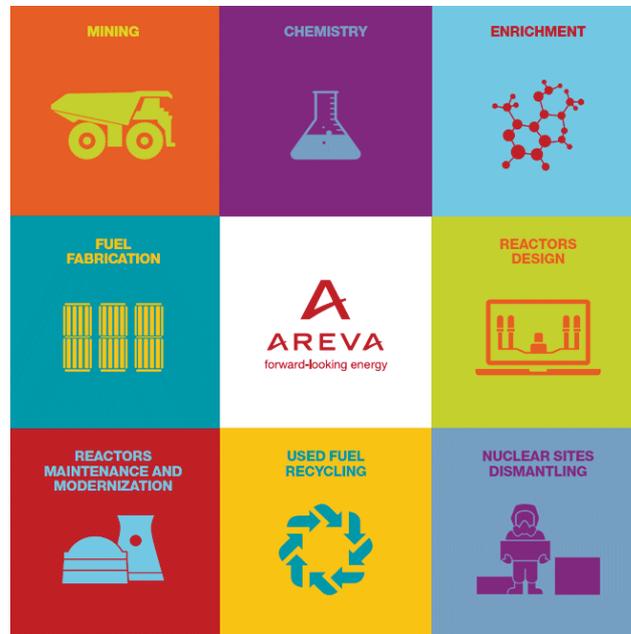


CHAPTER PROFILE

Extract from Responsible Development
report 2016 on Areva's Mining Activities

The complete report is downloadable on :
www.csr-mines.aveva.com

NEW AREVA



New AREVA transforms nuclear materials so that they can be used to support the development of society, first and foremost in the field of energy.

The group offers products, technologies and services with high added value throughout the entire nuclear fuel cycle, with activities encompassing mining, uranium chemistry, enrichment, used fuel recycling, logistics, dismantling and engineering.

New AREVA and its 20,000 employees bring to bear their expertise and their mastery of cutting-edge technology, as well as their permanent search for innovation and their unwavering dedication to safety, to serve their customers in France and abroad.

■ Corporate social responsibility

Ever since its creation, AREVA has given impetus to a proactive sustainable development initiative by making strong commitments in matters of social, environmental and societal responsibility. These commitments are deployed and periodically updated through the policies that the group implements in a number of areas – human resources, diversity, nuclear safety, health, occupational safety and the environment – as well as through its code of ethics. These different policies and the code help organize the company's operations in compliance with human rights and in the interest of environmental protection and the laws that govern them. AREVA's efforts target continuous performance improvement in every field, particularly nuclear and occupational safety, and take into consideration the expectations of stakeholders directly or indirectly concerned by the group's operations.

AREVA subscribes to the United Nations' Global Compact and, on the occasion of the 21st United Nations Climate Change Conference, reaffirms its commitment in its operations to:

- reduce industrial emissions of carbon dioxide (CO₂) in AREVA's nuclear fuel cycle facilities by 50% by 2020 compared to 2004;
- reduce the total energy used in all of New AREVA's facilities by at least 80% by 2020 compared to 2004;
- offer its customers the possibility of reducing their CO₂ emissions by building new nuclear reactors, improving their availability, and extending the operating period of existing reactors.

In addition, New AREVA is pursuing its proactive continuous improvement initiative in its mining operations based on best international practices for corporate social responsibility, in particular through the ten principles of the International Council on Mining and Metals (ICMM).

MINING ACTIVITIES

Constituting the first link in the nuclear fuel cycle, New AREVA's mining activities cover research, production and commercialization of uranium throughout the world.

New AREVA counts among the world's leading producers of uranium enjoying competitive production costs and with mines in operation in Canada, Kazakhstan and Niger.

Committed to its role as a responsible mining company, New AREVA conducts its mining activities in a manner that fully respects people and the environment, and contributes to the economic development of local regions and their populations.

Thanks to a **presence spanning five continents**, they ensure the long-term supply to customers of uranium for electricity production while maintaining a responsible attitude towards people and the environment. It has a diverse portfolio of both active mines (Canada, Kazakhstan and Niger) and mines under development (Africa).

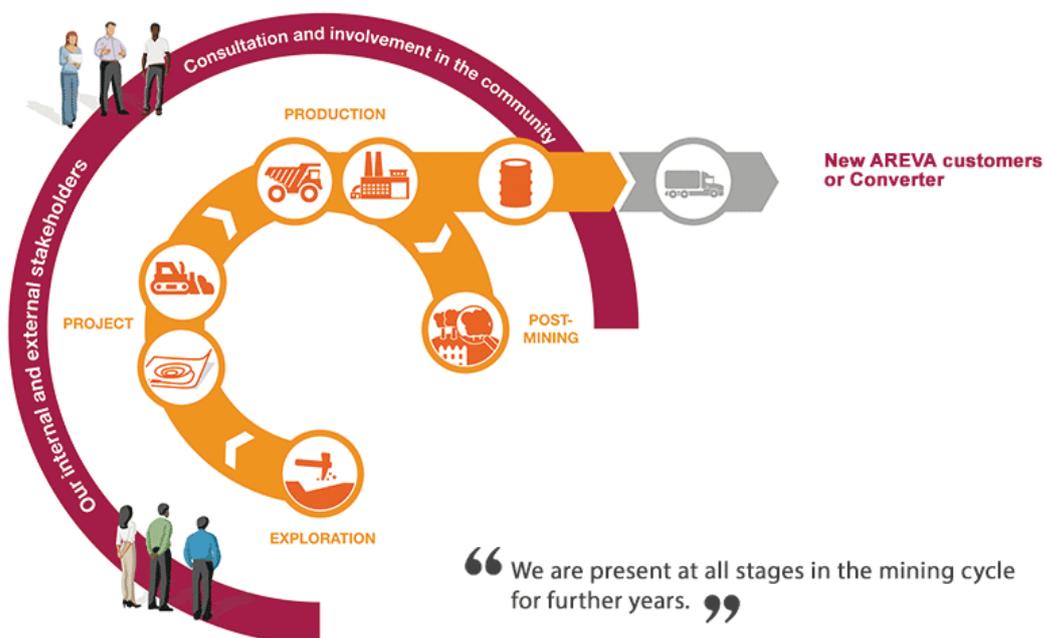
KEY FIGURES FOR 2016

- Contribution to Consolidated Revenue of **1,451 M€** (36% of New AREVA revenue) ;
- **4,116** employees*;
- **5** operating sites in 3 countries ;
- **11,186**** metric tons of uranium ;
- **15 %** worldwide market share.

*All employees managed by AREVA (fixed-term + permanent contracts) without taking into account New AREVA's financial participation in mining joint-ventures.

**Consolidated financial share including 447 metric tons of New AREVA share in COMINAK, whose accounts are deconsolidated in accordance with accounting rules.

THE MAIN STAGES IN THE MINING CYCLE



■ Exploration – 10 years in average

Exploration involves finding new uranium deposits. Prospecting is carried out in successive steps: geological study of the region, interpretation of aerial or satellite photos, geophysical techniques, ground radioactivity measurements and studies of soil and water chemistry.



■ Mining project – from 8 to 12 years

The development phase determines the technical, economic and environmental viability of a mining project. It involves confirming the resources identified by geologists and characterizing the deposit and its ore. During this stage, the industrial pilot, which allows the extraction and ore-processing methods to be established, is set up. The infrastructures needed for mine operation are built. Studies are also performed to assess the societal and environmental impact of the project.

■ Extraction and processing - from 12 to 50 years

Ore is extracted from open-pit or underground mines, or using in situ recovery. AREVA's mining experts also regularly test and apply innovative techniques, which improve the performance of existing operations and increase personnel safety.

The main ore processing operations include crushing and grinding, dissolving, purification, calcination and concentration. The ore of uranium is transformed into a solid concentrate referred to as "yellow cake" (due to its appearance and color).



■ Post-mining: closure, remediation and monitoring - more than 10 years

This stage covers the dismantling, remediation and revegetation of mining sites at the end of operation, in strict compliance with the environmental regulations in force and in consultation with local populations. AREVA also performs radiological and environmental monitoring at these sites for at least 10 years.



HIGHLIGHTS 2016

Take a look at the main milestones achieved during these twelve months



FEBRUARY 2016

AREVA MINING INNOVATES TO OPTIMIZE MINEWATER TREATMENT

For a six month period, the former mining site of Augère in the center of France is hosting the mobile pilot water treatment station developed by the group's Mining Innovation Center and the France Mining Closure teams. The objective is to improve current water treatment performance by means of a new filtration process.



MARCH 2016

DRILLING SAFETY STANDARD DEPLOYED IN KAZAKHSTAN

KATCO (a joint venture between AREVA and Kazatomprom, the Kazakh national company) has been chosen as the pilot site for the deployment of AREVA's new drilling safety standard. According to a review of the situation in February, the new standard which got a very positive reception, has now become an integral part of the daily routine for drilling workers. This standard aims to recall the safety rules and the correct actions to be taken in the drilling activity. AREVA's objective is to deploy throughout the Group's mining sites for application by all employees and all contractors.



APRIL 2016

SIX RIVERS FUND LAUNCH TAKES PLACE WITH COMMUNITIES IN NORTHERN SASKATCHEWAN

On April 11, 2016, AREVA Resources Canada, CAMECO and community leaders in northern Saskatchewan celebrated the establishment of the Six Rivers Fund, a legacy trust fund set up to share the proceeds of mineral resource development. Funding will go to finance community projects in areas such as education, sports and leisure, health and well-being.



APRIL 2016

SOMAÏR MINING TOWN IS NOW POWERED BY SOLAR ENERGY

Since the end of April 2016, 90% of the lighting of the mining town's public buildings and streets is powered thanks to the photovoltaic panels installed on the roofs of the houses and the hospital. For an equivalent level of lighting, installed power is reduced by more than 50%. This innovative project with a positive environmental impact also aims to reduce SOMAÏR's energy costs and ensure the compound's energy autonomy in terms of public lighting.



MAY 2016

INAUGURATION OF THE URANIUM PAVILION AT THE NATIONAL MUSEUM, A SYMBOL OF THE LONG-TERM PARTNERSHIP BETWEEN AREVA AND THE STATE OF NIGER

After 30 years of existence, the Uranium Pavilion located within Niamey's Boubou Hama National Museum was renovated and inaugurated under the distinguished patronage of Assoumana Mallam ISSA, Minister of the Cultural Renaissance, the Arts and Social Modernization, and Olivier Wantz, Senior Executive Vice-President in charge of AREVA's Mines-Front End Business Group. More than a hundred personalities, members of the government and of the diplomatic community and partners of the state of Niger came together to discover the fully renovated Pavilion.



MAY 2016

THE MCCLEAN LAKE MILL IN THE PROVINCE OF SASKATCHEWAN, CANADA, OBTAINS REGULATORY AUTHORIZATION TO ANNUALLY PRODUCE 9,200 TU (24 MLBS)

The McClean Lake mill operated by AREVA obtained the authorization to increase its annual production of uranium (U3O8) from 5,200 tU (13 million pounds) to 9,200 tU (24 million pounds) by the Canadian Nuclear Safety Commission (CNSC). The McClean Lake plant is the only plant in the world capable of processing high-grade uranium ore without dilution. Since 2013, the McClean Lake mill has been through an upgrade and expansion program to improve, modernize and increase the capacity of various circuits while ensuring employee safety and environmental protection.



JUNE 2016

AREVA RESOURCES CANADA SIGNS COLLABORATION AGREEMENT WITH COMMUNITIES IN THE ATHABASCA BASIN REGION

AREVA, the Athabasca Basin communities and Cameco were proud to announce in June 2016 the signing of a collaboration agreement that builds on a sustainable partnership in the development of uranium resources in the Athabasca Basin in northern Canada. The collaboration agreement named YaThi Néné confirms the continued support of the communities historically and traditionally associated with the uranium mining activities at McClean Lake, Cigar Lake and Rabbit Lake.



JUNE 2016

SAFETY MONTH ON AREVA MINING SITES

As has been the case every year for 4 years now, AREVA's Mining sites were all fully mobilized for Safety month. Thousands of employees and contractors met together in Canada, Kazakhstan, France, Niger, Namibia and Gabon, in the course of full-day sessions devoted to safety, to discuss best practices, identify at risk situations and learn safety reflexes during workshop sessions.



JUNE 2016

AREVA MINING, A PARTNER IN THE "MINING AND SOCIETY" NETWORK OF EXCELLENCE

A ceremony was held on June 20, 2016, at French higher education institution MINES ParisTech, to mark the launch of the "Mining and Society" Network of Excellence (NoE), in which a number of AREVA Mining representatives will be involved. The ambition of this network is to bring together the leading French expertise in the field, in order to take account of - and anticipate as far as possible - the needs of industry, government and civil society in the mining sphere.



JULY 2016

MINING LICENSES AWARDED TO AREVA MINES LLC, THE AREVA MINING SUBSIDIARY IN MONGOLIA

On July 19, 2016, the mining licenses for the Dulaan Uul and Zuuvch Ovoo deposits in Mongolia were awarded to AREVA Mines LLC by the Mongolian Mineral Resources Authority. This means that AREVA Mines LLC, jointly owned by AREVA Mongol (66%) and Monatom (34%) - a public company representing the nuclear industry in Mongolia - is now operational to develop mining projects in the country.



JULY 2016

AREVA MINING ONE OF THE PILLARS OF THE NEW AREVA REPRESENTING 35% OF REVENUES

As of July 2016, the AREVA group is organized into two autonomous entities. AREVA NP covers design and construction of NSSS (Nuclear Steam Supply Systems), as well as acting as a supplier of related services and fuels. New AREVA is refocusing on fuel cycle activities with the ambition of being a key player in the recovery, recycling and reuse of nuclear materials, waste management and decommissioning-dismantling. New AREVA ranks in the top 3 global companies in each of its core businesses (mining, chemistry-enrichment, recycling, logistics). Mining business represents 36% of New AREVA revenues in 2016 and is a strategic pillar of this new company.



OCTOBER 2016

POSITIVE OUTCOME FROM RENEWAL AUDIT ON DUAL ISO 14001 AND OHSAS 18001 CERTIFICATIONS FOR THE INDUSTRIAL PLATFORM OF BESSINES IN FRANCE

Facilities at the AREVA Mining Bessines site in the French Limousin region were audited for renewal of their ISO 14001 (Environment) and OHSAS 18001 (Occupational Health and Safety) certifications. The auditors noted a strong improvement in the level of operational control through the good standard of upkeep of the Bessines facilities, in particular the Mining Innovation Center, the France mining closure and depleted uranium storage activities, as well as the effective compliance with environmental and occupational health and safety requirements.



OCTOBRE 2016

AREVA SIGNS 12-MONTH EXTENSION OF WATER SUPPLY CONTRACT WITH NAMWATER

On October 24, 2016, AREVA Namibie signed an extension of the water supply agreement with NamWater, the national water company, to increase production of the Erongo Desalination Plant (EDP), built by AREVA. The water treated by the plant has enabled to meet the growing demand from other uranium mines (Rössing Uranium, the Langer Heinrich mine and Swakop's new Husab mine) and from the communities. The plant guarantees to deliver a sustainable water supply even during any hydrological drought at the coast.



NOVEMBRE 2016

THE NEW AREVA CEO MEETS WITH NIGER'S HIGHEST STATE AUTHORITIES

Philippe KNOCHE, CEO of New AREVA, during his visit to AREVA's mining companies in Niger, was able to meet with the President of the Republic, His Excellency Mahamadou ISSOUFOU, Prime Minister Mr. Brigi RAFINI and the Minister for Mining Mr. Hassane BARAZE. Exchanges with the highest authorities in the country focused on the historic partnership between AREVA and Niger, the decline in world uranium prices and the global market outlook, as well as on the development activities undertaken by the group to benefit the populations.

ICMM
International Council
on Mining & Metals

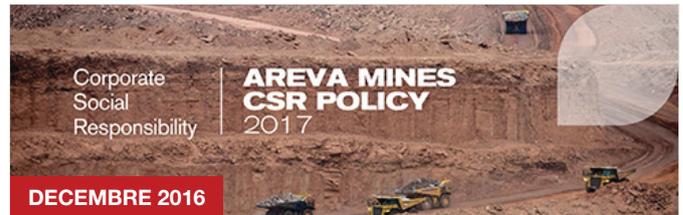


OCT. / NOV. 2016

Mining and sustainable development

AREVA MINES CELEBRATES ITS FIVE YEARS OF ICMM MEMBERSHIP (INTERNATIONAL COUNCIL ON MINING AND METALS)

The ICMM was set up in 2001 to support global mining groups in their commitment to addressing sustainable development issues. Today, the ICMM counts among its members 23 mining companies and 34 national and international mining associations, representing approximately 950 mining sites operated across 58 countries, not counting exploration sites. AREVA was admitted as a member in 2011 following a rigorous selection process.

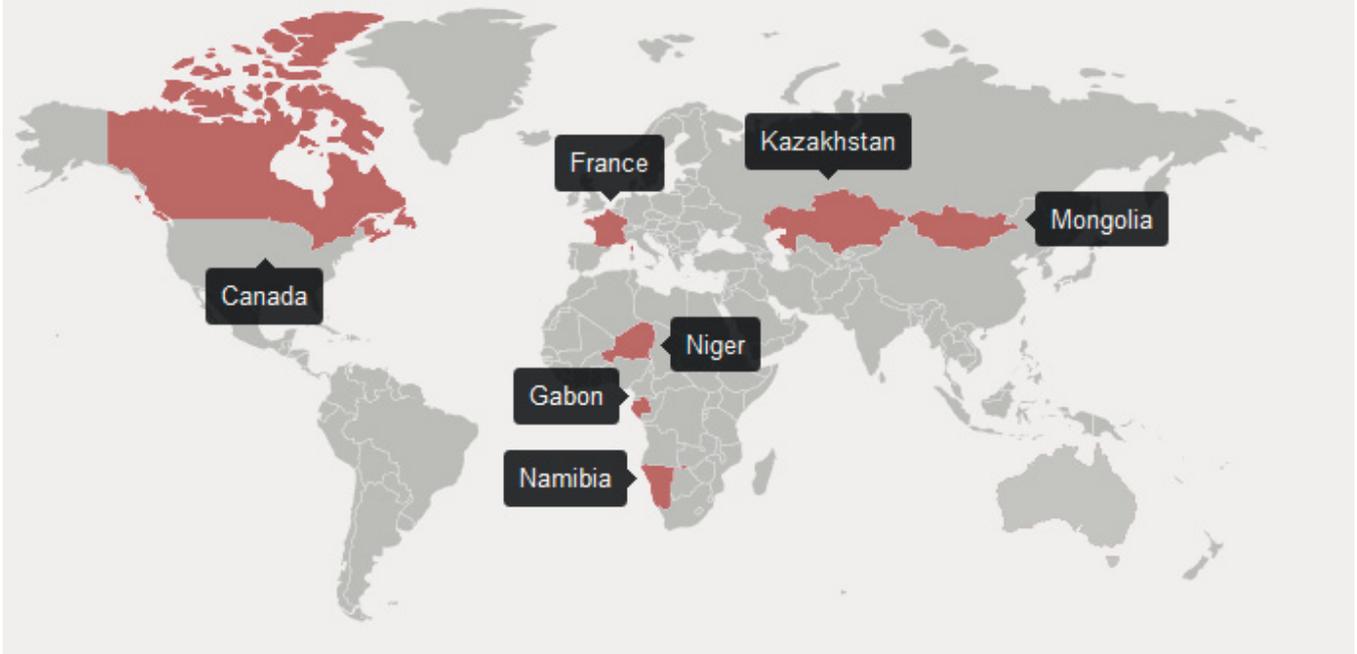


DECEMBRE 2016

AREVA MINES PUBLISHES ITS CSR POLICY PREPARED IN CONSULTATION WITH THE MINING TEAMS AND STRUCTURED AROUND THREE MAJOR PILLARS: SOCIAL, SOCIETAL AND ENVIRONMENTAL

The Corporate Social Responsibility (CSR) policy of AREVA's mining business, developed and consolidated within the company, is the outcome of a lot of effective teamwork involving all the constituent disciplines and specialties. Our priority action areas are identified in terms of social, societal and environmental issue categories. The policy sets the framework for our activities in these areas and is supported by action plans and indicators giving guidance for our employees and contributing to the impetus for regular progress.

WORLDWIDE PRESENCE



NIGER

- OFFICES
- MINING PROJECT
- OPERATING MINE

GABON

- OFFICES
- EXPLORATION
- REMEDIAED MINE

NAMIBIA

- OFFICES
- MINING PROJECT

KAZAKHSTAN

- OFFICES
- EXPLORATION
- OPERATING MINE

CANADA

- EXPLORATION
- MINING PROJECT
- OPERATING MINE
- REMEDIAED MINE
- OFFICES
- TREATMENT PLANT

FRANCE

- REMEDIAED MINE
- HEAD QUARTER

MONGOLIA

- OFFICES
- EXPLORATION
- MINING PROJECT

UPDATE ON OUR ACTIVITIES IN 2016

■ Canada

AREVA has been engaged in mining operations in Canada for more than 50 years.

AREVA production in Canada comes from the McArthur River and Cigar Lake mines, operated by Cameco Corporation. These sites are located approximately 700 kilometers north of Saskatoon in Saskatchewan Province.



AREVA is conducting a major exploration program in this uranium-rich province and in the Nunavut territory, where it also holds majority interests in several deposits:

- a 70% interest in McClean Lake,
- a 51% interest in Shea Creek,
- a 69.16% interest in Midwest,
- and a 64.8% interest in Kiggavik.

■ Cigar Lake

Cigar Lake is owned by a joint-venture consisting of Cameco Corporation, AREVA, Idemitsu Uranium Exploration Canada Ltd and TEPCO Resources Inc.

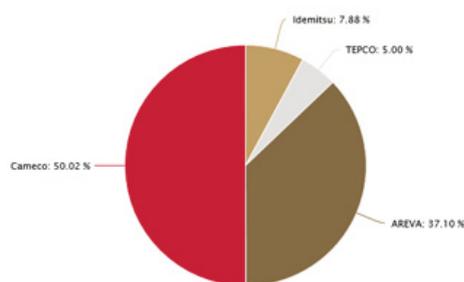
Operated by Cameco, Cigar Lake is the world's richest uranium deposit. The ore is processed in the McClean Lake mill operated by AREVA.

AREVA discovered the deposit in 1981 and helped develop the mining method.

In view of its location 450 meters below the surface and of the very high-grade uranium it contains, the deposit cannot be mined with conventional methods. Freezing techniques are used to strengthen the ground and prevent water infiltration. The selected mining method involves removing the ore by high-pressure jet boring. All infrastructure drifts are located in more solid rock under the deposit to position equipment, drill the ore body to freeze the ground, and mine it by jet boring.

With 17.3 million pounds (6,655 metric tons) of uranium concentrates produced at Cigar Lake in 2016, full capacity of 18 million pounds (6,925 metric tons) should be reached in 2017.

Composition of the Cigar Lake joint venture



■ McClean Lake

AREVA operates McClean Lake and is a 70% owner alongside Denison Mines Ltd and Ourd (Overseas Uranium Resources Development Company Ltd of Japan).

The first uranium production at the McClean Lake open pit mine began in 1995, and uranium concentrate production began at McClean Lake's Jeb mill in 1999.

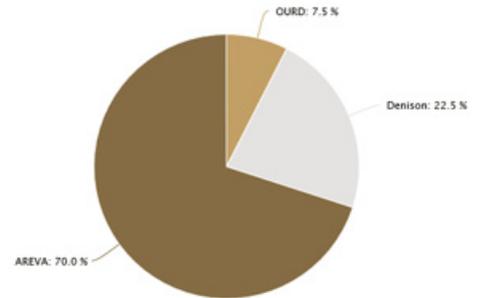
Mining operations were stopped in early 2009.

The mill was designed to process very high-grade ore (> 15%); its capacity was raised in order to receive all of the ore from Cigar Lake. Under an agreement signed in 2011 between the partners of Cigar Lake and McClean Lake, the Jeb mill processes all of the ore from the Cigar Lake mine.

The mill was restarted in October 2014 for that purpose, and its ramp-up to nominal capacity is in step with the ramp-up of mining production (18 million pounds of uranium concentrates).

In 2016, the mill obtained the regulatory permit to increase annual production capacity to 24 million pounds (9,200 metric tons).

Composition of the McClean Lake joint venture



■ McArthur River

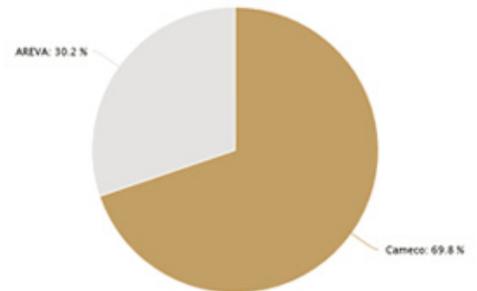
McArthur River is operated as a joint venture by Cameco Corporation. The McArthur River mine has, with Cigar Lake, the world's largest production capacity.

The deposit was discovered in 1988 and mining began in December 1999. Located more than 600 meters below the surface, and in view of the very high grade uranium it contains, the deposit cannot be mined with conventional methods.

The miners are protected from direct contact with the ore by the use of special mechanical mining methods (raise boring and long hole stoping), and the ground is frozen to prevent water infiltration. The mined ore is processed at the Key Lake mill, about 80 kilometers south of the deposit.

The Key Lake mill is operated by Cameco Corporation, which holds an 83.33% interest (AREVA holds 16.67%). McArthur River and Key Lake have a capacity of 7,200 metric tons of uranium per year (18.7 million pounds of U₃O₈).

Composition of the McArthur River joint venture



■ France

In France, the main activities are related to head office and managing the remediated former mining sites.

Today a total 234 sites are under AREVA Mines responsibility for monitoring.

Spread out over 25 departments, these sites were in operation between 1948 and 2001. Jouac, the last mine, closed in 2001. A number of activities were carried out at these former mining sites: exploration work, underground and open-pit mines, dismantled ore processing plants and 17 storage areas for uranium ore processing residues.



■ Gabon

Gabon, the Compagnie des Mines d'Uranium de Franceville (COMUF), of which New AREVA is the operator and principal shareholder, exploited uranium deposits in the region of Mounana until 1999. From 1999 to 2006, all of Mounana's mining and industrial sites, the quality of which has been approved by the International Atomic Energy Agency (IAEA), were completely remediated. Since then, COMUF has been responsible for their environmental monitoring, remediation and oversight of usage restrictions. In 2008, uranium prospection activities resumed and are continuing with the AREVA Gabon subsidiary.



■ Kazakhstan

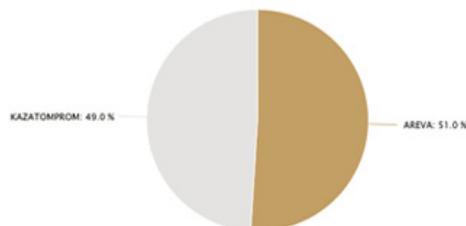
Katco was established in 1997 to develop and mine the Muyunkum and Tortkuduk deposits in southern Kazakhstan, approximately 250 kilometers north of Shymkent. The shareholders are AREVA (51%) and the Kazakh company KAZATOMPROM, the national producer of natural uranium (49%).



Development of the two mining sites, located approximately 60 kilometers apart, started in April 2004 after the signature of agreements between the two shareholders. The in situ recovery (ISR) technology was chosen to solubilize the uranium directly in the rock.

In 2008, Katco received a permit to raise production to 4,000 metric tons of uranium per year; it has maintained this level since 2013. Katco is pursuing studies and work aimed at bringing the South Tortkuduk deposit into production; this deposit is located between two deposits currently in production.

Composition of the KATCO joint venture



■ Mongolia

For more than 15 years, AREVA has successfully conducted mineral exploration operations in the Sainshand Basin at two sites, Dulaan Uul and Zoovch Ovoo.



Following an initial feasibility study, mining licenses were granted for the Dulaan Uul and Zoovch Ovoo deposits in June 2015 to Cogegobi, the subsidiary that will lead AREVA's exploration activities in Mongolia.

In accordance with nuclear energy law in Mongolia, these permits have been transferred to a new mining company in which the state-owned Mon-Atom company overseen by the Commission of State Properties will have a 34% interest. The remaining 66% is held by AREVA Mongol, itself 66% owned by AREVA and 34% owned by Mitsubishi Corporation. After receiving the necessary permits, the mining company will begin building and operating the pilot in order to confirm the technical and economic parameters of the deposit and update the feasibility study.

■ Namibia

The Trekkopje deposit located in Namibia has been 100% AREVA-owned since its acquisition in 2007. A pilot phase in 2012-2013 demonstrated the reliability of the technical solutions chosen and confirmed the production cost objectives.



Nonetheless, the deterioration of uranium market conditions prompted AREVA to mothball the project in October 2012. The equipment and facilities are currently mothballed and regular maintenance continues to be carried out.

■ Niger

Exploration teams from the Commissariat à l'énergie atomique (CEA, the French atomic energy commission) detected uranium in Niger at the end of the 1950s. The uraniumiferous area is located west of the Air granitic body. Close to 2,000 people work at Somaïr and Cominak, excluding subcontractors. Along with jobs, the operating companies provide health, social and educational services to the local communities in this isolated area.

Cominak and Somaïr have delivered uranium to their customers without interruption since operations began in the 1970s.

In Niger, AREVA also owns the Imouraren project, one of the world's largest deposits (with 174,196 metric tons of uranium in reserves after application of the ore yield with a grade of 700 ppm). This project is held via the Imouraren JV.



FIND OUT MORE

In accordance with the strategic partnership agreement signed by the State of Niger and AREVA on May 26, 2014:

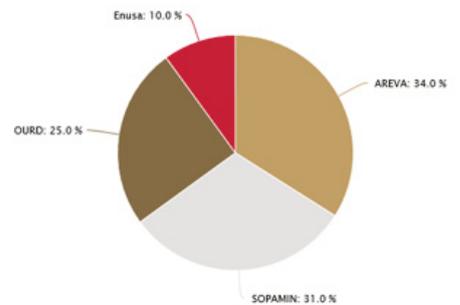
- The mining agreements for Somaïr and Cominak have been renewed in accordance with the Nigerien mining law of 2006 (with neutralization of VAT) ;
- A joint strategy committee has been set up. It will determine the schedule for the start of production of Imouraren as a function of the market trend, since current uranium prices do not allow the deposit to be operated profitably;
- AREVA will provide financial support for local development and infrastructure projects:
 - funding of a share of the Tahoua-Arlit road renovations;
 - financing of the construction of an office building for the mining companies;
 - strengthening of an agricultural development program in the Irhazer Valley of northern Niger.

■ COMINAK

Cominak (Compagnie Minière d'Akouta) is 34% owned by AREVA, which operates it. The other shareholders are Sopamin of Niger (31%), Ourd (25%), and Enusa Industrias Avanzadas SA of Spain (10%).

The ore is extracted underground and is then processed in the site's mill, producing approximately 1,500 metric tons of uranium per year (3.9 million pounds of U₃O₈).

Composition of the COMINAK joint venture



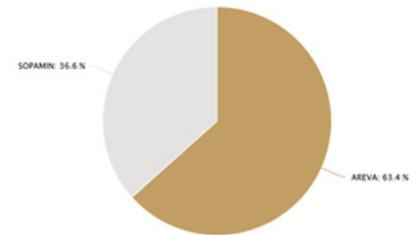
■ SOMAÏR

Société des mines de l'Air (Somaïr, the mining company of the Air) was established in 1968. The company is operated by AREVA, which owns 63.4% of the share capital; the remaining 36.6% is held by Société du patrimoine des mines du Niger (Sopamin, the Nigerien government's mining company).

Somaïr has operated several uranium deposits near the town of Arlit since 1971. The ore is extracted from open pit mines and heap leached or processed mechanically at the head end of the Arlit mill.

In both cases, the uranium solutions are treated in the back end process of the mill. Given the current characteristics of the ore processed, capacity is in the range of 2,000 and 2,500 metric tons per year.

Composition of the SOMAIR joint venture



■ IMOURAREN project

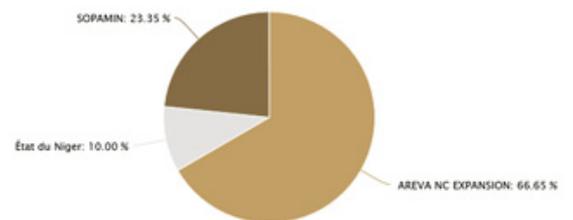
Located 80 kilometers south of Arlit, this deposit was discovered in 1966 and constitutes one of the largest deposits in the world today (reserves of 174,196 metric tons of uranium after recovery). The feasibility study was completed in December 2007 and submitted in April 2008. AREVA received the mining permit for the deposit in early January 2009.

The Imouraren SA mining company was established, with AREVA NC Expansion (86.5% AREVA and 13.5% Kepco/KHNP) holding a 66.65% interest and Sopamin, owned by the government of Niger, holding the remaining 33.35%.

In view of market conditions, production startup work was suspended. The site, equipment and facilities are currently mothballed, and all demobilization operations together with implementation of the restructuring plan were completed in 2015.

The project will restart when uranium market conditions permit. A strategy committee set up by the State of Niger and AREVA regularly reviews these conditions.

Composition of the IMOURAREN SA joint venture



FIND OUT MORE ABOUT AREVA



AREVA SA, head of the AREVA Group, is a French “société anonyme” with a Board of Directors. The Board of Directors sets the directions for the AREVA's business and ensures they are implemented.



Governance combining oversight and transparency

Since January 8, 2015, AREVA SA has had a single governance structure, comprised of a Board of Directors with a Chairman and a Chief Executive Officer.

The Board of Directors is in particular responsible for defining strategy and ensuring that it is implemented. Its activities are governed by internal rules. The Board of Directors meets as often as the interest of the company requires it and at least six times a year.

The role of the Specialized Committees is to gather and provide the Board of Directors with the additional information it needs, as appropriate, and to facilitate decision-making.

Organized into two separate entities

Since July 1 2016, the AREVA group has been organized into two independent entities, New AREVA Holding (hereinafter called “NewCo”) and AREVA NP, each with an Executive Committee in charge of steering operations.

Based on the principle of subsidiarity, the management system combines decision-making and decentralized operations through the Operations Departments and overall coordination by coordination and steering committees.

New AREVA EXCOM

New AREVA includes all of the fuel cycle activities and related central departments.

Its goal is to be a leader in the recycling of nuclear materials, waste management and dismantling.

It will develop its activities in mining, uranium chemistry (conversion and enrichment), used fuel recycling, logistics, dismantling and fuel cycle engineering.

AREVA NP EXCOM

AREVA NP couvre les activités des réacteurs et du combustible, qui ont vocation à être cédées à EDF.

AREVA'S MINING

The Mining Business Unit includes all the Areva's mining activities including "AREVA Mines SA" and the "mining operations" abroad and in France.

The Mining Business Line is managed by M. Jacques Peythieu (since July 1 2016). He chairs the Mining Business Unit Management Committee which includes the operational directors and directors of support functions involved in mining activities.

■ Board of Directors

AREVA Mines is a business corporation with Board of Directors (Société Anonyme avec Conseil d'Administration). Its primary function is to ensure operational consistency in mining activities carried out in France and internationally. Mr Olivier Wantz acted as President and CEO until February 18, 2016, at which point Mr Philippe Knoche, CEO of AREVA, took over the Chairmanship of AREVA Mines SA and Mr Jacques Peythieu became CEO.

AREVA Mines SA has a share capital of 25,207,343 euros and New Areva Holding holds a 99.99% stake in the company, with the remaining 0.01% held by the CEA (the French Alternative Energies and Atomic Energy Commission).

The head office of AREVA Mines SA is at the Tour AREVA (Courbevoie). AREVA MINES SA has another site at Bessines-sur-Gartempe (Limousin). The organization, operation and prerogatives of the Board of Directors are set by the statutes. The Board of Directors meets at least twice a year. It decides how the company orients its activities and ensures their implementation.

The Board of Directors comprises 13 administrators:

- 5 appointed at the proposal of New AREVA;
- 2 appointed at the proposal of the CEA (French Alternative Energies and Atomic Energy Commission);
- 3 state representatives;
- 3 elected staff representatives (first election held in February 2013).

A state inspector and a government auditor also attend board meetings, along with the secretary of the Central Works Council.

In accordance with the statutes, the Chairman is an executive administrator and has no right of veto. Representatives do not receive any remuneration or advantages from the companies controlled by AREVA Mines SA.

40% of the Members of the Board of Directors are women. 62% of its Members are between 30 and 50 years of age and 38% of its Members are over 50 years of age.

■ Management Committee

The Mining Business Unit is run according to a decentralized operating model, based around a head office that performs overall management and oversight functions, and structures that carry out mining operations in France and internationally. "Mining operations" covers exploration, project, production, remediation and after-mining monitoring activities.

The Management Committee meets regularly in order to study safety, commercial, industrial and financial results as well as to draw up and monitor mining activity action plans.

It also ensures that the AREVA Code of Ethics is respected, in addition to the company's commitments to sustainable development, and leads the risk management process for the Mining Business Unit.

The Management Committee is made up of directors from the operational departments (Geoscience, Operations and Projects, and Safety and Community Involvement) and the functional departments (Human Resources, Communications, Finance, Legal, Uranium Materials Management, Strategy and Development).

10% of the Members of the Management Committee are currently women. 45% of its Members are between 30 and 50 years of age and 55% of its Members are over 50 years of age.

■ Occupational Safety Committee

On September 1, 2013, in line with AREVA's Health and Safety Policy and as part of the associated Mining Business Unit Roadmap, an Occupational Safety Committee was set up. It is made up of members of the Mining Business Unit Management Committee, Site Directors and the Safety Team. It is chaired by Jacques Peythieu.

Its aim is to promote a **safety culture within mining operations**, establish and validate related objectives and ensure that the group's Health and Safety Policy is respected, along with its associated commitments.

■ Staff representative bodies

AREVA Mines' Human Resources Policy, in accordance with current regulations, is based on the principles of discussion and consultation. A responsible social dialogue, one that is both constructive and innovative, is considered to be a vital element in the healthy running of the company.

Agreements are regularly signed with staff representatives. In this way, since the creation of AREVA Mines as a legal entity at the end of 2011, more than twenty agreements have been negotiated and signed by all the representative union organizations at company level. Regular discussions have been held to keep representatives up-to-date with the latest developments concerning the company both via representative bodies and also at informal meetings organized on both our sites in France.

The Works Committees and union representatives form the representative bodies which engage in social dialogue in the various countries in which the AREVA group is present.

Regarding collective bargaining, agreements can be signed with union representatives (trade union coordinators) at group level and also in each of the companies that make up the group.

The AREVA group has chosen to formally and responsibly underpin its social policy with the signature of a number of group agreements which establish the foundations of this policy.

To date, several agreements have been signed at group level in France and the construction of social policy continues.

Every year, in France, the mandatory annual negotiations are organized with the staff representative bodies. These in particular relate to wages, gender equality goals on careers and pay levels in the company, as well as measures to achieve them.

On its production sites, AREVA Mines also organizes meetings on a monthly or quarterly basis with staff representatives on a variety of topics such as wages, safety, training, quality of life at work, recruitment, etc.

In France, 100% of employees are covered by a collective bargaining agreement.

In Niger, all employees are covered by an inter-professional collective bargaining agreement.

In Canada, workers are covered by a collective bargaining agreement and all other employees are covered by the Canadian Labour Standards Acts.

Finally, in Kazakhstan, an agreement covering employees has been signed for a period of 3 years (March 2015-2018).

In France, the Health, Safety and Working Conditions Committee (CHSCT) is both a consultative body and a proactive forum for making proposals. It plays an important role in prevention within AREVA Mining. It contributes:

- to the protection of the health, hygiene and safety of the employees of the entity and of employees made available by outside companies, including temporary workers,
- and to the improvement of working conditions.

In Canada, similar monthly meetings are organized. In Niger and in Kazakhstan, there is no Health, Safety and Working Conditions Committee as such but there are Occupational Health departments which are responsible for holding discussions with staff representatives on such matters.

2016 was a year marked by the implementation of the voluntary separation plan in France and the mothballing of the Imouraren project (Niger). All AREVA Mines employees who wished to remain with the company and whose jobs were cut were re-assigned to new positions.



FIND OUT MORE

Within the implementation of the AREVA Group's Recovery and transformation plan, it has concluded an agreement with the Union organizations at the group level on October 19, 2015. The purpose of this agreement was to establish the framework for support to be provided should companies of the Group be obliged to implement a redundancy plan in the form of a voluntary separation plan. Six companies were concerned by this agreement including AREVA Mines.

In this context, the procedure for information and consultation with the staff representative bodies of AREVA Mine on the Company's reorganization plan envisaging the cutting of 93 jobs and the creation of 12 new jobs, as well as the draft of the voluntary separation plan was completed on March 4, 2016.

A collective company agreement was concluded with all the representative trade union organizations on March 4, 2016.

In this latter agreement, the Company made an undertaking to adjust its organization and its workforce, on a voluntary basis by means of internal job mobilities, departures to other positions outside the company and end-of-career measures.

On July 29, 2016, at the end of a voluntary period of four months, 79 requests for voluntary departures either via job mobility, to jobs outside the company or to benefit from end-of-career measures had been registered and approved by management. These requests, to which a further 12 departures that took place prior to the implementation of the voluntary separation plan should be added, meant it was possible to cut 91 out of the 93 jobs initially envisaged under the AREVA Mines reorganization plan.

In addition, the 12 new jobs to be created as part of the Company's reorganization plan have been filled.

Lastly, 7 requests for voluntary departures made within the framework of the "substitution" scheme made it possible to reposition the same number of employees from other Companies of the Group concerned by the voluntary redundancy Plan.

In accordance with the undertakings made by Management, the staff representatives, as well as the union organizations for the company, were involved in monitoring of the effective implementation of the support measures envisaged by the Plan, within the framework of the joint commissions set up at site and company level.

The Company's Central Works Council, consulted on four occasions, returned unanimous favorable verdicts on the effective implementation of the measures envisaged by the Plan.

Public financial assistance received

Within the framework of their mining activities, neither AREVA Mines nor any of its subsidiaries included in the financial consolidation scope have received public financial assistance for the financial year 2016. Items not considered as public assistance for the purposes of this statement include incentives, in particular fiscal incentives, automatically applied to all mining operators, as expressly provided for by the legislation, including mining legislation, of the countries concerned.

Mining activities include exploration, development, mining projects, production of uranium concentrates, and remediation of mining sites. In 2016, they extend over the following geographical areas: France, Gabon, Niger, Australia, Namibia, Central African Republic, Kazakhstan, Mongolia, and Canada.

As at December 31, 2016, the company AREVA Mines SA is 100%-owned by New AREVA Holding SA, which is itself 100%-owned by AREVA SA. The French state holds a stake in AREVA SA through shareholdings held by the CEA (54.37%), the French Ministry of the Economy (28.83%) and BPI France Participations (3.32%). The State of Kuwait holds 4.82% of AREVA SA capital through the participation of Kuwait Investment Authority.

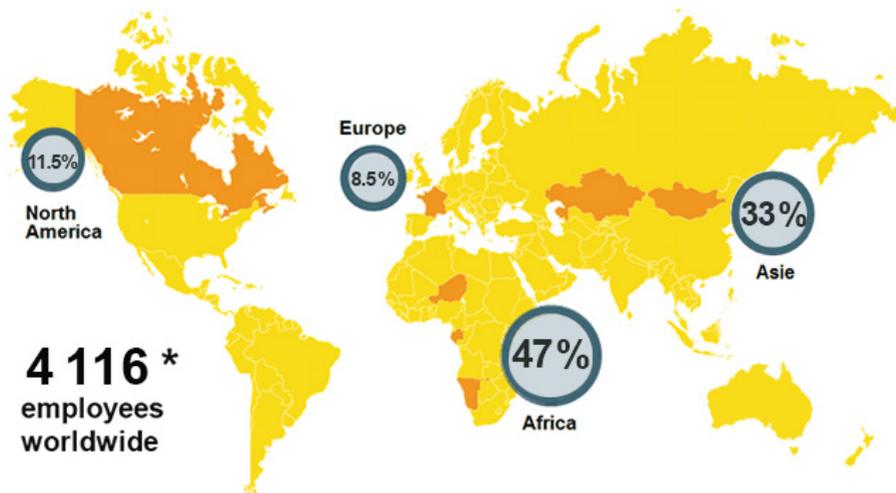
In addition, the following subsidiaries have stock held by a state other than the French state or by companies controlled by a State other than the French state (as at December 31, 2016):



SUBSIDIARY	Country	State or state-owned entity	Percentage ownership
KATCO	Kazakhstan	Kazatomprom company (100% owned by the Kazakh State)	49%
SOMAÏR	Niger	SOPAMIN company (100% owned by the State of Niger)	36.60%
COMINAK	Niger	SOPAMIN company (100% owned by the State of Niger)	31.00%
IMOURAREN SA	Niger	SOPAMIN company (100% owned by the State of Niger)	23.35%
		State of Niger	10%
COMUF	Gabon	Gabones State	24.75%

INTERNATIONAL ACTIVITIES

A presence on 5 continents



AREVA Mines has a diverse assets and resources portfolio, which constitutes an important security factor for utilities seeking long-term guarantees with regard to uranium supplies.

Mining employees are present in various countries. There are uranium production sites in three countries: Canada, Niger and Kazakhstan.

As part of the competitiveness plan put in place to address the context of depressed market prices, workforce adjustments have continued resulting in a decrease of 4% compared to 2015.

* All employees managed by AREVA (fixed-term + permanent contracts) without taking into account AREVA's financial participation in mining joint-ventures.
** Including staff of AREVA Med, the Nuclear Medicine subsidiary

URANIUM MARKET IN 2016



In a post-Fukushima environment, and despite a slower pace of growth in demand, AREVA intends to remain a key supplier of natural uranium.



AREVA's objective is to continue to optimize the competitiveness of existing sites, and to maintain its project portfolio and conduct the necessary studies in order to be in a position to launch new investments.

In this way, AREVA intends to strengthen its position in the uranium market while remaining one of the most competitive producers.

■ Market and competitive position

Reactor requirements stood at around 63,500 tU in 2016 (gross demand expressed in natural uranium equivalent, source: UxC Q4 2016), slightly up (+1.2%) from 2015, led in particular by demand in Asia (e.g. China).

Supply worldwide consists of:

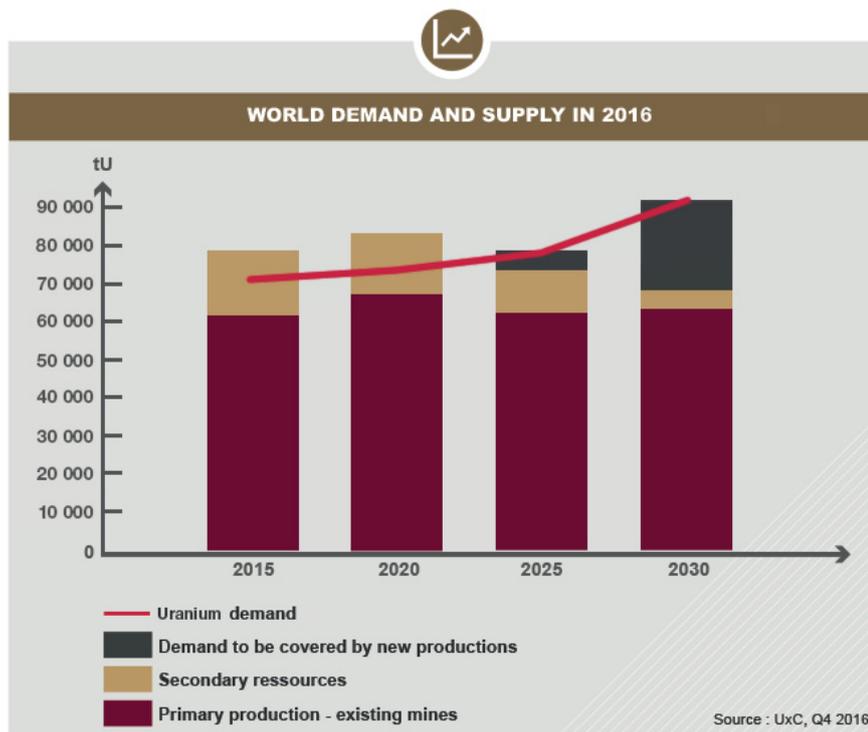
- mining production, which amounted to approximately 61,500 metric tons of uranium, an increase of 1.2% compared with 2015 ;
- secondary resources estimated to a total of 17,700 metric tons of uranium, according to UxC, coming from materials from used fuel recycling, marketing of uranium inventories of the US (DOE) and Russian governments, re-enriched depleted uranium, and low-enriched uranium.



IN 2016 ...

8,432 metric tons of uranium
(AREVA equity share) corresponding to
10,739 metric tons (financially consolidated
share).

NB: 1 metric ton of natural uranium ~ 2,599
pounds of U₃O₈.

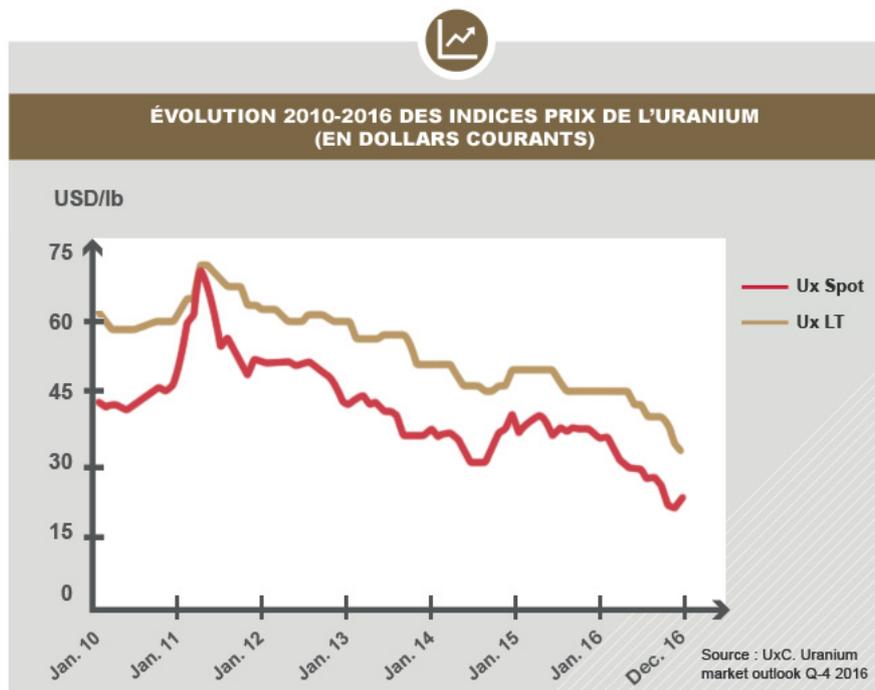


Spot market

The spot market, which accounts for approximately 15% of uranium supply, varied between \$34 and \$18 per pound, ending the year at \$20 per pound (a drop of 40%). These historically low levels reflect an imbalance between supply and demand, accentuated in 2016 by the drop in Chinese imports. The long-term indicator, which reflects the signature of multi-year contracts for deliveries starting a few years from now, fell in 2016, ending the year at \$30 per pound versus \$44 per pound at year-end 2015.

With the decline of market indicators since Fukushima, producers have announced numerous project postponements, closures and/or mothballing of producing mines, and reduced production, particularly Cameco et Paladin in 2016. This restructuring is expected to continue in the coming years.

Over the long term, according to the WNA, the market is still forecast to grow, with demand by 2025 predicted to be 25% higher than in 2015. The key drivers of this will be the restarting of Japanese reactors and growth in demand from the Chinese reactor fleet. Rising demand is expected to raise market prices and enable new projects to be launched.

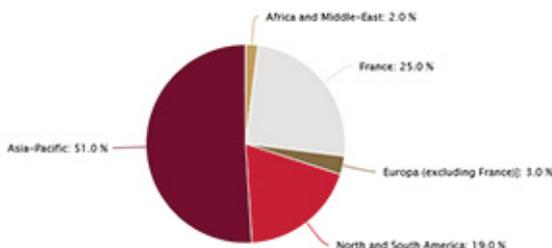


AREVA PRODUCTION AND SALES IN 2016

Backlog

The backlog amounted to 9,480 million euros at the end of 2016. The backlog is diversified among customers in different uranium-consuming regions. The uranium sold comes from the mining resources of the companies in which AREVA has an equity interest, or from uranium bought on the market.

2016 revenue by geographical area

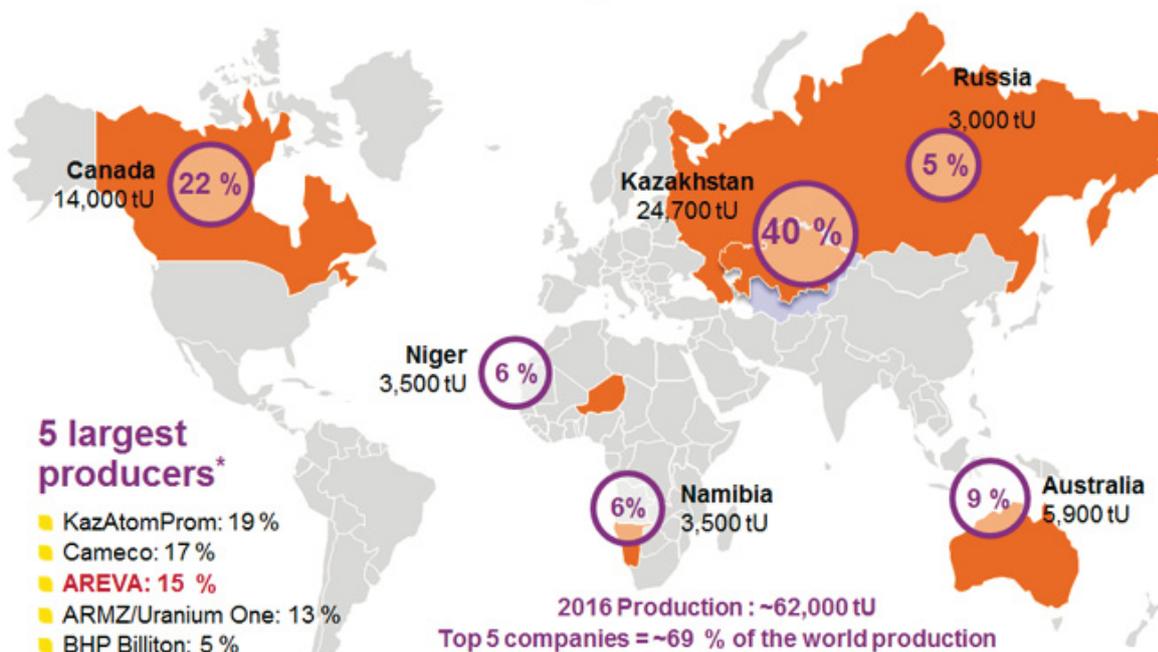


KEY FIGURES

		2016	2015	2014
Revenue *	(in millions of euros)	1 451	1 447	1 297
Operating income	(in millions of euros)	183	183	(73)

* Contribution to consolidated revenue.

Uranium world production in 2016



Sources : Annual reports, AREVA analyses

■ Production of mining sites

Through effective control over its production costs and its level of capital expenditure, the Mining business turned in good operating and financial performance in 2016, despite the persistence of low prices.

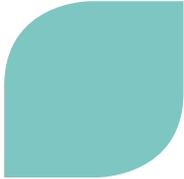
- Somair produced 2,164 metric tons of uranium (on a 100% basis), for an AREVA share of 63.4 %;
- COMINAK produced 1,313 metric tons of uranium (on a 100% basis), for an AREVA share of 34 %;
- KATCO produced 4,002 metric tons of uranium (on a 100% basis), for an AREVA share of 51 %;
- McArthur River/Key Lake produced 6,944 metric tons of uranium (on a 100% basis), for an AREVA share of 30.2 %;
- Cigar Lake produced 6,665 metric tons of uranium (on a 100% basis), for an AREVA share of 37.1 %.



PAYS 	Sites	Financial consolidation 2016	Type ¹
		tU	
CANADA	McArthur River	2 097	UG
CANADA	Cigar Lake	2 473	UG
TOTAL	Canada	4 570	
FRANCE	Lodève	3	n.d.
TOTAL	France	3	
KAZAKHSTAN	Katco	4 002	ISR
TOTAL	Kazakhstan	4 002	
NIGER	Cominak ²	-	UG
NIGER	Somair	2 164	OP
TOTAL	Niger	2 164	
TOTAL		10 739	

¹ Type of operation: ISR: In Situ Recovery; OP: Open Pit; UG: Underground; n.d.: not defined.

² COMINAK has been consolidated under the equity method since January 1, 2014. Source: AREVA.



CHAPTER
CSR APPROACH

Extract from Responsible Development
report 2016 on Areva's Mining Activities

The complete report is downloadable on :
www.csr-mines.aveva.com



*AREVA Mines, a socially responsible,
committed and forward-looking
Mining company*

JACQUES PEYTHIEU, SENIOR EXECUTIVE VICE PRESIDENT, AREVA MINES



Profitability and Responsibility laying the groundwork for the future

2016 was marked by key milestones with the formation of New AREVA. It was a year characterized by the completion of the planned asset sales, including AREVA NP's reactor business to EDF, the terms and conditions for increasing AREVA SA's and New AREVA's capital, and the equity stakes of JNFL and MHI, two long-standing partners and major Japanese industrial groups. New AREVA is now focused on fuel cycle activities.

We achieved more than 70% of our performance plan to which we had collectively committed, with a significant increase in our operating results in an unfavorable and increasingly competitive market environment. The Group has continued with its competitiveness plan by improving productivity, selective purchasing, the postponement or suspension of projects and the implementation of a voluntary separation plan.

However, we are convinced that nuclear power is an essential source of power in the energy mix considering a projected increase of 70% in global electricity demand by 2040 and the challenge of climate change, which requires a significant reduction in greenhouse gas emissions.

New AREVA has undeniable strengths, recognized by our customers and ranks among the top three in the world in its core businesses. The year was marked by new commercial successes, particularly in mining. Mining activities account for 36% of New AREVA's turnover and stand as a strategic pillar of our new Group.

We have chosen three priorities to define AREVA Mines' vision:

- Achieve the profitability expected by our shareholder and finance our investments for the future by remaining a producer with low cost of production
- Discover new economic deposits and continue to optimize the projects in our portfolio to be ready when the market picks up,
- Carry out our activities as a socially responsible mining company in accordance with the principles defined by the ICMM and our own CSR policy.

Achieving the profitability expected by our shareholder and financing our investments for the future by remaining a producer with low cost of production

In 2016, the Mining BU added to its order backlog, which amounts to € 9.5 billion, achieved record production of nearly 11,200 tonnes, while significantly increasing its rate of return. Its operational cash flow amounted to € 510 million, a strong performance in the context of a depressed market. The price of uranium reached its lowest level for 10 years at \$ 18 per pound in August 2016.

Unfortunately, market overcapacity will persist until the beginning of the next decade; this situation requires our teams to be ever more rigorous, agile and determined to improve continuously.

To this end, all the Mining BU's management committees and most of our managers have been trained in the operational excellence approach. We expect everyone to be more and more involved on the ground to better support employees in respecting and improving standards in terms of safety, quality, cost and on-time delivery.

We are also relying on innovation to improve the productivity of our operations in a responsible way. For example, our R&D work contributes to a better understanding of the process of natural mitigation in aquifers after ISR (In Situ Recovery) operations. It has also helped us to reach the production goal of our mine in Kazakhstan and optimize our project in Mongolia through 3D modeling of production blocks. Similarly, we rely on innovation in our technologies and/or working methods to reduce our consumption, especially of reagents, water and energy.

Discovering new economic deposits and continuing to optimize the projects in our portfolio to be ready when the market picks up

We are continuing our prospecting activities with a significant budget maintained at € 35 million in order to discover new profitable deposits. In July 2016, to our great satisfaction, the Mongolian Mineral Resources Authority granted AREVA Mines LLC the mining licenses for the Dulaan Uul and Zuuvch Ovoo deposits which have estimated resources of 61,000 tonnes of uranium. Similarly, the Imouraren project's modularity studies continued. The objective remains to maintain visibility of production for about 20 years, which is a very strong point with respect to our customers who want to work with long term contracts.

Carrying out our activities as a socially responsible mining company in accordance with the principles defined by the ICMM and our own CSR policy

In 2016, the CSR approach undertaken by AREVA Mines teams for several years took a new step forward with the development of a CSR policy, the deployment of which will be monitored by a CSR committee that I chair and which is composed of representatives from the BU's departments and subsidiaries.

Exercising our activity as a responsible mining player is the foundation of our CSR policy in terms of health, safety at work, the environment, ethics and also fitting into the local communities.

The primary principles of our policy are risk management, and health and safety at work for our employees and subcontractors. We regret, however, a fatal accident in the Cominak underground mine in Niger. This tragic event reminds us regrettably that safety requires the unfailing involvement of all of our employees at all times. For 2017, the priority areas of activity to improve our results in this field are the strengthening of the training of local operators and managers, and the identification and analysis of accidents with high potential of severity.

One of the principles which guide our actions is a thorough consideration of each local situation. We build relationships with our stakeholders by engaging in dialogue and consultation, and by developing important community support projects, always with respect for ethics and transparency.

Also included in our policy are anticipation and regulatory compliance, as well as compliance with international standards. For example, AREVA has supported the Extractive Industries Transparency Initiative (EITI) since its inception.

The progress made in 2016 would not have been possible without the determination and sense of responsibility of the men and women who make up our teams. It is their expertise, their know-how and their ability to meet the challenges and to respect the principles of our code of ethics that make New AREVA a socially responsible, committed, resolute and forward-looking Mining company.



Areva Mines wants to be a leading and exemplary player in driving the development of its mining activities. The goal as a responsible mining company is to ensure sustainable, concerted and balanced development towards meeting the social, environmental, societal, technical and economic challenges involved in the Mining BU's activities at each stage of the mining cycle.

OUR DEFINITION : "BEING A RESPONSIBLE MINING COMPANY"



Gilles RÉCOCHÉ
Vice President for Safety
and Sustainable
Development
AREVA Mines

4 4 PILLARS TO STRUCTURE
OUR POLICY OF RESPONSIBILITY



Our actions in the area of corporate social responsibility are structured and formally defined by our commitments and our governing bodies.

In 2016, we set out our CSR policy, which was drawn up in consultation with the various different sites and departments of the Mining BU Mines, then approved by the Management Committee and signed by the Senior Executive Vice President of the Business Unit.

A CSR committee, a body at the same level as the Management Committee of the Mining BU has been set up and will meet once a year to approve the goals and progress made with regard to CSR policy.

OUR STAKEHOLDERS : "IDENTIFYING AND MEETING EXPECTATIONS"

Dialogue and consultation with our stakeholders are among the fundamentals of our approach.

Our teams at headquarters and/or on site are their primary interface.

A number of both voluntary and regulatory approaches help us facilitate these relationships and identify groups interested in our activities.



■ Frameworks and tools for identifying stakeholder expectations

- **Regulations in force, whether national or international.** These may designate, depending on the type of mining project, the stakeholders to be consulted as part of a clearly established dialogue and consultation process: e.g. the Site Monitoring Committee in France for after-mining remediation and monitoring projects. Other groups to be consulted may include stakeholders such as (but not limited to) the authorities, residents' associations or staff representative bodies.
- **Mining agreements, specific partnership agreements or special provisions in our contracts,** may lay down a framework for investments for the benefit of communities or other local players with a view to socio-economic development.
- **Frameworks and standards set by professional organizations in the sector** and bodies in charge of voluntary transparency and responsibility initiatives.
- **"Stakeholder mapping" and risk management exercises (e.g. the business risk model).** These are internal methodological principles. These systems help our teams identify and analyze the commitments to be made with regard to groups impacted by our mining and industrial projects.
- **Local bodies for dialogue with stakeholders.** Bodies such as the Bilateral steering committee (CBO - Conseil Bilatéral d'Orientation, Niger), which bring together local elected officials, relevant authorities and civil society, alongside AREVA, serve to elicit local stakeholder expectations.

OUR CHALLENGES: "IDENTIFYING AND OVERCOMING CURRENT AND FUTURE CHALLENGES"

Mining is an industrial activity that can have environmental impacts.

Uranium has specific physical, chemical and radiological properties.

We therefore adopt stringent and statutorily demanding practices for the protection of people and the environment.

These are preoccupations that are taken into account at all stages of the mine's lifecycle over a number of decades: control the impact of liabilities and safeguard against long-term risks (over 50 years).

Our mining operations are international, and their contexts vary from one country to another, from an environmental standpoint as much as on political, economic, social and cultural levels.

The acceptability of our mining activities (our "social license to operate"), the contribution we can make to local development and the consultation of stakeholders are key areas of commitment on our part, both from a regulatory and a voluntary standpoint.

Building and maintaining trust is a constant challenge.

Numerous factors also have an impact on the production of Yellow Cake (uranium oxides): ore prices, national and international energy policies, the safety environment, regulatory requirements, stakeholder expectations, industry best practices, etc.

Our teams have to deal with constantly changing environments while ensuring a high level of safety and risk prevention over the long term.

Environment
Biodiversity Health Radiation
protection Remediation Water Air
Soil People
Safety Waste
Emissions

Multi-cultural
Local purchasing
Native populations Communities
Stakeholders Trust Dialogue
Consultation Local development
Redistribution EITI
Access to water Education Health
Environment

Fuel cycle
Transport Logistics Financial
Customers Partners Investors
States Authorities General public
Safety ICMM Risks

OUR ACTIONS : "MOBILIZING OUR DISCIPLINES AROUND OUR POLICY OF SOCIAL RESPONSIBILITY"

We are working hard to appropriate the concept of Corporate Social Responsibility (CSR) and extend it across the entire scope of our activities.

We seek to be coherent with our corporate culture and at the same time receptive to related developments: extra-financial reporting, materiality, mapping and inclusion of stakeholders in our processes, community involvement, etc.

Our responsible approach is best defined through the commitment of our teams to identify and apply best industry practices.

AREVA is a member of the International Council on Mining and Metals (ICMM) and its undertaking to adopt the principles and positions of the organization dates back to 2012. As such our delegation, composed of specialists and managers, is involved in its various working groups. The goal is to contribute to the development of new industry guidance and share our practices and lessons learnt with our peers. Members of our top-level management also sit on the ICMM Council.

We have defined three main areas where we are determined to progress continuously.



1. DEDICATED STRUCTURE AND PROCESSES

AREVA Mines' CSR Department was created in 2012. One of its missions is to assist our teams for the scope of the Mining BU, its support & operational business functions in incorporating these responsibility commitments.

We develop the associated **tools and improvement processes**: CSR audits on site and at headquarters, materiality assessment exercises, self-assessment, participation in external working groups, etc.

Our goal is to achieve better prioritization of our CSR challenges and work out with our teams how to act on the areas for improvement that we identify.



2. MOBILIZE OUR TEAMS

Our teams constitute the primary interface with our stakeholders. They conduct many concerted local initiatives to identify and address expectations.

They are key to the prevention of risks on a day-to-day basis and over the long term through research and development programs.

They are engaged in external working groups both for knowledge building and for sharing of best practices.

They are constantly seeking to improve their business practices in the course of "business as usual" or through targeted initiatives such as innovation competitions.



3. REPORTING & AUDITS

Our subsidiaries in countries which adhere to the Extractive Industries Transparency Initiative (EITI) declare revenues and amounts paid to governments within the framework of this process.

Since 2010, we have been producing this annual CSR document to report on our responsible development performance and commitments in accordance with the Global Reporting Initiative guidelines.

Since 2013, we have had external third party CSR audits carried out, both at headquarters and on mining sites, as per the ICMM Assurance Procedure and AA1000 principles.

We have been compliant with the G4 version of the GRI since the 2015 report.



We are identifying and evaluating solutions for optimizing our activities and reducing their impacts throughout the lifecycle of the mine, in terms of environmental, social and economic aspects, with the aim of preventing risks as far upstream as possible for the benefit of our employees and the general public.



Nuclear safety and risk prevention are supported at the highest management levels of our organization. This constitutes AREVA's number one strategic pillar.

We are establishing many mechanisms for identifying, managing, monitoring and alerting to risks, reducing and eliminating risks in the long term, as well as preparing for emergency situations.

SCOPE

The CSR report on AREVA's mining activities covers workstation risks, health risks, industrial and environmental risks.

Each of our commitments presents the mechanisms in place more comprehensively.

Risks relating to security situations in the countries, as well as so-called financial risks, are outside the scope of this reporting. Management and coverage of global risks are addressed in the AREVA group's Reference document (Business Risk Model) to which AREVA Mining is a contributor.



AREAS FOR ACTION

RISK MAPPING

Assessing Health - Safety - Environment risks



Risk mapping is a monitoring tool based on 11 themes

- leadership,
- management of regulatory compliance and repositories,
- projects and control of changes,
- crisis management,
- 3SE culture - safety, health, security and environment,
- health and safety,
- control of nuclear and radiation protection risk,
- transport of hazardous materials on public roads,
- control of technological and accidental risks,
- hazardous substances,
- control of long-term (chronic) risks and impact on the environment.

Our head office and onsite teams, and in all the countries in which we have a presence, participate in the process of evaluating Health, Safety, Radiation protection and Environmental risks, so that we can carry out risk mapping.

The aim of this mapping process is to identify the major risks encountered on sites in different areas, so that we can assess the degree of control and define priority action plans to implement.

Monitoring of this mapping process is carried out through inspection programs as part of a continuous improvement process.

HAZARD STUDIES

Reducing technological risks



In order to reduce both technological and natural risks, hazard studies are regularly conducted upstream of new industrial projects and whenever there is a change of process at our "yellow cake" (U_3O_8) production sites.

These aim to identify major risks and the preventive and protective barriers to be implemented to minimize them.

They are also an opportunity to demonstrate the good practices employed by the teams and promote the sharing of experiences.

In 2016, considerable industrial investments have been made in this direction. For example, in Kazakhstan, at Katco, the firefighting equipment for the facilities has been improved and enhanced by the installation of automatic extinguisher systems for certain facilities. This optimization has been carried out subsequent to an update to the American NFPA fire risk management codes.

Similarly, in 2014, a leach solution pipe was replaced between the South Torkuduk and North Torkuduk sites. This change follows feedback after an environmental event and a strengthening of our pipeline design and construction standards to prevent accidental spills.

In 2013, during preparation work for the restart of the McClean Lake mill located in northern Saskatchewan, Canada, the team of metallurgy experts at McClean Lake established an updated assessment of risks.

With the help of the operational and engineering teams, and an outside consultant, a new design was proposed and implemented in 2014. This assessment was also updated during the production ramp-up between 2014 and 2015, along with the associated action plan, in order to bring the level of identified risks within acceptable limits, in accordance with best practices, thus making the process safer.

CRISIS EXERCISE

Preparing for emergency situations



Exercises to prepare for emergency situations are regularly performed at a local level, and emergency response plans are regularly updated. Different levels of exercise are implemented:

Level 1 : Local exercises such as fire drills at least once per quarter.

Level 2 : Local exercises with involvement of the subsidiary's general management, at least once every two years.

Level 3 : Local exercises with involvement of the subsidiary's general management and AREVA Mines headquarters. Level 3 exercises are performed once a year within the Mining BU.

In 2016, a level 3 crisis exercise was carried out at the SOMAÏR site in Niger. The aim was to test the crisis organization put in place to deal with an industrial accident situation.

This exercise took place over half a day and was managed locally and in collaboration with teams at the Niamey headquarters and AREVA Mining in Paris, involving the activation of three crisis control centers.

In 2017, a level 3 crisis exercise will be organized on the KATCO site.

These exercises also provide an opportunity to train the various stakeholders (internal and external) and foster their skills and experience, test structures, procedures and equipment, and define new areas for improvement.

R&D PROGRAMS

Developing and sustaining multidisciplinary expertise to assess and minimize our environmental footprint throughout the life of our mining sites.



The scientific work for our R&D programs is performed by our onsite teams, as well as with numerous research partners. The work aims above all to:

- understand, prevent and model the migration of chemical and radiological substances over the long term;
- identify the issues relating to water management and treatment;
- be proactive with regard to regulatory changes and the requirements of the authorities;
- develop new tools for sampling and analysis, to improve our knowledge of environmental impacts.

In order to support AREVA in tackling scientific challenges, a number of academic partnerships have been set up.

These partnerships enable our R&D teams to enhance their work through reciprocal contributions of skills and offer prospects for development.

Academic partnerships also provide a guarantee of published results and add to the R&D teams' own legitimacy and visibility.

Our partners include Université Paris VI, Université Paris VII, Ecole des Mines de Paris, Université de Poitiers, Université de Bruxelles, the University of Manchester, the University of Granada, the CEA, Ecole Polytechnique Fédérale de Lausanne, CREGU, the University of Wisconsin.

CODE OF ETHICS

In October 2016, AREVA introduced its Code of Ethics, which supersedes the Values Charter in force since 2003. Available on the AREVA website and issued to all of our employees and industrial partners (subcontractors, suppliers, business partners, customers), the AREVA Code of Ethics describes the group's ethical commitments to its stakeholders, as well as what it expects from its employees and its suppliers or subcontractors and business partners; it specifies the rules of conduct which everyone must follow at all times.

It is complemented by a Compliance Policy which specifies how the Code is to be implemented at all levels, across all activities and in all countries; this policy also explains how compliance is organized within the group.

According to the Code of Ethics, it is a reflex and a duty for each and every one of us to immediately raise the alert if any blatant incident or breach of a statutory or regulatory obligation or violation of this code of ethics or compliance policies and procedures is observed. There are no hierarchical barriers to the internal circulation of information required to ensure the smooth running of AREVA, nor any requisite rank for anyone alerting their superiors or a compliance manager forthwith. This applies with the full force of legal protection offered under the SAPIN II Law concerning whistleblowers.

The rules of conduct of the Code of Ethics deal with the action we take in terms of the following:

- Compliance with international treaties (international mechanisms in force with regard to non-proliferation);
- Conflicts of interest;
- Insider trading;
- Corruption, gifts and unfair advantage, and influence peddling;
- Payments;
- Political financing;
- Philanthropy, donations, humanitarian work;
- Competition;
- Threats against persons and property;
- Primacy of the AREVA Code of Ethics.

At group level, the AREVA Board of Directors has set up four specialized committees including the **Audit and Ethics Committee**. Its mission includes overseeing group compliance with the best international ethical practices, reviewing the Code of Ethics and its updates and where appropriate making recommendations to the Board of Directors. The role of **Compliance Officer within the Mining Business Unit** is held by the General Counsel for our activities, in contact with the Senior Vice President for Compliance of the AREVA Group on the Group Ethics Committee.

ETHICAL REPORTING

Every year, AREVA Mines, like all the group's business entities, conducts an internal ethical reporting process on the proper application of the Code of Ethics, any infringements observed, and action plans put in place to remedy such breaches.

Each campaign opens with a letter from the Senior Executive Vice President of AREVA Mines. This process involves all our directors and their managerial staff in all the countries where we are present (AREVA Mines and its sites in France and abroad, as well as its subsidiaries).

This reporting is underpinned by the principle that our employees can report an infringement they have found without repercussion to themselves if the facts are proven (whether the issue is within our own operations or related to the practices of our subcontractors). In the same way, if anyone is given an order that clearly goes against the AREVA Code of Ethics, they are entitled not to comply and must report the matter to group management immediately.

The nature of corrective actions proposed varies depending on the severity of the failure to comply with the Code. These actions may range, for example, from training to dismissal of the personnel concerned. This exercise also enables our teams on all our sites to have a better qualitative understanding of the situations that bear risks with regard to the rules of conduct and the Code's values: corruption, conflict of interest, forced or child labor, etc.

All members of the AREVA Mining Management Committee have followed or will follow training in ethics and human rights. Similarly, all of our subcontractors and suppliers, in subscribing to our General Purchasing Conditions, make a contractual undertaking to adopting the Code of Ethics.

It was decided in 2016 to implement at least half-yearly monitoring of ethical incidents within the AREVA Mining Management Committee.

INDIGENOUS PEOPLES' RIGHTS



The right of indigenous peoples to decide on the basis of prior and informed free consent is one of the undertakings necessary for the acceptability of our activities and for building a constructive dialogue over the long term.

More specifically, in Mongolia and in Canada, we seek to establish respect for these fundamentals at the earliest possible stage in the life cycle of mining activities.

The way in which we approach and deal with the questions surrounding this complex issue in concrete terms is currently being examined by our different functions. As part of this process we are involved in an ICMM working group and we situate this important initiative as one of our continuous improvement priorities.

SYSTEM FOR ALERTING AND ISSUING COMPLAINTS IN CASE OF DISCRIMINATION

Discrimination is unequal treatment based on grounds prohibited by law.

French law recognizes twenty grounds or criteria of discrimination: age, gender, origin, family status, sexual orientation, gender identity, customs, genetic features, belonging or not to an ethnic group, nation, race, or given religion, physical appearance, disability, health status, pregnancy, family name, political opinions, trade union activities, place of residence (twentieth criterion, in the Law of February 21, 2014 on Planning for Cities and Urban Cohesion).

It is different from a discriminatory behavior or act, which is a discriminatory gesture or action of one employee towards another, based on one of the twenty grounds of discrimination.



FIND OUT MORE

A system for alerting and issuing complaints in case of discrimination has been in place since February 2013.

Our employees can use this system or else raise any issue with the human resources teams, their managers, their staff representative, or the network of ethics officers.

In 2016, the system was used once within the scope of mining activities. The case was found not proven following an internal investigation.



Regulatory compliance and enforcement is a prerequisite in our business and lies at the heart of group policies and standards.

We also attach great importance to adopting international good practices in order to continuously improve our approaches and guarantee sector monitoring in terms of sustainable development.

THE INTERNATIONAL COUNCIL ON MINING AND METALS (ICMM)

Since May 2011, AREVA has been a member of the International Council on Mining and Metals (ICMM). This initiative is a reflection of AREVA's desire to be part of a dynamic of continuous improvement and to share its know-how more effectively with its peers.

Top tier management, together with experts and specialists are actively involved in the working groups and processes associated with the development of ICMM sectoral good practices. As such, activities shall be in line with the following commitments:



- Incorporate into our policies and practices the **10 principles of sustainable development and the position statements of the ICMM** (e.g. **Indigenous peoples' rights**). In accordance with our internal policies and commitments, we are applying these principles in the development of our Responsible Commitments Plan. They enable us to better understand the issues faced by the mining sector and act as a support in prioritizing the materiality of associated themes.
- Provide our stakeholders with an annual non-financial report in accordance with the international reporting guidelines of the Global Reporting Initiative (GRI). Today we are also committed to adopting the G4 version of the GRI.
- Have our statements and practices, presented in the Corporate Social Responsibility Report on AREVA's Mining Activities, reviewed annually by an independent assessor (as per ICMM audit procedure and AA1000 accountability principles).

■ Understanding the 10 ICMM sustainable development principles

The ten fundamental principles of the ICMM (and their complementary documents in the form of "position statements") take inspiration from other global standards such as the Rio Declaration, the Global Reporting Initiative, the OECD Guidelines for Multinational Enterprises, the World Bank's Operational Policies, Conventions 98, 169 and 176 from the International Labour Organization and the Voluntary Principles on Security and Human Rights.

For further information on each of the ten fundamental principles and the different "position statement" commitments, see www.icmm.com.



THE 10 PRINCIPLES

1	Implement and maintain ethical business practices and sound systems of corporate governance.	2	Integrate sustainable development considerations within the corporate decision-making process.
3	Uphold fundamental human rights and respect cultures, customs and values in dealings with employees and others who are affected by our activities.	4	Implement risk management strategies based on valid data and sound science.
5	Seek continual improvement of our health and safety performance.	6	Seek continual improvement of our environmental performance.
7	Contribute to conservation of biodiversity and integrated approaches to land use planning.	8	Facilitate and encourage responsible product design, use, re-use, recycling and disposal of our products.
9	Contribute to the social, economic and institutional development of the communities in which we operate.	10	Implement effective and transparent engagement, communication and independently verified reporting arrangements with our stakeholders.

THE EXTRACTIVE INDUSTRIES TRANSPARENCY INITIATIVE

Since 2003, by lending its support to the Extractive Industries Transparency Initiative (EITI), AREVA has demonstrated its commitment to greater transparency in payments made to States, in relation to the management of mining resources.

Niger, Mongolia and Kazakhstan, countries in which the group is engaged in mining activities, are members of EITI. In these countries, our mining subsidiaries participate in the local multi-party process and declare payment of taxes, mining rights and taxes on profits, royalties, and fees using specific declaration forms, with national governments obliged to report revenues from payments received.

The statutory auditors of these subsidiaries carry out an audit which results in a certificate of compliance in accordance with the IFAC (International Federation of Accountants) ISRS 4400 international standard on related services.

Furthermore, AREVA's mining activity entities assess their involvement in the EITI process by means of self-assessment forms.

France has started the process of preparing its application to become a member of the EITI and Gabon has expressed its commitment to apply to be a member of the EITI.



HEALTH OBSERVATORIES



LES OBSERVATOIRES EN QUELQUES CHIFFRES...

At the end of 2016, in total more than 3,513 post-professional monitoring consultations have been carried out for former employees of COMUF in Gabon and SOMAÏR and COMINAK in Niger. In 2016, the Health Observatory of Mounana (Observatoire de la Santé de Mounana – OSM) Gabon did not perform any consultations as a result of a disagreement between the different stakeholders in the Observatory.

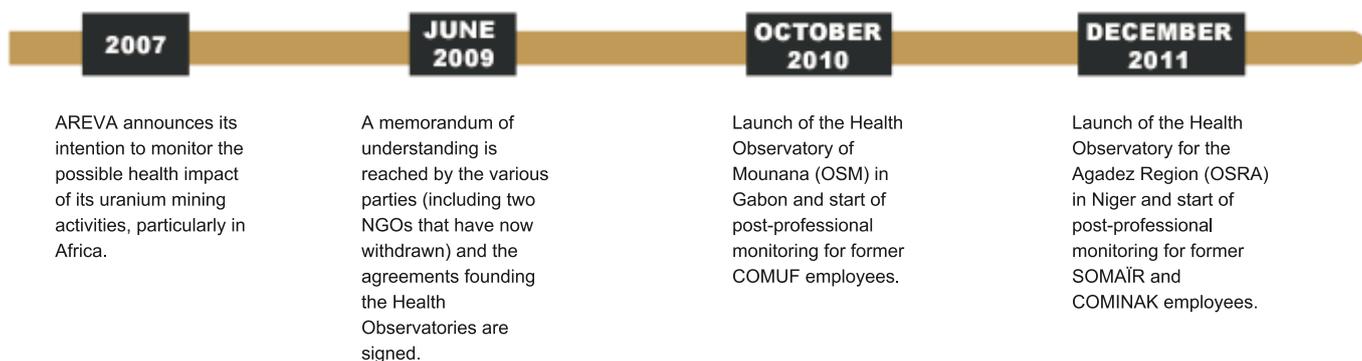
As of the end of 2016, no occupational diseases related to exposure to ionizing radiation have been declared.

Through the Health Observatories deployed in Gabon (Health Observatory of Mounana - OSM) and Niger (Health Observatory for the Region of Agadez - OSRA), AREVA's mining activities carry out post-professional monitoring of retired miners liable to have been exposed to ionizing radiation due to their activity, in exactly the same manner as the system in force in France.

This is an initiative conducted by AREVA mining companies, the states and civil societies of Gabon and Niger. The observatories are the result of an innovative and multi-party approach.

The medical consultation that forms part of this post-professional monitoring is organized every 2 years and includes an interview with a doctor, a clinical examination, a chest x-ray and a blood test. It is carried out by independent doctors whose services are provided to the Observatories.

■ Setup timeline



How the Health Observatories work

In the event that a pathology not found in French Social Security table 6 is observed:

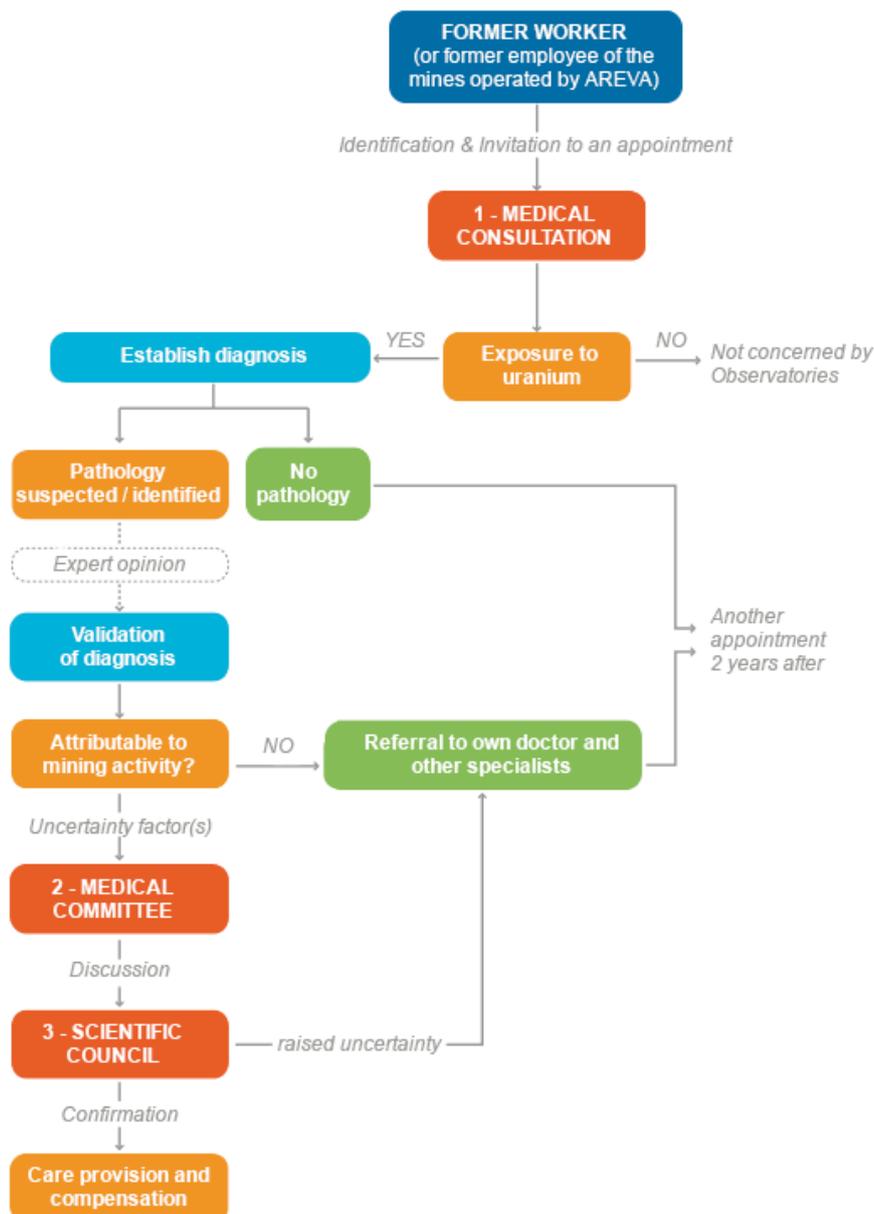
- The former employees concerned are directed to a suitable hospital facility but their case is no longer the responsibility of the Observatories.

In the event that a pathology found in French Social Security table 6 is observed:

- Medical cover is provided by the competent body (the National Security Funds) or in the absence of any cover by the AREVA group.

In the event of a suspected pathology, three entities proceed to process the medical files and analyze results.

- The Medical Committee:** three doctors, all experts in pathologies linked to ionizing radiation, analyze the health data sent by the Observatory doctor.
- The Scientific Council:** five experts internationally recognized for their knowledge of pathologies linked to ionizing radiation make a judgment on the occupational nature of the pathology.
- The Board of Directors:** representatives of AREVA, the states and the general public, confirm the decision of the Scientific Council and launch the medical care.



OTHER VOLUNTARY INITIATIVES

■ Committee for Strategic Metals (COMES)

The French committee for strategic metals (Comité pour les Métaux Stratégiques - COMES) was created in January 2011 by the French authorities, giving rise to a forum for discussion and coordination between government departments, public agencies and professional associations three doctors, all experts in pathologies linked to ionizing radiation, analyze the health data sent by the Observatory doctor from the extractive industries.

To protect the national economy, COMES provides strategic steering of mineral resources with the aim of safeguarding the procurement of these raw materials needed to supply the country's industry.

Given this objective, the activities carried out by COMES are organized into five critical areas:

- 1. Analysis of the demand of domestic industry.
- 2. Exploration initiatives and assessment of existing resources.
- 3. Waste management.
- 4. Vulnerability with regard to international circumstances.
- 5. Research and innovation.

■ Minerals, Ores and Metals Alliance (Alliance des Minerais, Minéraux et Métaux - A3M)

The Minerals, Ores and Metals Alliance (Alliance des Minerais, Minéraux et Métaux - A3M) is the result of the alliance between the FEDEM (Federation of Ores, Industrial Minerals and non-ferrous metals - Fédération des Minerais, Minéraux Industriels et Métaux Non Ferreux) of which AREVA Mines is a member, and the French steel federation, the FFA.

The alliance was created in 2013 and started operating in January 2014. Its aim is to improve visibility, representativeness and effectiveness in all areas of shared interests and particularly in two areas:

- 1. Economic performance and competitiveness.
- 2. Safety and community investment.

A3M contributes to safeguarding the supply of the raw and secondary materials that are necessary for French industry to function properly, especially in key sectors with the greatest needs (construction, defense, automotive, aerospace, engineering), while implementing all the appropriate practices for meeting stringent regulatory requirements.

A3M also took part in discussions for the drafting of the new French mining code with the French Ministry for Ecology, Sustainable Development and Energy.



■ International Atomic Energy Agency (IAEA)

AREVA Mines is one of France's representatives in the Uranium group of the International Atomic Energy Agency (IAEA), in collaboration with the OECD's Nuclear Energy Agency, the organization responsible for publishing the biennial report "The Red Book". This report collects all the mining statistics on the uranium of member countries.



All member countries contribute to the data for mining exploration activities, for the industrial activity of uranium production, on mining resources and reserves, and basic data on nuclear power generation.

AREVA Mines, with its international expertise and knowledge of the uranium business and disciplines, contributes to the analysis of collected data in order to produce a baseline report to serve the international nuclear community.

■ World Nuclear Association (WNA)

The World Nuclear Association (WNA) is an organization created in 1991 that evolved out of the Uranium Institute. Today it counts more than 170 members throughout the global nuclear industry:

- 1. all the players across the fuel cycle (uranium, conversion, enrichment, fuel);
- 2. all the builders of nuclear power plants;
- 3. most of the engineering, construction and nuclear waste processing companies.



Its mission is to promote nuclear energy as a sustainable source of electricity production, through the organization of working groups and plenaries, and by producing benchmark technical or strategic analyses for the industry.

The organization thus enables its members to share expertise, the best practices in the industry, and to gain a thorough understanding of their markets.

AREVA is an active member of the WNA.

■ Nuclear Energy Institute (NEI)

The Nuclear Energy Institute (NEI) is an American organization created in 1994 through the merger of several legacy organizations, devoted to promoting the nuclear energy industry. The institute currently has 350 members.

The aim of the organization is to inform and raise awareness on the role of nuclear energy.

The NEI uses its expertise to develop policies adapted to the specific issues facing the nuclear industry (economy, environmental, health issues, etc.), in order to ensure sustainable development and public acceptance of the industry.



■ The OCDE

On 4 May 2010, the governments of the 42 OECD and non-OECD countries adhering to the OECD Declaration on International Investment and Multinational Enterprises updated their Guidelines to reflect changes in the landscape for international investment and multinational enterprises.

These Guidelines aim to ensure that the operations of multinational enterprises are in harmony with government policies, to strengthen the basis of mutual confidence between enterprises and the societies in which they operate, to help improve the foreign investment climate and to enhance the contribution to sustainable development made by multinational enterprises.



■ The Global Compact

These are ten universal principles relating to human rights, rights at work, the environment and anti-corruption:



United Nations
Global Compact

■ Human rights

- 1. Businesses should support and respect the protection of internationally proclaimed human rights; and
- 2. Make sure that they are not complicit in human rights abuses.

■ Labour

- 3. Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining;
- 4. The elimination of all forms of forced and compulsory labor;
- 5. The effective abolition of child labour; and
- 6. The elimination of discrimination in respect of employment and occupation.

■ Environment

- 7. Businesses should support a precautionary approach to environmental challenges;
- 8. Undertake initiatives to promote greater environmental responsibility; and
- 9. Encourage the development and diffusion of environmentally friendly technologies.

■ Anti-Corruption

- 10. Businesses should work against corruption in all its forms, including extortion and bribery.



Our objective:

"provide you with meaningful and comprehensive reporting on our policy of social responsibility, as associated with our principal short and long term challenges. »

Our challenge:

"allow you to express your expectations in terms of disclosure either through this web report or locally through our teams on the mining sites".



MATERIALITY

Materiality consists in identifying the CSR performance topics on which the AREVA Mining Business Unit should report annually.

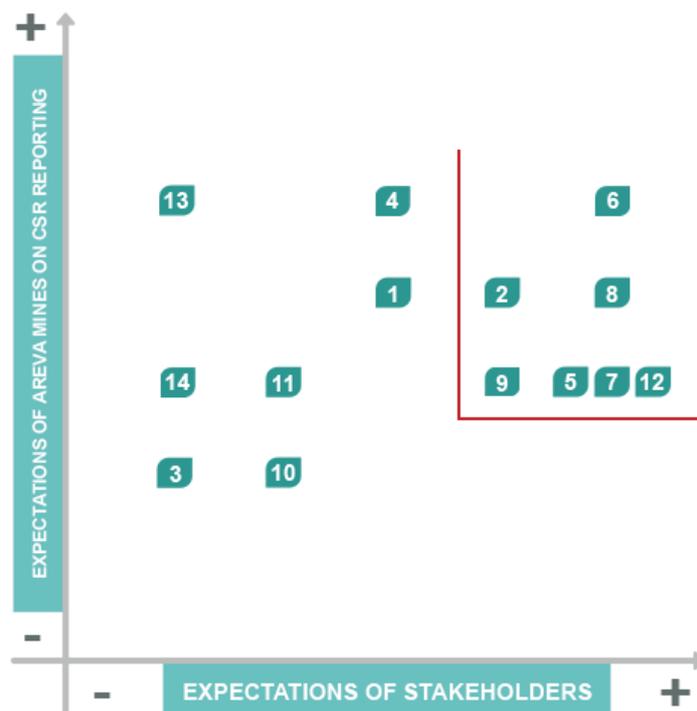
To carry out this exercise, we must consider two types of input data:

- Prioritization of issues to be conducted by the stakeholders in our mining activities;
- Prioritization of issues from an internal perspective (management and disciplines).

In 2014, we identified materiality criteria to be assessed. To determine the criteria, we based our thinking on AREVA's internal policies and on the ten sustainable development principles of the International Council on Mining and Metals (ICMM).

1. TRANSPARENCY	2. RESPONSIBLE PURCHASING	3. ETHICAL BUSINESS	4. RISK MANAGEMENT
Share with stakeholders in a relevant, accurate and accessible manner, non-confidential information relating to decisions or activities having an impact on the economy, the general public or the environment.	Manage the supplier and product procurement chain in compliance with criteria conducive to protecting the environment, to social progress, to human rights and to economic development.	Adopt and maintain ethical business practices in order to avoid incidents of corruption or bribery.	Reduce, analyze and assess industrial risks liable to lead to health and safety consequences for employees, or to harmful consequences for the general public and the environment.

5. COMMUNITY INVOLVEMENT	6. HEALTH, SAFETY AND RADIATION PROTECTION OF EMPLOYEES	7. LABOR RELATIONS	8. ENVIRONMENTAL FOOTPRINT
Contribute to meeting local socio-economic and healthcare needs, respecting fundamental human rights and the culture and heritage of indigenous peoples, throughout the lifecycle of the mining activity and in cooperation with stakeholders.	Protect the health and safety of employees and keep the radiation impact on neighboring communities to a minimum.	Facilitate and safeguard dialogue between employees and general management (e.g. through staff representative bodies and internal communications).	Monitor and assess quality of air, water, soils and the food chain, and optimize consumption of resources (water, energy, etc.) and raw materials (reagents, etc.).
9. BIODIVERSITY	10. CLIMATE CHANGE	11. EMISSIONS AND WASTE	12. REMEDIATION – MANAGEMENT OF LONG-TERM IMPACT
Keep footprint to a minimum and preserve the flora and fauna in proximity to mining activities.	Help combat climate change by keeping greenhouse gas emissions to a minimum(CO2 et VOCs).	Control all liquid, solid and gaseous discharges and emissions, as well as waste and processing tailings, liable to have an impact on the environment.	Prepare for the end of life phase of the mine as far upstream as possible, in compliance with environmental, social and societal principles and the regulations in force.
13. OPERATIONAL PERFORMANCE	14. SHIPMENTS AND TRACEABILITY OF URANIUM		
Ensure production is conducted on time, on budget and in accordance with AREVA values.	Guarantee the inspection and tracking of uranate concentrates, as well as the safety and security of shipments to converters.		



At the end of 2016, we re-updated the exercise conducted in 2014, re-using the same criteria and putting questions to certain of our external stakeholders.

A wide variety of stakeholders, from Niger, Namibia, Canada and France were consulted, as part of mapping processes carried out in Namibia and to some extent in Niger; opinion surveys carried out in Canada and questionnaires sent out in France or in Niger. The feedback from questionnaires filled out online in the "Participate" section of the CSR report website were also used to gain a fuller picture of the expectations of stakeholders.

This update made it possible to confirm 7 criteria as being priority areas for reporting:

- Health and protection of employees
- Environmental footprint
- Ethical Business
- Community involvement
- Labor relations
- Remediation – Management of long-term impact
- Biodiversity

We have therefore decided to give readers of the Corporate Social Responsibility Report access to the information on these seven criteria through the CSR Approach governance section which presents the main transverse subjects of interest to our stakeholders (ethics and human rights, risk management, etc.) and to our six major commitments on mining activities: occupational safety, health and radiation protection, environment and biodiversity, community engagement, commitment to employees, post-mining, innovation.

■ 2016 Results

The new 2016 CSR report seeks to meet these expectations by following the guidelines of GRI 4 – core level.

Canada draws up its own reports, Mongolia published its first report in 2015, and Kazakhstan and Niger are in the process of finalizing theirs. The ambition for the coming years is to compile all these reports on based on the same GRI 4 template, every two years as a rule.

The Next steps:

It is necessary to confirm the issues identified as being of material significance in 2016, in particular as far as business expectations are concerned. To this effect, in line with a continuous improvement approach and to ascertain more fully the wishes of the various stakeholders, a consultation on the expectations of Mining BU subsidiaries and departments is planned for 2017 to check for any changes in CSR expectations regarding AREVA Mines. About external stakeholders, certain categories not consulted in 2016 will need to be approached, including suppliers and customers for example.

Furthermore, the stakeholder mapping work planned in Mongolia and Niger will make it possible to provide greater reassurances that the expectations of external stakeholders are being met, supplementing the questionnaire available online as part of this report which gives readers the chance to express their views on CSR issues.



CHAPTER

COMMITMENTS

Health, occupational safety and
radiation protection

Extract from Responsible Development
report 2016 on Areva's Mining Activities

The complete report is downloadable on :
www.csr-mines.aveva.com



Our employees may be exposed to several risk factors that could affect their health, whether on industrial sites, in offices or during business trips to the various countries in which AREVA's mining activities are based. In the course of our activities, a great number of information and prevention actions are undertaken in order to maintain a high level of occupational health and safety. The AREVA group aims for excellence in occupational safety, with the objective of achieving zero fatal accidents and a constant reduction in the frequency rate of occupational accidents (number of occupational accidents per million hours worked) tending towards zero.

OUR FUNDAMENTALS IN HEALTH, OCCUPATIONAL SAFETY AND RADIATION PROTECTION



■ AREVA's Health and Occupational Safety Policy 2014-2016

One of the first pillars of the AREVA strategy is devoted to "Safety and Security" and incorporates the objectives of the group's Occupational Health and Safety Policy 2014-2016.

The objective that AREVA has set itself is to move towards achieving zero accidents and zero impact of our activities on the health and safety of our employees. This is why we are taking a range of actions to prevent occupational accidents and illnesses.

More specifically, AREVA makes the following commitments:

■ In the field of health, to secure an adequate medical surveillance for all its employees.

The 5 major areas of action being deployed by the group:

- Define and implement international standards for the medical surveillance of occupational risks;
- Strengthen the governance of our medical support everywhere we operate;
- Increase vigilance on the quality of life at work of all our employees, especially for the prevention of psycho-social risks across the organization, and with an active policy to maintain our employees at work;
- More specifically in France, deploy the Occupational Health Service group-wide;
- Account more systematically for the specific nature of expatriation in our employee medical surveillance.

■ In the field of occupational safety, to ensure adequate risk prevention for our employees and the employees of our subcontractors, by:

- Engaging our managers daily in strengthening the safety culture of our teams;
- Deploying applicable safety standards in all entities;
- Evaluating risks in all our activities using a gradual approach and a common methodology;
- Involving all employees in the detection and the elimination of dangerous and risky situations;
- Collecting and exchanging best practices in Occupational Safety;
- Sharing the experience feedback from our accidents among the entities of the Group and with our industrial partners.



SAFETY STANDARDS

Since 2012, the AREVA group has been running a program specifically aimed at establishing an occupational safety culture. Its purpose is to develop a safety culture that involves all our employees and subcontractors. Our commitment to safety is based on 12 standards applicable on all group sites. These 12 standards are not a substitute for local regulations, standards or rules of best practice, but serve to complement them whilst also complying with them.

For the fourth year in a row, June 2016 was Safety Month. This year, each site organized a Safety Day during which various events were held to raise awareness and train employees and subcontractors in the group's safety culture.



■ **In the field of radiation protection**, as indicated in the group's nuclear safety charter, AREVA is committed to a voluntary radiation protection initiative.

AREVA is committed to keeping personnel exposure to ionizing radiation in its facilities as low as reasonably achievable in application of the ALARA principle (As Low As Reasonably Achievable), and has adopted a continuous improvement program to that effect. Within this framework, AREVA is committed to reducing the maximum individual dose to workers exposed to ionizing radiation in its facilities to 20 mSv/man/yr in countries with less stringent legislation, based on ICRP (International Commission on Radiological Protection) recommendations.

In terms of occupational health and safety regulations, employees are the responsibility of their entity of origin and are subject to national legislation. These regulatory considerations are incorporated into our operating policies and practices.

The objective of the Mining BU is to harmonize our practices as much as possible and to apply international standards in the field.

■ Health and safety roadmap for mining activities

The group's policy is set out in a roadmap specific to AREVA Mines, which is based on four pillars:

■ **Leadership and safety culture:**

- ◆ Strengthen safety governance by fostering interaction in the field between management and employees, a day dedicated to safety on all sites, a safety committee to meet at the highest level of the Mining BU, a health, safety & environment and radiation protection action plan for each site.
- ◆ Raise awareness on occupational health and safety on all sites: targeted actions concerning subcontractors, communication campaigns, mobilization to encourage initiatives, participative safety visits and feedback.

■ **Organization and skills:** clearly define roles and responsibilities to ensure the right person is at the right post and identify key people, develop HSE (Health, Safety & the Environment) skills among managers and employees, set individual safety targets, conduct audits of medical structures, organize and optimize health schemes, etc.

■ **Standards and procedures:** implement the 12 standards common to the whole of the AREVA group, harmonize practices and implement procedures specific to mining activities, strengthen management systems on sites, expatriate health procedures, health recommendations in contracts with subcontractors, etc.

■ **Risk analysis and prevention:** assess risks at workstations and industrial and health risks, set up a documented crisis system, take suitable prevention measures and update risk assessments when necessary.



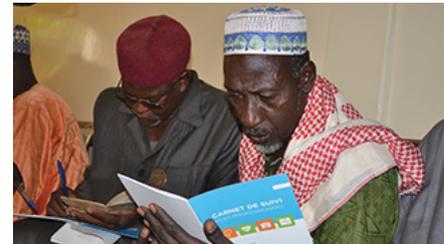
Each local action plan is challenged by the Health, Safety, Environment and Radiation Protection team of AREVA Mines (to examine its feasibility in terms of coherence, resources, leadtimes, etc.)

HEALTH

■ Our fundamentals in terms of occupational health

Our employees may be exposed to several risk factors that could affect their health, whether on industrial sites, in offices or during business trips to the various countries in which AREVA's mining activities are based.

In the course of our activities, a great number of information and awareness raising actions are undertaken in order to maintain a high level of occupational health.



■ 4 major areas of action being deployed in the field of health in mining activities

The following 4 major areas of action are being deployed:

- 1. Draw up and apply international medical standards for the medical monitoring of occupational risks;
- 2. Strengthen medical support governance in all regions in which we are present;
- 3. Increase vigilance with regard to our employees' quality of life at work, particularly in terms of preventing psychosocial risks at all levels of the organization, by developing an active employee retention policy;
- 4. Take into account the specific issues associated with expatriate workers in employee health monitoring.

■ An international health organization

Through our health policy, we are deploying a health service in all the countries in which we work to ensure we meet the prerequisites for occupational health and healthcare, as well as providing support for medical evacuations for local people and expatriates.

Priorities are set by the group Health Department and discussed by staff representative bodies (such as Occupational Health and Safety Committee).



FIND OUT MORE

Through the Health Observatories deployed in Gabon (Health Observatory of Mounana - OSM) and Niger (Health Observatory for the Region of Agadez - OSRA), AREVA's mining activities carry out post-professional monitoring of retired miners liable to have been exposed to ionizing radiation due to their activity, in exactly the same manner as the system in force in France.

This is an initiative conducted by AREVA's mining companies, the states and civil societies of Gabon and Niger.

Risk factor prevention

Our employees are exposed to different categories of health risk, including the injuries that may occur following an accident in the workplace mainly on an industrial or mining site, but also the exposure to ionizing radiation, that is intrinsic to uranium ore mining and the production of uranium oxides (U₃O₈ – Yellow Cake). Our employees may also be exposed not only to psycho-social risks, but also to other risks as well, principally those such as exposure to noise, to dust, or to chemical substances which may potentially lead to occupational illnesses. Other factors may be directly linked to risks that are endemic in the country.



The prevention of risks that may affect the health of our employees takes place at several levels:

- **Occupational medical consultations:** e.g. medical visits on recruitment and periodically to establish suitability for the work in question.
- **Specific medical examination prior to expatriation.**
- **Preventing stress-related health risk factors**
- **Training for all employees involved in travel** (long or short-term missions): e.g. pre-departure information including travel advice, information on specific medical check-ups, endemic diseases present in the countries where our sites are located, any other current health alerts (country health sheets, pathology data (for endemic diseases), healthy eating and hygiene tips, etc.), information relating to assistance agreements in the event of medical evacuations.
- **Awareness-raising campaign** throughout the years using a number of channels: intranet (general health information or focus on a particular disease according to health alerts or seasonality); communication screens on each floor at headquarters.
- **Vaccination monitoring for employees abroad** (whether expatriate or on a business trip, long-term or short-term mobility), with compulsory vaccinations in accordance with current regulations and recommended vaccinations depending on the risks associated with the destination country (endemic diseases or according to health alerts).
- **First aid training:** training is organized regularly, along with refresher courses for AREVA personnel in France and within our international entities.
- **Baseline health assessments** before production begins to assess the health situation in the country or region in which our sites will be based: e.g. the baseline health assessment feasibility study launched in 2016 in Imouraren in Niger.
- **Counseling and support service** for psycho-social risks with provision of a psychologist from the occupational health department in France. Since 2015, a personal health contact specializing in this area has been placed at the disposal of expatriates and their families.
- **Preventative measures in the field of occupational safety and radiation protection:** every measure taken with a view to preventing, eliminating or reducing the impact of accident-generating events or exposure to chemical risks or to ionizing radiation helps to protect the health of our employees.
- **Assessments of risks to health and safety** at workstations.

MAKING OCCUPATIONAL SAFETY A PRIORITY

■ Our objectives: A commitment at all levels within the company

The Mining BU's occupational safety objectives are based on the following commitments to:

- Strengthen and share a common safety culture across the Mining BU,
- Ensure a suitable structure that allows the effective implementation of actions to achieve the targets set,
- Effectively assess and prevent risks at workstations, as well as industrial and health risks.

Safety governance takes the form of a safety committee. This think tank and body of action meets 2 to 3 times per year. It is made up of the main directors of the Mining Business Unit.



“ Prevention, Rigor & Vigilance

"One single ambition: to aim for zero accidents"

Safety means prevention and attention on a daily basis and every minute. As long as our colleagues continue to suffer injuries at work, we have to keep working to strengthen our safety culture and be rigorous in the implementation of preventive actions. We must all conduct ourselves in an exemplary manner in all matters relative to safety. I expect the following from each and every one of you:

- **Strict compliance with standards, rules and instructions.** There can be no compromise when it comes to safety.
- **A questioning attitude, as well as rigor and not waving attention** in performing your everyday tasks and activities.
- **Responsible and attentive behavior:** know how to engage with a colleague who is putting himself/herself into a hazardous situation or is not following the rules; intervene where necessary; know how to handle feedback from one of our colleagues who alerts us about a hazardous or non-compliant situation.
- **Alert others and stop work when the situation requires.**

I know I can count on the commitment of each and every one of you.

*Commitment and message from
Jacques Peythieu, Senior Executive Vice President of the Mining BU.*

The Safety committee is responsible for the planning of courses of action (roadmap), the supervision of their application, as well as for monitoring them and ensuring continuous improvement in safety results.

The safety representatives of AREVA Mines are responsible for deploying these actions in the sites where it is present, with the assistance of managers and all employees who are responsible for their implementation. This occupational safety policy applies to everyone, whether employees of AREVA and its subsidiaries, sub-contractors or visitors.

Every year, with a view to achieving continuous progress towards achieving the goal of zero accidents, the safety committee of the Mining BU sets intermediary objectives, which apply to everyone:

■ For 2016 :

- 0 fatal accidents
- LTIFR < 0.7 i.e. no more than 12 lost-time occupational accidents
- Consolidation of TRIR and AIFR
- 100% of all accidents with and without lost time, as well as events with a high severity potential, analyzed then followed up with an action plan.

LTIFR / TF1 (Lost Time Injury Frequency Rate): Fatalities, and lost time accidents
TRIR / TF2 (Total Recordable Injury Frequency Rate): Fatalities, and accidents with and without lost time
AIFR including first aid / TF3 (All Injuries Frequency Rate): Fatalities, lost Time Injuries Medical Aids and first aids



5 PRIORITY ACTIONS FOR 2016

In order to attain these safety objectives, the AREVA Mines Safety Committee has defined 5 priority actions which are an integral part of the Mining BU's roadmap:

- Action N°1 : Implement and comply with the "Drilling" safety standard . Train personnel in safety and risks related to drilling.
- Action N°2 : Implement a specific course of training in safety culture for all managers and site supervisors.
- Action N°3 : 100% of lost-time occupational accidents and medical aids, first aids, near misses with a high severity potential (HIPO) are to be analyzed (root cause analysis) and the action plan shall be implemented.
- Action N°4 : Take stronger action to identify and analyze events with a high severity potential (HIPO) and to prevent accident-generating behaviors. High severity potential (HIPO) events are near misses or accidents which could have resulted in a fatality or disability of the person affected.
- Action N°5 : Strengthen management of industrial risks.

Each site has prepared its own roadmap based on these five priority actions.

Each local action plan is challenged by the Health, Safety, Environment and Radiation Protection Department (to examine its feasibility in terms of coherence, resources, leadtimes, etc.).

■ Management System

Work to prevent professional risks is carried out at most of our mining sites using a management system that meets the requirements of standards OHSAS 18001 (for occupational health and safety) and ISO 14001 (for the environment).

These systems make it possible to set up processes and procedures to control the main risks encountered on sites, prioritize them, monitor them, take corrective action and make improvements.



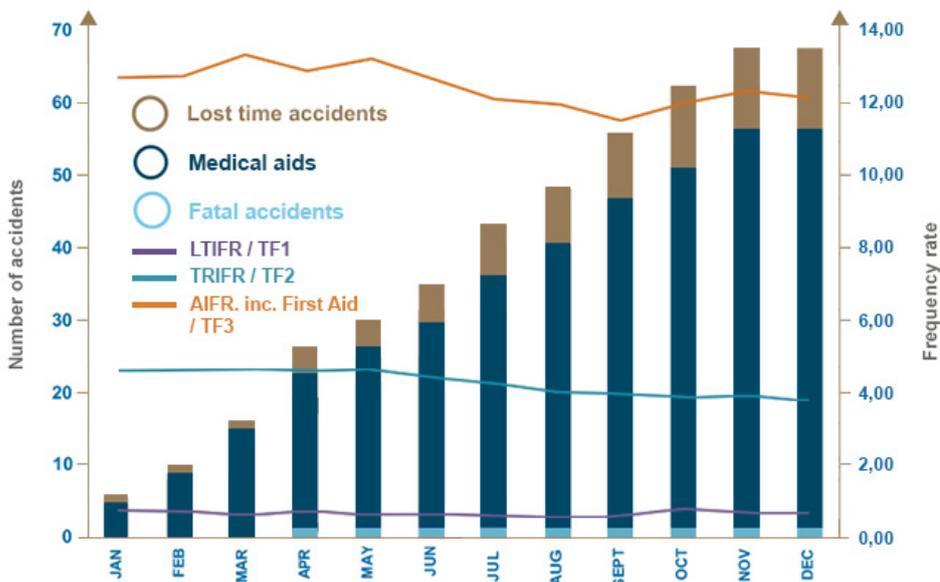
LOCATION OF OUR SITES	CERTIFICATION STATUS ON DEC. 31, 2016 - OHSAS 18001 & ISO 14001
CANADA	Certified
FRANCE (ÉTABLISSEMENT DE BESSINES)	Certified
GABON	Certified
KAZAKHSTAN	Certified
NAMIBIA	Integrated management system compliant with OHSAS 18001 and ISO 14001 standards but not certified
NIGER	Certified
MONGOLIA	Non certified

■ 2016 results: Tending towards “zero accidents”

In 2016, the safety results of the Mining BU were not met. A fatal accident occurred at COMINAK during an underground mining operation.

Nevertheless, the commitment to safety at all levels of the organization allowed us to achieve a lost-time accident frequency rate equal to (TF1 = 0,74), corresponding to 12 lost-time occupational accidents for the year in total and 1 fatal accident. Since 2011, the frequency rate has included the safety results of our subcontractors.

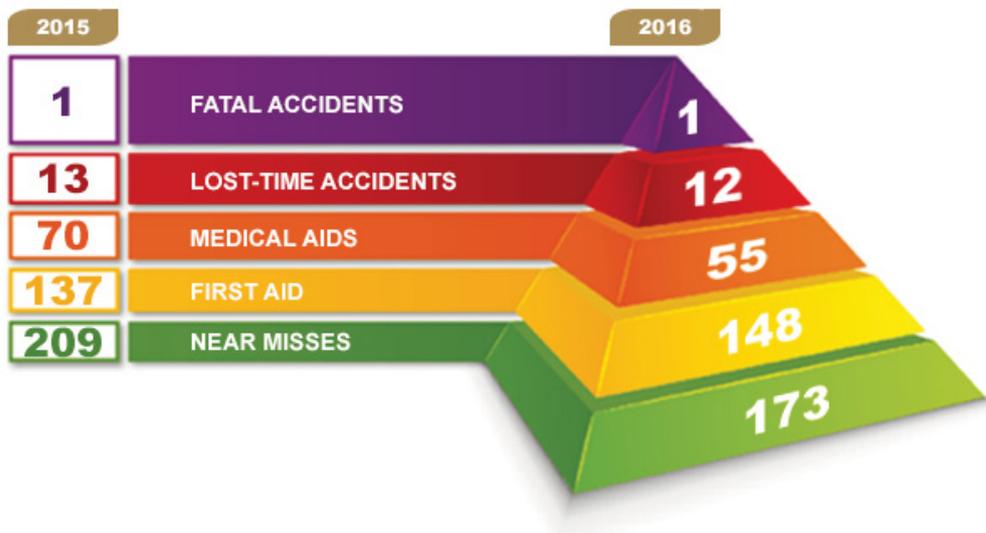
■ AREVA MINES ACCIDENTS AND FREQUENCY RATES



Reminder of definitions

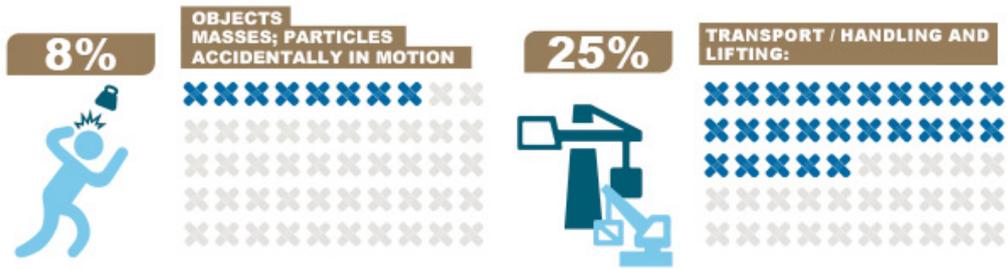
- **LTIFR / TF1:** Fatalities, and lost time accidents x 1 Million / hours worked over a rolling 12-month period
- **TRIFR / TF2:** Fatalities, and accidents with and without lost time x 1 Million / hours worked over a rolling 12-month period
- **AIFR including first aid / TF3:** Fatalities, and accidents with and without lost time (including medical care and first aid) x 1 Million / hours worked over a rolling 12-month period

■ Safety events at end-2016 (from 1st January to 31 December 2016)

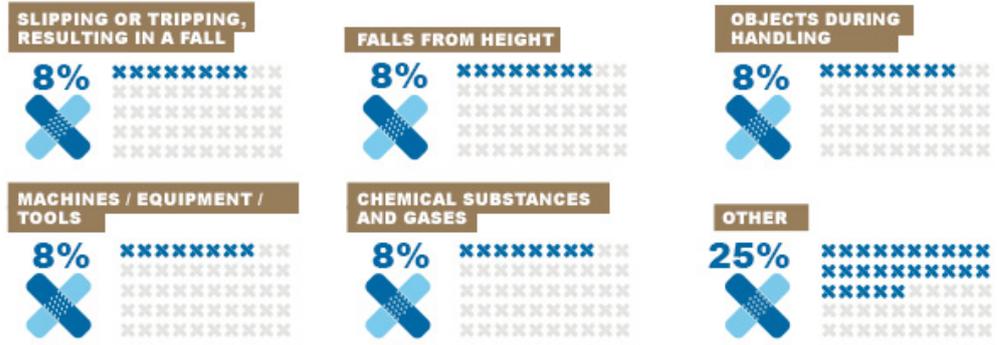


■ Main causes of lost-time occupational accidents

MAIN CAUSES OF ACCIDENTS ARE:

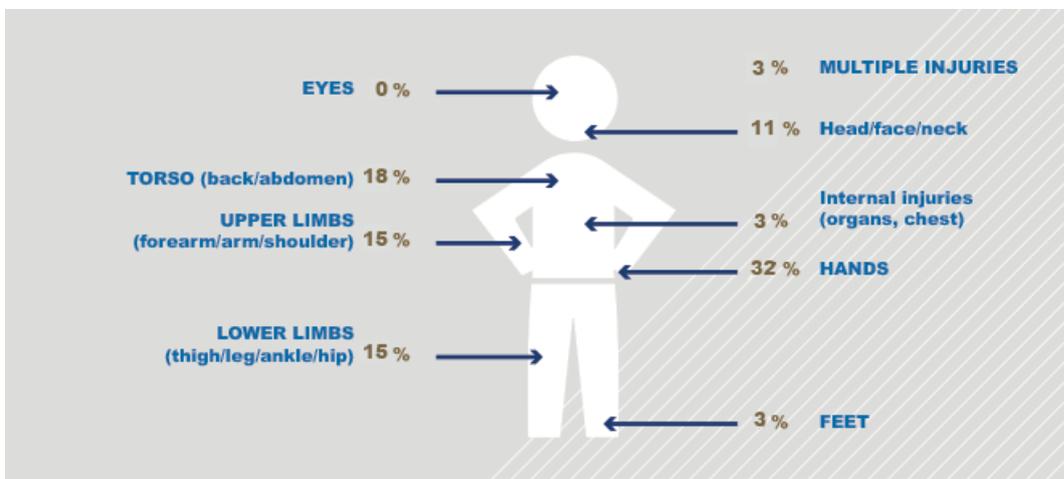


OTHER CAUSES ARE :



■ Injuries associated with occupational accidents

2016 RESULTS: injuries due to occupational accidents (lost time injuries, medical aids) for employees and subcontractors



EXAMPLES OF ACTIONS CARRIED OUT IN 2016

- Deployment in Canada of the approach for the critical controls management developed within the framework of the ICMM.
- Continuation of work to draw up the drilling standard together with the pilot site, KATCO. Implementation of the standard on sites in Gabon, Mongolia, Niger and Canada.
- Safety culture training conducted on the COMINAK site.
- Causes analyses conducted for all accidents with and without lost time.
- Re-assessment of major industrial risks on the KATCO site and introduction of follow-up sheets.
- Continuation of the site safety day events, which are an essential forum for interaction.

RADIATION PROTECTION OF EMPLOYEES



Exposure to ionizing radiation is a form of occupational risk like any other, such as exposure to noise or risks of falls from height. It does however have a number of features which make it specific, in particular that of being an invisible risk that requires high-performance equipment to measure individual exposure to it.

In the uranium mining sector, as in other sectors, such as the nuclear industry, certain fields of medicine, veterinary medicine or research, ionizing radiation is an integral part of an employee's everyday work.

The radiation protection of workers includes the whole coherent set of activities with the purpose of preventing and controlling any risk of exposure of workers to ionizing radiation by guaranteeing adapted and relevant dose rate monitoring under all circumstances.

This means it is necessary not only to assess occupational risks of a radiological nature and to improve working conditions in order to optimize the exposure of personnel, but also to foster a culture of radiation protection by offering training and expertise.



FIND OUT MORE

Ionizing radiation

Radioactivity is a physical phenomenon related to the structure of material. Certain atoms, such as those of uranium, are unstable and emit ionizing radiation. Such radiation is referred to as ionizing radiation as, when it interacts with material, it can result in ionizations, in other words tear away one or more electrons from its atoms.

■ Means of exposure to ionizing radiation

Two types of exposure to ionizing radiation are possible:

■ External exposure:

In the case of external exposure, the radioactive source is outside the organism. If the whole of the organism is affected, this is referred to as global exposure; if only part of it is affected, then it is a case of partial exposure.

In the case of external "remote" exposure, exposure stops as soon as the person is sufficiently far away from the radioactive source or if a screen (shielding) is placed between the person and the source.

When radiation is emitted by radionuclides present by being deposited on the surface of the skin, in direct contact with the person, we also talk about "external contamination".

■ Internal exposure:

The radioactive source has penetrated inside the organism. This is referred to as "internal contamination".

This can happen if a person inhales radioactive particles present in the air or ingests food that is contaminated with radioactive particles, or if there is direct contact with the skin or a wound (in this case we talk about "external contamination" that becomes "internal contamination").

When contamination occurs, exposure to radioactive particles continues as long as the source remains inside or in contact with the body.

■ Radiation protection principles

Through radiation protection, we implement all the preventative measures that limit the exposure of teams and populations to ionizing radiation.

In order to avoid or reduce the associated risks, radiation protection follows three main principles: justification, optimization and limitation of doses.

- **The justification of activities** that carry the risk of exposure to ionizing radiation;
- **The optimization of exposure** at the lowest level reasonably achievable. This is the ALARA precautionary principle (As Low As Reasonably Achievable) ;
- **The limitation of doses of individual radiation exposure** so as not to exceed the regulatory limits.

Ces trois principes fondamentaux découlent des recommandations de la CIPR (Commission Internationale de Protection Radiologique), et s'inscrivent dans le code de la santé publique.



MORE INFORMATION

ALARA is the acronym for "As Low As Reasonably Achievable". It is one of the three main fundamental principles of radiation protection. The purpose is to reduce worker exposure to the lowest level possible, taking into account technical, economic, and social factors. The group adheres to this approach and applies this principle throughout its facilities.

It is with a view to achieving this objective that, in the underground mine at COMINAK (Niger), fixed equipment has been installed to monitor the activity concentration of radon with audible and/or visual alarms. This ensures that workers are directly made aware of the presence of radon in the atmosphere and makes it possible to intervene as rapidly as possible should the ambient conditions deteriorate. The indication of "hot points", in other words areas with higher dose rates, by means of radioactive symbols in reflective paint on suspended signs is another optimization initiative which helps to make it easier to identify zones of risk.

Radiation protection was given pride of place at the AREVA Awards 2015, a challenge the main purpose of which is to reward teams at the origin of projects and accomplishments of an outstanding innovative nature. The Quick Change Pumps to reduce the exposure of workers at the McClean Lake mill (Canada) was chosen as one of seven winners from among the 24 finalists. This project, initiated by employees of AREVA Resources Canada (ARC) in charge of maintenance, has made it possible to shorten the time required to carry out pump replacements in the ore pulp reception and storage areas, by introducing standardized pumps. This initiative has delivered a significant reduction in repair times and therefore in exposure to gamma radiation, from 4 hours to 10 minutes. This results in a direct improvement in the radiation protection and safety of workers thanks to a reduction in exposure time.

At Katco (Kazakhstan), major preventive maintenance actions were conducted in 2016 at the plant for the activities 400 and 500. They are helping to contribute to the necessary optimization initiative. Maintenance of the calciner has made it possible to prevent leaks from the powder network. Similarly, at the crystallizer, the expected benefits are a decrease in clogging incidents and a decrease in the quantities of materials deposited on its walls. These anticipatory actions have thus made it possible to reduce the number of interventions and the time necessary for repair and maintenance operations. The expected results include reduced intervention times in the event of production incidents and lower ambient dose rate values around the crystallizer.

Renovation work on the calciner building on levels 9 m and 11 m have also made it possible to improve the surface of the floors to avoid the accumulation of dust and facilitate cleaning and decontamination. The benefit obtained as a result is a decrease in the time for which operators have to be present and better management of ambient dust in the building.

These initiatives are considered best practices with regard to international standards.

In countries where legislation is less strict, AREVA is committed to reducing the maximum personal doses received in its facilities by exposed workers to 20mSv over a rolling 12-month period.

Radiation protection is taken into account from the design phases of projects. Facilities are built to limit exposure at workstations. Zoning, ventilation and structural components are the most important factors to take into account for sound design.

Following this, during normal operation, risk analyses are conducted at workstations and the exposure of workers is monitored using suitable dosimeters.

■ Radiation protection culture

■ Continued action to foster a culture of radiation protection

In 2016, the Group, via its Health, Safety and the Environment Department (Direction Sûreté, Santé, Sécurité et Environnement – DHSE), continued to pursue its actions to foster a culture of radiation protection. For example, such actions have taken the form of distribution of communication materials, with the preparation of thematic information sheets for the "Are you sure?" ["Etes-vous sûr ?"] initiative, like those relating to the failure to wear dose measurement equipment in regulated areas or checking that Personal Protective Equipment (PPE) is being worn correctly.

Furthermore, it is also recommended to capitalize on the effect of some of these actions, in particular for instance by promoting participatory safety visits (Visites Sécurité Participative – VSPs) and checks to ensure that all those involved are following radiation protection rules correctly.

In addition, a self-assessment guide culture on nuclear safety culture including questions on radiation protection was also presented and made available.

The experience of participants in the area of radiation protection culture has made it possible to define criteria to assess the development of radiation protection culture under normal and post-accident conditions. The objective is to encourage a practical dialogue and allow everyone to make sense of measures and information relating to radiation protection, to provide a wider variety of sources of information that are more pluralistic and take account of local challenges, to promote a global approach to radiation protection issues, and encourage the development of networks to bring those actively involved and experts in radiation protection together.

Training is a regulatory requirement and must be provided to categorized workers. Going beyond these requirements, we also want to meet certain requests for information and training, in line with regulatory obligations. Accordingly, in 2016, on our Paris site, actions continued to be taken to provide employees of AREVA Mines with training in the fundamentals of radiation protection, with 52 people receiving training. Since 2014, more than 150 people have been able to benefit from such training. Sites have also set up similar training programs themselves.

By way of reminder, the prevention of occupational risks covers all measures to be taken to protect the health and safety of employees, improve working conditions and enhance well-being in the workplace.

An approach for the prevention of occupational risks is built up by involving all the participants concerned and by taking the specificities of the company into account (size, resources that can be mobilized, organization, sub-contracting, co-contracting, temporary staff, subsidiarization, multiple geographic locations, presence of external third parties such as the general public or customers, etc.). To establish a prevention approach, it is necessary to follow the nine main general principles governing the organization of prevention. One of these nine main general principles is to "Give appropriate instructions to employees".

This means providing employees with training and information so that they are aware of risks and preventative measures.

■ Regulations governing radiation protection

■ Regulatory limits per country



REGULATORY LIMIT SET FOR EMPLOYEES AND SUBCONTRACTORS	CUMULATIVE ANNUAL DOSE OVER A ROLLING 12-MONTH PERIOD FOR EXPOSED WORKERS
CIPR RECOMMENDATIONS	100 mSv over 5 years, without exceeding 50 mSv per year
EURATOM COUNCIL DIRECTIVE 2013/59/ OF 5 DEC. 2013	20 mSv per year
NIGER	20 mSv per year
CANADA	100 mSv over 5 years, without exceeding 50 mSv per year
KAZAKHSTAN	100 mSv over 5 years, without exceeding 50 mSv per year
FRANCE	20 mSv per year
NAMIBIA	100 mSv over 5 years, without exceeding 50 mSv per year
MONGOLIA	100 mSv over 5 years, without exceeding 50 mSv per year
GABON	100 mSv over 5 years, without exceeding 50 mSv per year

The Sievert (Sv) is a unit used in radiation protection which is expressed in "equivalent dose" and takes into account the characteristics of the radiation and of the irradiated organism. On average, the annual exposure of a member of the public in France is 4.5 mSv.

■ Definition of occupational diseases related to ionizing radiation

A disease can be recognized as an occupational disease if it is included in one of the tables appended to the French Social Security Code (Code de la Sécurité sociale).

Disorders caused by occupational exposure to ionizing radiation are dealt with in table 6 (general social security scheme) and table 20 (agricultural scheme) of occupational diseases. Each table has the following features:

- the symptoms or pathological lesions the affected person must present;
- an exhaustive list of these symptoms or pathological lesions, in the left-hand column of the table;
- reporting time limits, i.e. the maximum period between the end of the worker's exposure to the risk and when the condition is observed. This time limit varies depending on the clinical signs or symptoms presented by the affected person;
- the jobs likely to cause the condition in question, given in the right-hand column of the table.

Any condition that meets the medical, occupational and administrative criteria even in the lists is systematically "presumed" to be occupational in origin, without any proof being necessary.



CHAPTER

COMMITMENTS

Environment & Biodiversity

Extract from Responsible Development
report 2016 on Areva's Mining Activities

The complete report is downloadable on :
www.csr-mines.aveva.com



Our environmental responsibility is an ongoing commitment firmly rooted in AREVA's core values. As such, our actions seek to reinforce mitigation of the risks and management of the environmental footprint of our activities.

FUNDAMENTALS



■ AREVA's environment policy

The commitment of AREVA's mining activities is shaped by the AREVA group's Environmental policy for 2014-2016. Our teams therefore base their work on meeting current regulatory practices, international standards and the sharing of experience.

At every stage in the lifecycle of a mine, from exploration to site remediated, the 6 environmental policy commitments are met.

■ Performance in our management of the environmental challenges:

- 1. Foster and develop a culture of environmental risk prevention.
- 2. Improve the design of our facilities by taking into account their entire lifecycle.

■ Prevention and control of environmental accident risks:

- 3. Strengthen prevention and control measures surrounding technological accident risk.
- 4. Reduce risks related to ageing of facilities and accidental spillages.

■ Prevention and control of chronic environmental and health risks:

- 5. Strengthen prevention and control measures surrounding chronic health risks.
- 6. Prevent threats to biodiversity by managing the environmental footprint of our activities.

Our environmental policy applies to all entities of Areva Mines, both in France and abroad. Each operational entity deploys it in the form of action plans.

■ Certified environmental management system

Work to prevent professional and environmental risks is carried out at most of our mining sites using a management system that meets the requirements of standards ISO 14001 (for the environment) and OHSAS 18001 (for occupational health and safety).

These systems make it possible to set up processes and procedures to control the main risks encountered on sites, prioritize them, monitor them, take corrective action and make improvements.

The systems are audited every year by an external third party.

In 2016, an audit for renewal of the ISO 14001 (Environment) and OHSAS 18001 (Occupational Health and Safety) certifications was conducted on the Bessines facilities.

The auditors noted a strong improvement in operational control through the good standard of upkeep of the facilities as well as the effective compliance with environmental and occupational health and safety requirements.

The auditors expressed their confidence in the Integrated Management System at Bessines and will therefore be proposing to AFAQ-AFNOR to renew its dual certification to standards ISO14001 v.2015 and OHSAS 18001 v.2007.



LOCATION OF OUR SITES	CERTIFICATION STATUS ON DECEMBER 31, 2016 – ISO 14001
CANADA	Certified
FRANCE	Certified
KAZAKHSTAN	Certified
NAMIBIA	Integrated management system compliant with ISO 14 001 standards but not certified
NIGER (SOMAIR & COMINAK)	Certified
MONGOLIA	Non-certified

■ Our environmental performance

Throughout the life of the mine, the extraction and processing of uranium ore entail a need for raw materials and natural resources (water, energy, etc.). Our main challenge therefore consists in optimizing consumption and waste over time, and, in looking for possible ways of recovering waste, for a fluctuating uranium production level and taking account of a changing regulatory framework.

The scope of environmental objectives is adjusted depending on: changes in the mapping of risks, the expectations of stakeholders, internal and external best practices, environmental reporting and dialogue with operational entities.

Reporting for the various different environmental indicators presented in this section is carried out using the AREVA group's dedicated application, called "STAR". The methods used for the calculation of environmental indicators, as well as the associated reporting procedures are formally set out in the "AREVA Sustainable Development and Continuous Improvement" measurement and reporting protocol. This protocol, which is updated every year, is sent out to everyone involved in the preparation and reporting of data.

The scope of the reporting encompasses all activities of the Mining Business Unit and all those for which AREVA is the operator.

For the financial year 2016, the main developments regarding scope are the following:

- The Mining Business Unit recorded good operational performance in 2016 in terms of Uranium production, going beyond the previous production record of 11,186 metric tons.
- The authorization to increase production at the McClean Lake mill in Canada (up to 6,655 metric tons of uranium, or 2,469 tons for the AREVA share).

2016 RESULTS

Water

A rare natural resource in certain countries where AREVA is present, management of water is one of the company's core environmental and social concerns. From the monitoring of the volumes of water taken per source and the optimization of consumption through to monitoring of groundwater quality, the question of water is the subject of constant attention.

Abstracted water

There are two distinct qualities of water needed by sites: drinking water and industrial water.

The water used for our industrial and mining processes comes from various sources: surface water (lakes, rivers, the sea, etc.), groundwater (aquifers) and mine drainage water (pit water), recycled industrial water. Quantities of water sampled are measured by flowmeters; however, certain points of sampling cannot be equipped with a flowmeter, in which case the quantity is estimated or simulated based on models.

- the increase in surface water consumption results from the progressive ramping-up of production at the McClean Lake mill in Canada;
- the fall in water consumption from the distribution network remains linked to the reduced activity at sites under maintenance such as Trekoppje in Namibia and Bessines in France (associated with the shutdown of the Mabounié pilot), and the closure of offices in Niger (exploration activity);
- the slight decrease in groundwater sampling is linked to both the care and maintenance of the Imouraren project in Niger and the reduction in exploration activity, which requires water for the exploratory drilling.





QUANTITY OF WATER TAKEN BY SOURCE - M ³	2014	2015	2016	TREND 2015-2016
VOLUME OF WATER TAKEN FROM SURFACE WATERS (including rain water)	219 009	394 349	483 485	+18%
VOLUME OF WATER TAKEN FROM THE DISTRIBUTION NETWORK	156 660	98 756	79 746	-19%
VOLUME OF PIT WATER TAKEN	5 147 643	6 214 265	6 256 782	+0,7%
VOLUME OF GROUNDWATER TAKEN (via pumping wells)*	6 414 741	5 717 849	5 544 477	-3%

* This indicator includes water taken from groundwater, for whatever use: industrial water supply, drinking water supply, pumping for hydraulic containment, passive treatment. This water may be put to another subsequent use, on or off-site, to meet industrial needs or for the supply of water for consumption. This indicator excludes pit water. 50% of the decrease in this indicator is related to the cessation of activities in Niger (Imouraren project).

Note: the wells may be located on or off site.

Water consumed

The total volume of water consumed increased by 12% in 2016 compared to 2015. This result is due to:

- the ramping up of production and the industrial water requirements at the McClean Lake mill;
- a change towards more clay content in the ore of certain deposits being operated, and some exceptional maintenance work at SOMAIR and KATCO.

However, the KATCO site is moving forward with its process of reducing and optimizing water requirements and installing an effluent recycling facility at the plant. Staff awareness campaigns in Niger have also had a positive impact on the consumption of water in the mining towns.



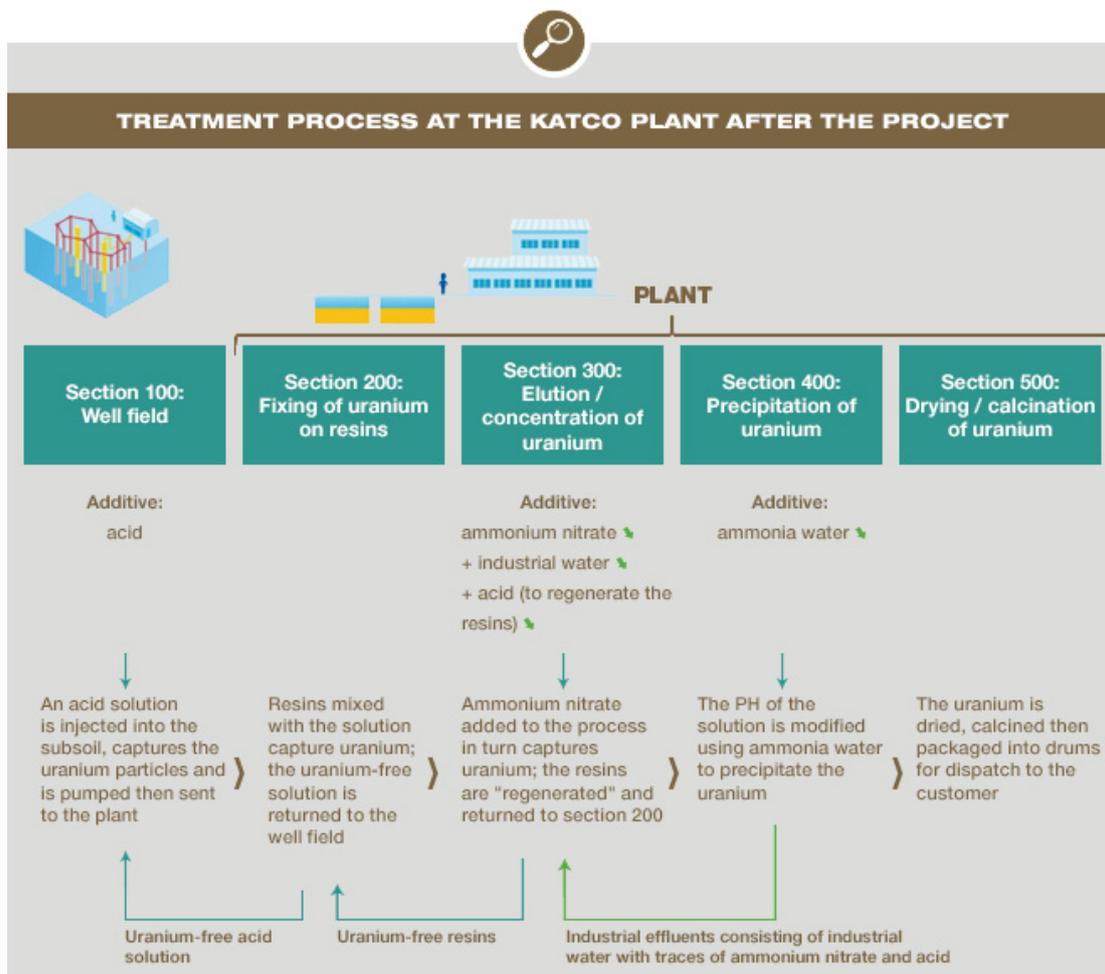
	2014	2015	2016	TREND 2015-2016
TOTAL VOLUME OF WATER CONSUMED - M³ *	6 346 657	6 041 114	6 862 927	+12%
VOLUME OF PIT WATER USED ON SITE - M³	3 704 193	3 826 732	4 711 519	+19%
WATER SAMPLED (withdrawn)	7 790 107	8 428 647	8 408 190	-0,2%
PIT WATER TAKEN	5 147 643	6 214 265	6 256 782	+0,7%
WATER RETURNED	0	0	0	0

* Volume of water consumed = water sampled – water returned – pit water taken + pit water used

■ Concrete actions to reduce our water consumption and monitor groundwater quality

■ In Kazakhstan

Since 2013 the recycling of effluents has been rendered sustainable at the KATCO plant. The main idea was to recycle a part of the effluents in the process at section 300 (the uranium elution process area) in order to capture the residual reagents present in the solution and to reuse them in the process before returning them to the wellfield: the project therefore makes it possible to limit the addition of new reagents and industrial water and thereby reduce the environmental footprint of the uranium extraction process (less industrial water used).



KATCO INDICATOR	2014	2015	2016
VOLUME OF WATER CONSUMED (excluding volume used for geothermal processes and volume reinjected into ground water)	655 741	595 555	625 033

Since 2013, we have seen a downward trend in water consumption at the KATCO site thanks to this effluent recycling project. Nevertheless, In 2016 the KATCO site consumed 5% more water than in 2015, as a result of exceptional maintenance work at the plant.

■ In Niger

Since 2003, for Niger, a Mining BU working group called "Aman" has been carrying out periodic additional monitoring campaigns on a wider scale than those conducted by site operators. The working group is mainly composed of geologists and mining hydrogeologists, with the support of environmental specialists. Its aim is to construct a model of the water resources, to refine our understanding of the regional hydrogeology and guarantee the quality of supply to sites and nearby towns.

In 2016, the working group continued its work, carrying out:

- regional monitoring of the impact of our activity on groundwater on behalf of the mining companies,
- monitoring of the drinking water network,
- centralization of all hydrogeological data and appraisals in order to monitor changes in the water resources,
- support for the coordination of the societal initiatives conducted by AREVA NIGER (Areva Mines Niger, COMINAK, SOMAIR) for the sampling and conditioning of water samples on newly drilled boreholes for the benefit of the local population in the communes of the department of Arlit.

Overall, thanks to these actions and to the ramp-up in production of AREVA Resources Canada, whose process is less water-intensive, our consumption per tU indicators remains stable.



RATIO	2015	2016	TREND 2015-2016
WATER CONSUMED (M³/tU)*	481	486	+1%

* Ratios are calculated on the basis of total production from all sites in operation

■ Energy

Whether it originates from fossil fuels or renewable sources, the energy consumed by the different AREVA Mines sites is monitored on a constant basis. The goal: to continue to reduce consumption, whilst increasing the share of renewable energy.

Since 2014, energy consumption has decreased for the Mining Business Unit as a whole. Moreover, there has been a sharp increase in the consumption of electricity from renewable energy sources compared to previous years: the site in Namibia now draws 40% of its energy supply from hydroelectric power and the KATCO site powers part of its facilities using solar energy generated in situ. Beyond the improvement actions, this increase is also directly impacted by a change in reporting protocol for this energy source.

The decrease in fossil energy consumed is significantly attributable to the measures implemented at the KATCO sites (action plan under ISO 50001 certification). AREVA Resources Canada's fossil energy consumption remains stable despite the increase in production.



	2014	2015	2016
ENERGY CONSUMED IN MWh	801 487	792 140	752 708
FOSSIL energy (MWh)	574 641	569 365	527 686
ELECTRICITY consumed (MWh)	226 847	222 775	225 022
Electricity consumed from non-renewable sources (MWh)	226 841	222 063	224 336
Electricity consumed from renewable sources (MWh)	5,8	711	686

Improving the energy efficiency of sites and reducing GHG emissions and therefore our impact on climate change is a priority for the Mining BU. This is among the commitments taken at the highest level.

Energy efficiency assessments were carried out in 2015 at the Bessines and KATCO sites (the latter site has obtained ISO 50001 certification) and in 2016 were launched for the AREVA Ressources Canada, SOMAIR and COMINAK sites. Improvement actions are being conducted within this framework.

The following positive results have been recorded:



RATIO	2015	2016	TREND 2015-2016
FOSSIL ENERGY (MWh/tU)*	45	37,3	- 17,6%

* Ratios are calculated on the basis of total production from all sites in operation

Greenhouse gas emissions

The main source of global warming, greenhouse gases are subject to global monitoring by AREVA, whether produced directly by mining activities, or resulting from the consumption of energy necessary for the proper running of the company.

Direct greenhouse gas emissions are mainly due to:

- The burning of fossil fuels: the quantities of CO² emitted are deduced from the quantities consumed and the corresponding CO² emission factors:



CO ² EMISSIONS FACTORS BY FUEL			
COMBUSTIBLE	tCO ² / GJ LHV	tCO ² / MWh LHV	tCO ² / tonne
NATURAL GAS	0.057	0.2052	...
PROPANE GAS / LP GAS	0.064	0.23	2.944
HEAVY FUEL	0.078	0.2808	3.12
DOMESTIC FUEL / DIESEL	0.075	0.27	3.15
MOTOR GASOLINE	0.073	0.2628	3.212

- Decarbonation during phases involving the chemical leaching of ore using acid, and reagents (containing carbonates) put into contact with acid solutions. The quantities of CO² emitted (corresponding directly to greenhouse gas emissions) can then be calculated based on the quantities of carbonate contained in the ore and the quantities of reagents used.
- Emissions of HFCs (hydrofluorocarbons) resulting from the use of refrigerating fluids. The greenhouse gas emissions are deduced from the quantities of the different refrigerating fluids consumed and their associated GWP* (Global Warming Potential).

Note: The Global Warming Potential values used are defined in the group's reporting protocol.

The unit of measurement for GHG emissions is the metric ton CO² equivalent (tCO²e).

The method of calculation is shown below:

$$\text{Direct_GHG_emissions} = \text{Fuel_GHG_emissions} + \text{Process_GHG_emissions} + \text{Fluids_GHG_emissions}$$

Fuel and process related emissions are calculated automatically in the reporting package STAR partly from programmed data and partly from data entered by the sites.

Emissions from refrigerant fluids are calculated and entered by the site from on-site data and protocol data.



GREEN HOUSE GAZ EMISSIONS (Metric Tons CO ² equivalent)	2014	2015	2016
DIRECT GREENHOUSE GAS EMISSIONS (GHG) – SCOPE 1	190 278	187 460	183 525
DIRECT EMISSIONS OF GREENHOUSE GASES (GHG) LINKED TO THE TRANSPORTATION OF FREIGHT AND PERSONNEL – SCOPE 1	16 442	14 218	9 176
CO² EMISSIONS FROM PROCESSES AND FACILITIES, INCLUDING CO² EMISSIONS FROM ON-SITE WASTE INCINERATION (Tons of CO²)	30 334	32 162	39 349
DIRECT EMISSIONS OF GREENHOUSE GASES (GHG) LINKED TO FOSSIL ENERGIES – SCOPE 1	151 048,31	148 404,04	137 204
INDIRECT GREENHOUSE GAS EMISSIONS (GHG) – SCOPE 2	174 215	171 624	144 626
EMISSIONS OF OZONE-DEPLETING GASES	65,9	53,08	56,29



RATIO	2015	2016	TREND 2015-2016
GREENHOUSE GASES – SCOPE 1 (T CO²/tU equivalent)*	15	12,98	-13%

* Ratios are calculated on the basis of total production from all sites in operation



AREVA MINES AND CLIMATE CHANGE

As a member of the International Council on Mining and Metals (ICMM), AREVA Mines supports the ICMM's position on climate change. In conducting its mining activities, AREVA Mines undertakes to limit greenhouse gas emissions in accordance with the environmental policy of AREVA and to carry out social projects and take action to conserve water and biodiversity in order to meet the challenges faced due to the consequences of climate change.

■ GHG Life Cycle Assessment for U Mining and Milling

Example in Canada

Life cycle greenhouse gas (GHG) emissions from the production of nuclear power are uncertain. A comprehensive life cycle assessment of greenhouse gas (GHG) emissions (in g CO₂e/KWh) produced from the mining and milling of uranium (cradle to gate) in Canada was completed by University of Saskatchewan graduate student David Parker.

The study included data from 2006-2013 for two uranium mine-mill operations in northern Saskatchewan (McArthur-Key Lake and Rabbit Lake) and data from 1995-2010 for a third SK mine-mill operation (McClean Lake).

The study calculated GHG emissions using real data provided by the mine-mill operators and transparent well-documented methods. The production weighted average GHG emission intensity is 42 kg CO₂e/kg U₃O₈ at an average ore grade of 3.81% U₃O₈. Calculated GHG life cycle intensities for the McClean Lake Operation, with an average ore grade of 1.54% U₃O₈ (1995-2010) was 64 CO₂e/kg. The production-weighted average GHG emission intensity drops to 24 kg CO₂e/kg U₃O₈ when the local hydroelectric GHG emission factor is substituted for the SK grid-average electricity emission factor. Canadian uranium mining-milling contributes 1.1 g CO₂e/KWh (conversion for light water reactor) to the total life cycle GHG emissions from the nuclear fuel cycle (0.7 CO₂e/KWh using the local hydroelectric emission factor).

Overall, life cycle GHG emissions from the mining and milling of Canadian uranium are low compared to estimates for uranium production elsewhere, largely due to the higher ore grade.

Life Cycle Greenhouse Gas Emissions from Uranium Mining and Milling in Canada

David J. Parker*†, Cameron S. McNaughton*‡†, and Gordon A. Sparks†

† Department of Civil and Geological Engineering, University of Saskatchewan, Canada

■ Waste

AREVA assumes responsibility for its waste, whether it is conventional or radioactive waste. The company must therefore ensure that waste is traceable through to its definitive disposal or recovery.

■ Conventional waste

Conventional waste is related to normal activity (as part of normal production) or exceptional activity (e.g. as part of works, projects, etc.) and falls into two categories

- hazardous waste (e.g. asbestos, batteries, packaging for toxic substances, electronic waste, etc.),
- non-hazardous waste (e.g. household waste, rubble, scrap metal, tires, plastic, etc.).

Waste is said to be recovered when it is recycled, reused, transformed or used to generate heat or energy. This is the case for example at the KATCO site in Kazakhstan: around 60% of conventional waste was recovered in 2016 (100% of hazardous waste, 32% of non-hazardous waste).

The overall tonnage of conventional waste decreased by 8,5% in relation to 2015 for AREVA's mining activities as a whole. This development is mainly due to the decrease of waste due to the end of construction activities in Canada. Nevertheless, we notice an increase of waste reported by the SOMAIR and COMINAK sites. The sites have put a new organization in place to improve selective sorting of waste at the facilities and to enhance waste tracking.



	2014	2015	2016
QUANTITY OF CONVENTIONAL WASTE - METRIC TONS	4 595	6 939	6 353
QUANTITY OF HAZARDOUS WASTE*	1 410	3 535	3 302
QUANTITY OF NON-HAZARDOUS WASTE**	3 186	3 405	3 051
QUANTITY OF HAZARDOUS CONVENTIONAL WASTE RECOVERED	424	109	47
QUANTITY OF NON-HAZARDOUS CONVENTIONAL WASTE RECOVERED	2 565	1 432	1 460

*Hazardous waste generated by our sites are: used oil, filters of fuel, unnecessary antifreeze agent and superfluous batteries. They are collected in indicated containers and transported for the internal or external recycling. Empty barrels or canisters which contain typically the residue of products as oil, antifreeze agent and grease are returned to the suppliers for the recycling.

**Our most significant non-hazardous waste includes scrap, used tires, inerts industrial waste and the organic waste. All our scrap and a part of tires are recycled. Many of our operational sites implemented recycling schemes of the equipment as the paper, the plastic, the pallets, the glass, and some implemented programs of composting for organic waste.



SHARE OF RECOVERED WASTE DUE TO NORMAL ACTIVITY (%)	2014	2015	2016
MINING BU	73,1	24,75	23,7

■ **Management of waste containing PCBs (polychlorinated biphenyls) in a country without a direct elimination route**

Example in Niger

A project involving 14 Francophone African countries has been set up in Niger under the supervision of the Ministry of Environment and Sustainable Development of Niger. The purpose of this regional project is to reduce the environmental and public health risks associated with PCB releases by introducing environmentally sound management practices for PCB oils and equipment. These polychlorinated biphenyls (PCBs) contained in the transformers at SOMAIR and COMINAK have been transported and stored on a site in Niamey for treatment by French experts belonging to the TREDI laboratory before they are shipped on to France for destruction.

The mining companies SOMAIR and COMINAK have supported the project since 2013. The project, which is structured in 2 phases, aims initially to set up a regulatory, administrative and technical framework for the management of PCBs and, in a second phase, to cater for chemical treatment and disposal of this waste in France.

SOMAIR and COMINAK carried out a series of upstream operations involving the sampling and analysis of the waste, the identification of 150 metric tons of transformers and contaminated waste in the case of COMINAK, and 81 metric tons in the case of SOMAIR, and its subsequent routing to the interim storage site in Niamey.

Concerned to respect and preserve the environment, the SOMAIR and COMINAK mining companies have been actively involved in the implementation of the project and in the technical and financial execution of this significant environmental project.

■ **Radioactive waste**

Mining waste is classified as Very Low Level Waste (VLLW) and only contains naturally-occurring radionuclides.

Such Very Low Level Waste is either put into specific surface storage, or, possibly after processing, is rendered safe for disposal via normal channels, when it is below the release thresholds defined by national regulations (if applicable).

Directives sent out to each of the operational units likely to produce radioactive waste remind them of objectives and specify the resources to be deployed in terms of organization and performance to ensure such waste is managed safely. In particular, they take action in the following areas: the strict separation of conventional and radioactive waste, the exhaustive management of such waste, the taking into account of improvements, risks related to transport, the use of any final disposal channels.

The increase in the production of radioactive waste in 2016 is related to the activity at the McClean Lake mill and to works of an exceptional nature carried out at KATCO (sludge removal in process ponds).



QUANTITY OF RADIOACTIVE WASTE - METRIC TONS	2014	2015	2016
TOTAL MASS OF RADIOACTIVE WASTE FROM OPERATIONS EITHER RECOVERED OR ELIMINATED THROUGH APPROVED CHANNELS OR PENDING (INTERIM STORAGE)*	266	848	976

*All the waste evacuated in authorized sector are to be taken into account, including if it is about specific storage. It is for example the case of waste of regular maintenance and muds, stored in an authorized mining dependence. The reporting of the quantities lower than 1 ton or 1 m3 is optional for waste having at least a stream for elimination, as well as reporting of any quantity lower than 100 kg or 100 liters.

Biodiversity

As a responsible mining company, AREVA attaches a great deal of importance to the protection and conservation of biodiversity. This is why, right from the exploration stage, AREVA Mines takes action to minimize its impact on biodiversity as much as possible.

Its road network is optimized to ensure that the number of tracks used is kept to a strict minimum. These tracks are maintained on a regular basis to reduce the dispersal of dust which may collect on vegetation by the side of the road. Access to them is now sealed off when they are not necessary, to allow vegetation to grow back.

In the same way, the entire drilling process has been improved to reduce its impact on the ecosystem, by installing optimized platforms, avoiding the need to cut down trees or at least allowing the number of trees cut down to be reduced. The drilling process itself is currently being improved to reduce consumption of natural resources, and of water in particular.

Migration routes of animals and livestock are also taken into account in the exploration program.

Taking action to protect biodiversity

Certain mining sites are located close to zones which are rich in biodiversity. In 2016, we undertook studies and actions to preserve sensitive zones with third parties, such as local communities, consultancy firms, university specialists or nature conservation bodies.



For its 2016 CSR report, Areva Mines has decided to include new indicators related to biodiversity and world heritage.

Thus, among the GRI's list of indicators, we have selected GR-EN14, deemed particularly relevant today for monitoring the potential impacts of our activity on biodiversity. GR-EN 14 reports the total number of threatened species on the global red list of the IUCN (International Union for the Conservation of Nature and its national equivalent) and whose habitats are situated in areas affected by our activities, classified by level of risk of extinction:

- critically endangered;
- endangered;
- vulnerable;
- near threatened;
- least concern.

IUCN categories for the Red list

Extirpated species ▼

EX : Extinct worldwide

EW : Extinct in the wild

RE : Regionally extirpated

Species threatened with extinction ▼

CR : Critically endangered

EN : Endangered

VU : Vulnerable

Other catégories ▼

NT : Near threatened

(species close to threshold of threatened species or which could be threatened if specific consevation mesures are not taken)

LC : Least concern

(species fo which the risk of extinction is low)

DD : Data deficient

(species fo which evaluation could not be carried out due to insufficient data)

In the same way, we list UNESCO World Heritage sites around our sites and the actions we take to preserve them, especially when they are in close proximity to our sites.

These two indicators allow us to determine whether our activities are liable to pose a threat to certain plant and animal species or to World Heritage sites and to take the necessary measures to avoid harming them and to prevent their degradation.

A number of the results of monitoring of these new indicators are available in the Case Studies – Environment and Biodiversity section and below for our Kazakhstan, Mongol, Canadian and Namibian sites.

As an example, here are two cases, one in Kazakhstan, the other in Canada :

■ **An inventory was carried out in 2010 to cover the scope of our licenses**

Example in Kazakhstan, in the KATCO subsidiary

The table below lists the species present in these the zones and listed in the IUCN Red book. We note that since then, employees of the company have spotted the great bustard (*Otis tarda*), a bird that was not observed during the 2010 inventory but is classified as Vulnerable in the IUCN Red list.

NAME OF SPECIES	TYPE	IUCN CLASSIFICATION
Saiga tatarica	Plant	Critically endangered
Selevinia betpakdalensis	Animal	Deficient of data
Felis manul	Animal	Near Threatened
Gazella subgutturosa	Animal	Vulnerable
Mustela (Putorius) eversmanni	Animal	Least Concern
Aquila chrysaetos	Animal	Least Concern
Circaetus gallicus	Animal	Least Concern
Otis tarda	Animal	Vulnerable, observed by employees

In Kazakhstan, no sites are listed in UNESCO's World Heritage List.

■ **A habitat classification study was conducted covering approximately 100,000 square kilometers**

Example in Canada, in the Athabasca Basin region

The exploitation of this inventory resulted in a list of animal species potentially present in the basin area. These have been classified according to the IUCN red list. This gives: 26 animal species in the Least Concern category, one species recognized as Vulnerable and one species Endangered.

Habitat classification and conservation data allowed us to establish that 38 plant species classified of Least Concern and one classified as Vulnerable have the potential to occur in the local assessment boundary (watersheds). Seven plants in the Least Concern category were found in the local assessment area during flora surveys.

Field observations have also been conducted on a perimeter bounded by the watershed, and therefore including the McClean Lake site. These observations found one species in the Vulnerable category and one in the Least Concern category.

All these studies done under the Canadian Species at Risk Act (SARA) protocol result in 7 Special Concern Plants plus 1 Endangered, 3 Threatened, 5 Special Concern Animals with the potential to occur in the regional or local assessment boundaries neighboring the license zones. Surveys have found only two animals of Special Concern in the local assessment boundary (watersheds) and no plants classified under SARA.

Located more than 400km away from our surface lease, the Wood Buffalo National Park was classified, in 1983, as a UNESCO world heritage site because of its great concentrations of migratory wildlife; the large inland delta, salt plains, and gypsum karst which are internationally significant natural phenomena; breeding habitat for the endangered whooping crane; and its wild bison population living in the most ecologically complete example of the North American Great Plains-Boreal Grassland ecosystem.

■ Environmental studies

The Mining BU conducts environmental studies throughout the life cycle of the mining and industrial projects, whether in response to regulatory requirements or voluntarily in order to better understand the impact of our activities.

Environmental impact studies (EIS) are performed for each new mining project and whenever a major modification to our industrial facilities is planned. They meet the regulatory requirements in force and must be submitted for public consultation to be approved by the local authorities.

These studies make it possible to map the impacts generated by a new project, improve understanding of the associated environment (e.g. biodiversity inventory), identify preventive or mitigating measures and offset measures to reduce risks at the source and define preventive measures to be incorporated into our facilities.

Accordingly, in 2016, we conducted a wide variety of studies on our different sites:

Mongolia :

- Detailed Environment Impact Assessment (DEIA) for the ZOOVCH OVOO pilot project
- Paleontological study
- Archeological study
- Saxaoul study (University of Mongolia)

Kazakhstan :

- Preliminary environmental and social impact study of a new project to exploit the uranium deposit

Canada :

- Environmental Performance Report with analysis of monitoring data and updating of the Ecological Risk Assessment (ERA) and the Health Risk Assessment (HRA). It reviews all monitoring data and updates the Ecological Risk Assessment (ERA) and also the Health Risk Assessment (HRA)
- R&D project on measures to reduce the concentration of Selenium (Se) in the effluents. In addition, field studies were carried out in order to establish the initial state for the monitoring of Se in fish.
- Study of the impact of the mill on groundwater quality

The list of studies is not exhaustive.

ENVIRONMENTAL MONITORING

As part of its CSR initiative, the Mining BU has implemented environmental monitoring tools on its mining sites. Thanks to this initiative, the Mining BU is able to ensure that they do not pose any risk to the environment or local populations.

■ Regular environmental monitoring of our sites

To verify that there is no pollution on its sites, the Mining BU monitors many different parameters in the air, water and ground. With only one objective: to be ready to act in response to even the slightest alert.

Air monitoring

This monitoring chiefly consists in measuring exposure to ambient radioactivity, with measurements being taken, depending on the site, of concentrations of gas either in the air or at the outlet of chimney stacks. Measurements are taken continuously, both at the site and in the nearby area, using specific dosimeters.

Water monitoring

We are running campaigns to monitor the quality and quantity of aquifers and surface waters using a piezometric monitoring system upstream and downstream of our activities.

Hydrological and hydrogeological studies are performed at all sites, well before mining operations begin. These studies allow a better understanding of the environment type and the composition of the natural water so that we can adapt our projects accordingly. At all sites where it is necessary, the water is first sent through a treatment station before being released back into the environment in conformity with the environmental and health standards in force. Our experts are also studying the various water treatment methods to improve the environmental efficacy of the processes applied.

Monitoring of plants and the food chain

Sampling and analysis are regularly carried out in the food chain and on plants, including aquatic and land fauna, aquatic flora, the fruit and vegetables produced in nearby gardens, and the milk supplied by animals that have grazed in meadows near sites or drunk from receiving water courses.

Soil monitoring

To minimize mining remediation work downstream as well as exposure limits, everything is done upstream to reduce the risk of soil pollution (whether by radionuclides or hazardous chemical products). Systematic monitoring allows identification of abnormal zones. If such zones are pinpointed, soil decontamination measures are applied to restore the zone to regulatory levels. Typically, soil sampling is annual, but if necessary the frequency can be increased.

■ Accidental spills

Preventing accidental spillages is something our teams in the Mining BU have been working on for several years. Thanks to their efforts and the sharing of experience, these spillages are limited and are handled very swiftly and safely.

Environmental events are fed back at group level via a specific electronic tool known as AHEAD (AREVA Happened Events Advanced Database). The AREVA group has developed a new severity classification scale for near-events and environmental events known as ASSESS (AREVA Severity Scale for Events and Soft Signals) which has been tested in the Mining BU.

In 2016, we had no environmental events that had an impact outside our sites. A few accidental spillages (effluents, acid solution) have occurred during our operations. They remained within the sites concerned and had no major environmental consequences and no impact outside our sites. Corrective clean-up measures were taken at the sites. This type of incident is subject to feedback and a lessons learned process which helps us improve our procedures and our practices.



CHAPTER

COMMITMENTS

Social involvement

Extract from Responsible Development
report 2016 on Areva's Mining Activities

The complete report is downloadable on :
www.csr-mines.aveva.com



Given the diversity of contexts, past events within our activities and the nature of our future projects, our aim is to promote a trusting dialog and long-term partnership with our stakeholders.

FUNDAMENTALS: STRATEGIC ORIENTATION



Presentation of awards to graduate students in Athabasca

The priority actions defined in AREVA Mines' CSR policy for the social domain are:

- The acceptability of our activities;
- Ethics, with risks of corruption and transparency of payments;
- Labor relations, environmental and social issues being taken into account by our suppliers and subcontractors: responsible purchasing and local roots.

To meet these objectives, we are adopting an approach with our head office and teams on all our sites, whether in France, Canada, Niger, Namibia, Gabon, Kazakhstan or Mongolia, based on working on the following areas:

Governance :

- Ensure by way of the **CSR Committee** (body consisting of the Mining BU management committee, site directors, as well as the Safety and Community Involvement Department (Direction Sécurité et Intégration dans les Territoires – DSIT)) that actions taken across the whole scope of the Mining BU are consistent with regard to CSR policy;
- Define by way of the **Mining Social Committees** of each site, the major challenges, priority projects, the outlook in terms of local development and engagement with stakeholders;
- Identify and define new and ongoing **partnership frameworks** in consultation with stakeholders.

Prevention of risks thanks to our commitment to our stakeholders:

- Update our knowledge base regarding the regions in which we work, notably through societal impact studies and the updating of stakeholder maps. In 2016, Canada and Namibia updated their maps of local stakeholders;
- Formalize our social lessons learned, particularly those learned from after-mining, both in France and on an international level;
- Update our tools for risk mapping and materiality assessment analysis. A materiality exercise was conducted at the end of 2016 and allowed us to confirm the expectations of our stakeholders.

AREVA'S MINING SOCIAL COMMITTEES: OUR GOVERNANCE TOOL

Since 2013, the Mining Social Committees of AREVA Mining Group have had the task of identifying (on an internal basis by country):

- strategic areas for involvement in the community;
- prospects for engagement with stakeholders;
- priority community investment and local development projects;
- multi-year plans and associated budgets.

They bring together the managing directors of subsidiaries, local social leaders, and coordination and support teams from head office. Meetings are held more or less frequently depending on the country and depending on needs. The Mining Social Committees cover the whole scope of AREVA Mines: Canada, Gabon, Kazakhstan, Namibia, Niger and Mongolia.

DIALOGUE WITH OUR STAKEHOLDERS

■ Who are our stakeholders?

We define our stakeholders as persons or groups of persons upon whom our activities have had or are having an impact. As part of a responsible approach, it is absolutely necessary to have an understanding of this environment in order to be able to adapt our actions as effectively as possible.

We break our stakeholders down into four main groups:

- internal participants: managers, employees, trade unions, etc.;
- the authorities: Government Ministries, Prefects, Mayors, etc.;
- national and international NGOs;
- the media and representatives of the general public.

We are called upon to establish dialogue with all of these groups of stakeholders.

The methodology used to identify and qualify our stakeholders was updated in 2015 and has since been applied to the territories where we are operationally active.

This methodology is based both on internal feedback from experience and on benchmarking of performance outside the AREVA group.

The criteria retained to qualify their representativity are their geographical proximity to our operations, the level of impact of our activity and their possibilities for engagement with stakeholders.

■ Framework for dialogue

Meetings of bodies to maintain dialogue in labor relations (internal to AREVA and intended for employees) are organized both on sites and centrally. A similar process is also deployed to maintain social dialogue with our external stakeholders.

The objective of this process of entering into dialogue and discussion with stakeholders and meeting with them on a regular basis is to maintain a constructive relationship with our stakeholders to understand their expectations and explain our activity to them. It is an approach which is essential in order to get to know each other better. We thus adapt our frameworks for dialogue depending on the stakeholders (authorities, local population, associations, media, AREVA employees).

These formal exchanges may take the form of face-to-face discussions, public meetings, or communication in writing and are adapted to the environment in each of the countries in which we are present. The topics most frequently addressed are those relating to the environment and the economy. The frequency with which we enter into dialogue will depend on the results of the stakeholder mapping methodology deployed in 2016 in Canada and in Namibia and extended in 2017 to Niger, Mongolia and Kazakhstan.

To date, all sites have taken measures to involve local communities, perform impact assessments and implement development programs. Such action takes different forms depending on the country concerned, but there are however a certain number of common elements that can be noted.



The capacity of participants, the frequency of meetings and the subjects discussed depend on the issues encountered locally: socio-economic development, environmental footprint, health, better understanding of our mining and industrial projects, to name but a few.

Currently, stakeholder complaints are reported via our dialogue bodies on a country-by-country basis. As of 2017, we intend to centralize this information in order to have a global overview of the topics involved. This will enable us to improve our understanding of the real challenges. Internally, there is already a report on ethical practices in which AREVA employees can report matters that they deem to be in conflict with the group's values to their line management.

■ Dialogue bodies

Here are some of the different types of dialogue and consultation bodies and events in the main areas in which we work:

■ CANADA – Athabasca Working Group (AWG)

- Created in 1993, this body is composed of members of the mining companies (AREVA Resources Canada Inc. and Cameco Corporation) and six communities in the north of Saskatchewan province.
- In 2012, these stakeholders began the renegotiation process for the "Impact Management Agreement", an agreement that since 2001 has covered all aspects relating to the impact of mining activities on the region: employment, training, environmental protection.
- In 2016, negotiations with the Communities of Athabasca gave rise to the signature of a new Partnership Agreement on June 10, 2016. This Agreement deals with McClean Lake and supersedes an Impact Agreement dating from 1999. It is structured around 5 pillars for cooperation: local workforce development, economic development, community engagement, the environment and community investments.



■ FRANCE – Site Monitoring Committee (CSS)

- Set up on the initiative of local Préfets (government representatives), Site Monitoring Committees are bodies to promote dialogue and consultation between the operator and local stakeholders (residents, employees, elected officials, associations, etc.). Their aim is to inform the public about the effects of waste processing facilities on health and the environment. The introduction and organization of CSS, formerly CLIS, was strengthened by the circular of July 22, 2009, which calls for the development of this policy of openness and transparency.
- The Prefect can set up a CSS for each waste processing facility for which a permit is requested, and is obliged to set up a CSS for all storage facilities for the collection of final waste or special industrial waste, or where a request is made by one of the municipalities located within the area covered by the public enquiry.
- Through these committees, AREVA presents the different environmental outcomes and the work to be carried out to improve monitoring of former mining sites, in consultation with committee members.
- At least once a year, the operator provides the committee with a summary of site activities, focusing on environmental monitoring and risk prevention.
- In 2016, there were 11 committee meetings across France.

■ GABON – Local information committee

- The most recent meeting of the Local Information and Oversight Committee (Commission Locale d'Information et de Surveillance – CLIS) was held in Mounana in Gabon in November 2015. The next meeting is scheduled to be held in Q1 of 2017.
- The objective was to keep the local authorities and the general public informed about the actions taken and works carried out by COMUF on its former mining sites. A detailed report on the results of the 2013-2015 action plan was also drawn up.
- The results of environmental monitoring for the last three years concerning the areas on and around former mining sites - carried out under the supervision of the Gabonese Nuclear Safety and Security Agency (Autorité de sûreté et de sécurité gabonaise – AGSSN) were also commented on. "As in previous years, the results of the various inspections do not show any health risk", confirms an expert from the Department of Safety and Community Involvement, Mining BU.
- A review of the Group's social initiatives was carried out, one of which concerns the creation of a pilot fish farm project in several basins of the Haut-Ogooué, which could be extended to the region of Mounana.
- A presentation of the project to build 124 houses to replace 124 radiologically affected houses was also given. Initial building work commenced in 2016, after signature of an agreement with the State of Gabon.

■ KAZAKHSTAN – Local communities

AREVA, via KATCO, its joint venture with KAZATOMPROM, has developed labor relations and social initiatives in the region of Suzak (South Kazakhstan), where its production sites are located, as part of an ongoing process of dialogue with representatives of local communities: Shu, Tasty, Sozak, Sholakorgan and Taukent. All the projects are the outcome of the parties working together, as part of consultation sessions with these different communities.

■ MONGOLIE – Local cooperation councils

- There has been a formal framework for dialogue and discussion between AREVA Mongolia and local communities in place since "Local Cooperation Councils" were set up in 2013. Twice a year, representatives of the Soums and Bags of Ulaanbadrakh and Zuunbayan meet with representatives of AREVA Mongolia;
- The Local Cooperation Councils allow information to be shared with the local community in the areas where AREVA Mongol LLC is present;
- At these meetings, specialists from AREVA Mongolia present studies and review the state of progress on the programs currently underway: the cultivation of saxaouls, the rebuilding of herds, a veterinary project, wells being created and wells to be repaired, etc.;
- These meetings also provide Community representatives with the opportunity to pass on their requests.

■ NIGER – Bilateral steering committee (CBO)

- Created in May 2006 to help strengthen the local governance of societal projects for the benefit of populations;
- Brings together local elected officials, relevant administrations and civil society alongside AREVA. They define local development policies, identify priority areas for intervention, issue opinions on projects and ensure financing for the latter;
- AREVA's mining entities in Niger make an annual contribution of 750,000 euros to the CBO.

CONTRIBUTION TO LOCAL DEVELOPMENT

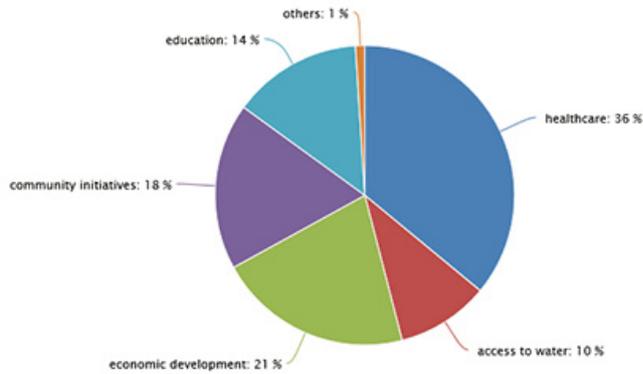
■ Community investments

■ Community investment strategy

We define community investments as the setting up of project and actions with the aim of meeting both the expectations of our stakeholders and the operational goals of AREVA Mines. In this sense, these projects differ from a purely corporate sponsorship-based initiative which is "a voluntary undertaking (...) which does not seek to have any impact on its (the company's) activities" (corporate sponsorship charter – ADMICAL).

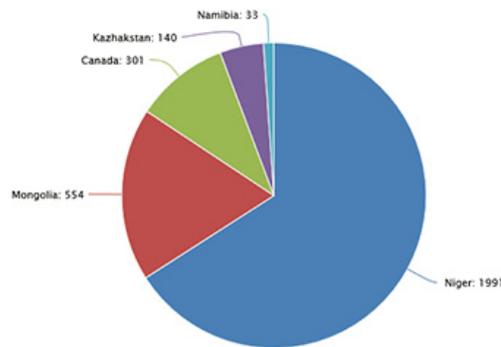
■ Funds spent for AREVA's mining activities in 2016: € 3,000 K

By area

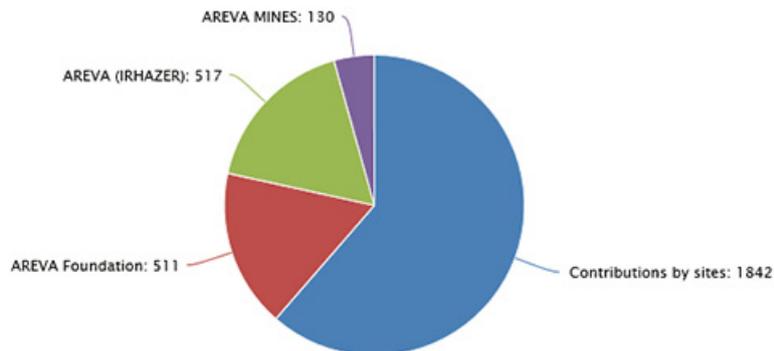


The funds for community investments are allocated by the various different subsidiaries, by the AREVA Foundation, AREVA SA and by the CSR Department of AREVA Mines.

By country

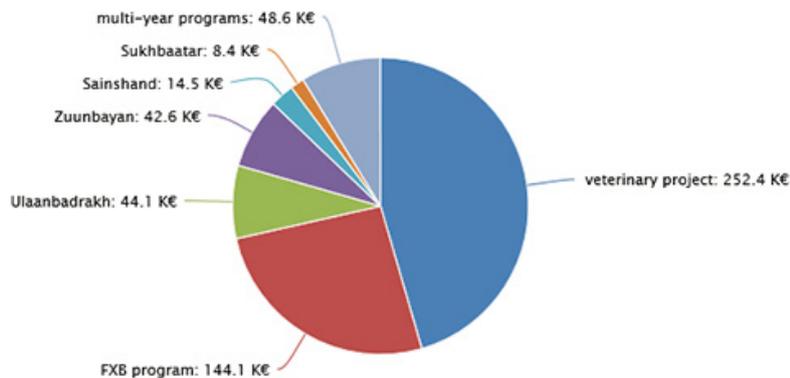


By contributor



■ Examples of social projects supported by AREVA's mining activities

MONGOLIA – € 554K



The veterinary program

The aim of the project was to gain improved knowledge of animal diseases in the areas of Ulaanbadrakh and Zuunbayan, to monitor animal breeding, create groups of herders and report back on the results.

The program was implemented between January 2015 and December 2016. It was possible to make 814 visits to 239 different families (78% of families living in the area, with 1,600 animals concerned).

The program made it possible to make advances in knowledge of animal diseases. It also allowed avenues for improvement to be identified with regard to diagnostics tools and means of inspection and regarding the necessity of creating groups of herders.



FXB Village

The program was launched in the rural province of Dornogobi in January of 2016, with funding from the AREVA Foundation.

Its aim is to simultaneously combat five factors related to poverty: malnutrition, the general lack of hygiene and lack of clean housing, disease, inadequate education and lack of revenue.

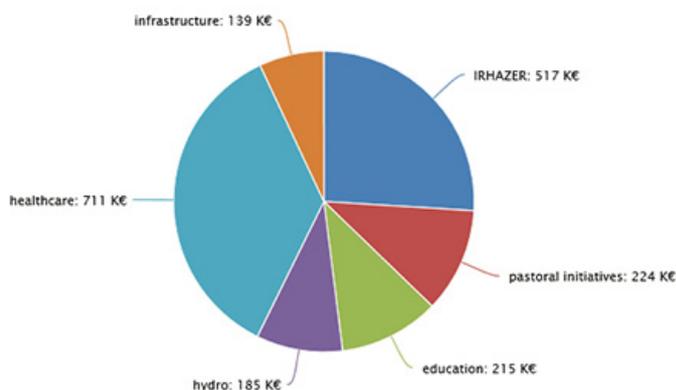
100 families are receiving support for a period of 3 years. FXB is ensuring that those receiving support are able to become self-sufficient by placing emphasis on the importance of the role of women, teaching them how to save money and giving them access to microloans.

The total number of direct beneficiaries in the province of Dornogobi comes to 515 individuals, of whom 266 are children.

At the end of this first year, the objective in terms of development of activities that will generate revenue has not quite been fully met. This is due in part to climatic issues, but also due to the fact that the motivation to "work" is not yet high enough. In 2017, the aim for the teams from FXB will therefore be develop a more entrepreneurial mindset within these families.



NIGER – € 1,991K



Projects supported by the Bilateral steering committee (Conseil Bilatéral d'Orientation – CBO)

The main projects include education with the construction of new classrooms, latrines, etc. in urban and rural areas and access to water with the creation of livestock wells.

The municipality of Arlit received 41% of the funds, followed by the municipalities of Timia, Iférouane and Gougaram.

An effort is to be made in 2017 to ensure that the developments financed within the framework of the CBO are rendered sustainable. The answer may be to rebalance operations in favor of the training of trainers, teachers or healthcare personnel so that local populations and local authorities appropriate the projects and infrastructures more effectively.



Village well

Health: improving conditions of treatment for kidney diseases

Take action to address the considerable increase in the number of cases of chronic kidney disease by providing support to the dialysis center at the Hôpital de Lamordé in Niamey.

The strengthening of its technical equipment should eventually make it possible to provide correct treatment for impaired kidney function by means of the technique of hemodialysis and thus reduce the number of health evacuations that have to be made to other countries.

A first installment of funds was made available for the purchase of equipment in 2016, to be followed by further installments in 2017 and 2018.



Hôpital Lamordé, Niamey

IRHAZER: 2016, a year of transition

IRHAZER is a hydro-agricultural and pastoral development project in northern Niger to improve food security in desert areas. Following a feasibility and environmental impact study, a pilot project is underway and aims to cover 100 hectares, from which 200 families will benefit.

As part of the move from the pilot phase to the development phase of the "IRHAZER" project to extend the cultivable land area through irrigation, it was essential to take stock of progress to date in 2016. This was achieved by means of a financial and operational audit which made it possible to identify several points for improvement, particularly in the management of the project and the implementation of a structure to ensure coordination in the field.

The report on results achieved in 2016 showed low level of achievement in both physical and financial terms. Satisfactory results were however recorded in the production and the increased popularity of forage crops, particularly alfalfa in the region of Agadez. The high levels of production recorded not only made it possible to improve the availability of forage crops, but also, most importantly, to generate revenue for farmers.

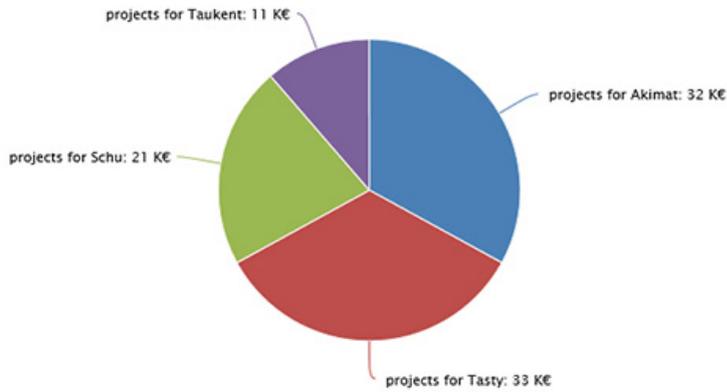
The next steps:

- HY1 of 2017: implementation of recommendations with deployment of the operational structure;
- HY2 of 2017: Gradual resumption in 2017 of the development phase with the creation of new farming sites. The plan is to develop 186 hectares consisting of 86 hectares of areas with community irrigation and 100 hectares with private irrigation.



Irhazer project: visit to a farming operation

KAZAKHSTAN – € 140K



Annual support for local communities

Community initiatives have an effect on the life of local people by providing support for the organization of various festive events, helping to acquire communications tools, as well as offering support for the education of children (kindergarten for 50 children in Tasty, school for 200 pupils in Sholakkorgan), for underprivileged families (distribution of coal), for people in need (sewing workshop for handicapped persons in Sholakkorgan) and for herders.



Delivery of coal

Focus on education

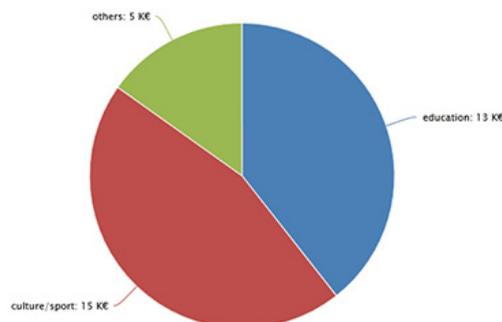
Higher education: partnership with the Universities of Kazakhstan to finance student accommodation grants.

Technical secondary education: partnership with vocational colleges in the District of Sozak.

Training initiatives for unqualified workers to help them to develop their potential.



NAMIBIE – € 33K



Making the areas around schools safer

In Namibia, many children are victims of traffic accidents on the way to school due to lack of safety barriers. With the help of a local team of consultants, AREVA provided funding to equip the areas around schools with reflective safety protection barriers. 60 schools in the region of Erongo have been able to be equipped in this way.



Installation of barriers

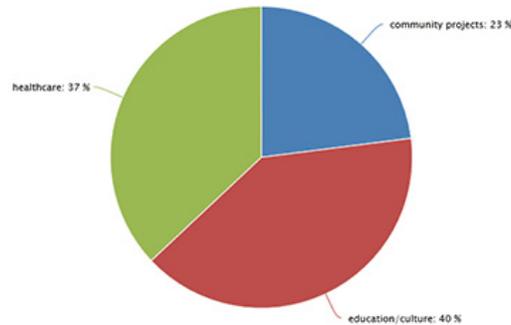
Local back-to-work assistance initiatives

AREVA has helped to fund training sessions in leatherwork skills for underprivileged people in Swakopmund, thus helping to create jobs through the development of skills and entrepreneurial spirit.



End of a training session in leatherwork skills

CANADA – € 301K



AREVA RESOURCES CANADA (ARC) gives priority to community initiatives which we run in the province of Saskatchewan and Saskatoon. Teaching and literacy initiatives, cultural events, healthcare and community development programs are central to the contributions made by ARC. In 2016, ARC made grants available to 12 students to enable them to pursue courses of further education. 82 students who graduated with degrees in mathematics and the sciences received an award from ARC.



Community program for schools

■ Transparency of revenue in the extractive sector

Through our support for the Extractive Industries Transparency Initiative (EITI), AREVA has continued to demonstrate its commitment to greater transparency in payments made to states in relation to the management of mining resources.

Niger, Mongolia and Kazakhstan, countries in which the group is engaged in mining activities, are members of EITI.

In these countries, our mining subsidiaries participate in the local multi-party process and declare payment of taxes, mining rights and taxes on profits using specific declaration forms. The total revenue is presented officially on the EITI website.



IMPACT OF OUR PRESENCE IN THE REGIONS Focus on AREVA Niger

AREVA Mines, which has been present in Niger for over 50 years, is the main shareholder in **Société des Mines de l'Air** (SOMAIR) and the **Compagnie minière d'Akouta** (COMINAK) which operate the two mining sites. The group is also developing the **Imouraren** project (one of the largest uranium deposits in Africa), this project having been mothballed while awaiting more favorable market conditions.

Niger has significant uranium resources in its northern region. Uranium is the country's leading export resource (accounting for 55% of exports in 2013).

Each mine has its own ore processing plant. Since they were founded in the late 1960s, the two mining companies have extracted more than 124,000 metric tons of uranium.

The impact of AREVA's mining activity in Niger can be read through various indicators:

- 800 million euros have been invested to date in the Imouraren project,
- 44.3 million euros paid to Niger in taxes and royalties in 2015,
- An average of 100 million euros per year in local purchases,
- 7,000 direct and indirect jobs: 98% of direct jobs (=Areva Mines employees) are held by Nigerien nationals,
- the mining companies provide free medical care to employees and their families, the hospitals are open to the rest of the population. The hospitals budget is more than 4 million euros per year or 38% of overall expenditure devoted to externals,
- the mining companies make community investments targeting the following priority areas:
 - education (building classrooms, scholarships, etc.),
 - health (construction of health infrastructure, training, medical equipment, etc.),
 - access to water (drinking water wells, wells for horticulture, livestock wells, etc.),
 - provision of infrastructure (infrastructure for the municipalities and cooperatives, developments for agriculture or sanitation, etc.),
 - In 2015, 3,6 million euros were spent on community investments in Niger.
- the mining companies contribute to the maintenance of the Tahoua-Arlit road through an annual allocation to a maintenance fund for the road in an amount equivalent to 1% of their turnover.

Local recruitment

Recruitment of employees

AREVA Mines' social policy expresses a commitment to promoting the local recruitment of our employees. Over 98% of our employees on our sites are from the host country.



We also pay particular attention to indigenous communities, which may find it difficult to take advantage of our employment opportunities. This situation exists in Canada, for example, in North Saskatchewan, a region that has seen numerous initiatives to promote access to employment and select local entrepreneurs as a preference.

This is also true in Mongolia and in Kazakhstan, for example, where more than 52 % of employees originate from the District of Suzak, close to the mining site and more than 70 % are from the South of Kazakhstan.

Currently, across all the countries in which we work, the majority of employees (at all levels of the organization) are of local nationality. The proportion of local managers is 70%.

Local purchasing

The fact that preference is given to local suppliers during the bidding process enables the creation of a network of companies and numerous jobs in the region where the mining site is located. Today, 72% of our purchasing volume comes from the countries in which we are based, and 63% of our suppliers are local.

It is not always easy to define the meaning of "local", and the term varies depending on the country, its stage of economic development and the population density around the site. AREVA has therefore implemented specific purchasing policies in the countries in which it has mining sites.

For example, in Canada, for similar contract bids, preference is systematically given to "local" northern suppliers, as per their status under provincial legislation in Saskatchewan. A company has "local" northern status if it belongs to or operates within the community living in northern Saskatchewan. Service contracts such as site catering or monitoring, which require a large workforce, have only been awarded to suppliers from this region.

Similarly, in Kazakhstan, preference is given to local suppliers where skill levels are comparable. For catering services for instance, following a tender a local company took over from a European supplier. Contractual commitments become key indicators, which are monitored over time. The caterer was asked to pay special attention to the variety of dishes, and the quality and freshness of products used. Surveys will be conducted throughout the entire life of the contract with employees to assess their perception of the services rendered.



CHAPTER

COMMITMENTS

Commitment to employees

Extract from Responsible Development
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www.csr-mines.aveva.com



Our commitment to employees in 2016 within the scope of mining activities saw on-going commitment to the implementation of policies to improve quality of life at work, in areas related to work-life balance, psycho-social risks and support for people with disabilities.

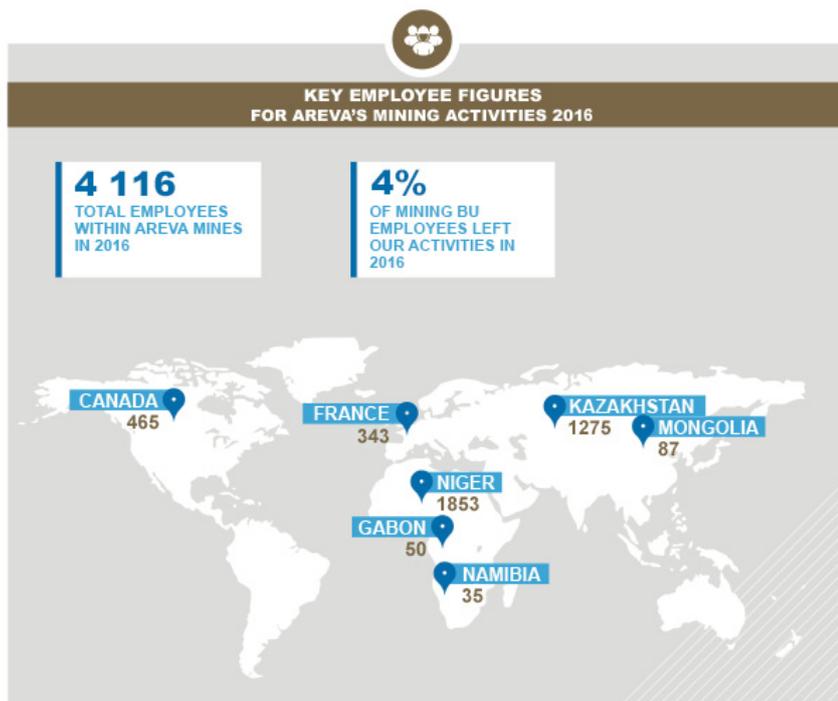
ROADMAP: STRATEGIC ORIENTATION 2013-2016



■ People

"People" constitutes one of the pillars of the group's strategic plan. This strategic area aims to anticipate future needs in terms of skills, promote mobility within the group and offer a wide range of professional training, as well as ensure progress is made towards the successful implementation of our pro-diversity policy.

■ 2016 : Key figures





SEX			
BREAKDOWN OF EMPLOYEES	Woman	Man	Total
PERMANENT	553	3 295	3 848
TEMPORARY	54	214	268
TOTAL	607	3 509	4 116

■ Turn Over

In a very difficult market context in 2016, controlling employee numbers (one recruitment in France due to the voluntary redundancy plan) and making several adjustments at production sites (87 employees recruited for Katco, 54 in Canada, 38 for Cominak and 35 for Somair) has enabled AREVA Mines to adapt the workload while maintaining and developing skills.



COUNTRY	RECRUITMENT MEN	RECRUITMENT WOMEN	TURN OVER
CANADA (temporary included)	68	30	3.5%
FRANCE	1	0	11.8%
KAZAKHSTAN	64	23	11.7%
NIGER – Cominak	37	1	2.6%
NIGER – Somair	32	3	4.5%

■ Roadmap

Within AREVA Mines, various agreements were signed for the three-year period 2013-2016 to set objectives regarding quality of life at work, gender balance in the workplace and the knowledge transfer, thereby demonstrating the commitment of management at the highest level.

■ Gender balance in the workplace

With regard to gender balance in our teams, the indicators in our mining activities are encouraging: women make up 36% of the teams in France, and 40% of the AREVA Mines Board of Directors. However, some work remains to be done to improve the overall numbers of women in our mining activities abroad (12%), by ensuring that women are promoted at all levels of the organization, and particularly in Management Committees, to reach AREVA's target of 26%.

■ Knowledge transfer

We aim to rigorously manage our technical know-how and expertise, ensuring knowledge is transferred. We do this by paying particular attention to the AREVA Mines pool of experts, maintaining and consolidating our work-study figures to contribute effectively to the professional integration of young people, and preparing for the future.

■ **The employment of people with disabilities**

Currently, people with disabilities make up 3.1% of the workforce. We seek to recruit and include all talents by favoring skills, and raise awareness about disability among employees and management.

■ **Social, ethnic and cultural diversity**

We aim to develop local skills and promote mobility in order to reflect the international and multicultural dimension of our mining activities.

MANAGING SKILLS

Between November and February, employees benefit from:

- a performance review, which looks back over the year and sets objectives for the coming year;
- a development objectives are also set, with a training and development plan being drawn up (covering areas such as techniques, management, expertise, industrial performance, etc.).

In 2016, a performance review was held for 100% of managerial and non-managerial staff in France, as well as 100% of managers at production sites.

KNOWLEDGE TRANSFER



■ **Access to training**

Training is a key factor in skills development and career advancement. It also help to improve performance. In France, Niger and Kazakhstan, a training plan is drawn up for each employee every year.



IN FRANCE, 99.7% OF THE SCHEDULED TRAINING PLAN WAS COMPLETED IN 2016



NUMBER OF HOURS OF TRAINING FOR MEN AND WOMEN BY EMPLOYEE CATEGORY IN FRANCE IN 2016

ENGINEERS AND MANAGERS		ADMINISTRATIVE STAFF, TECHNICIANS AND SUPERVISORS	
Women	Men	Women	Men
39	41	38	17.5

■ Mining College

The AREVA Mines Mining College offers training courses in technical areas, health, safety and radiation protection, CSR, remediation and operational excellence to its employees in France and at our subsidiaries' sites applied to the disciplines of the uranium mining cycle.

When it was founded in 2006, the aim of the Mining College was to train and develop the professional skills of engineers newly recruited by AREVA Mines.

Today, our needs have evolved, and the Mining College supports the maintenance and development of technical skills in our core businesses of mining, ore processing and geology.

The Mining College is aimed at mining engineers, managers and technicians in both technical and support disciplines who wish to bolster their knowledge, or acquire new skills, and potentially at employees from other New AREVA entities as part of a transfer to AREVA Mines, or who need to develop a skill taught by the Mining College.

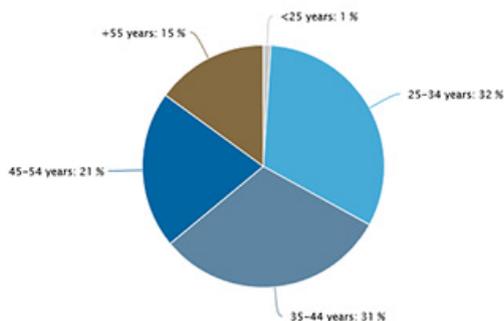


THE MINING COLLEGE HAS...

- 18 training courses provided in 2016 (13 in France and five at subsidiaries) to 180 trainees
- A 2017 Mining College Plan anticipates to train more than 255 trainees
- 30 theoretical and practical training courses, delivered by AREVA Mines employees, experts and specialists in our activities

■ Age diversity

Allocation of ages by employees in 2016

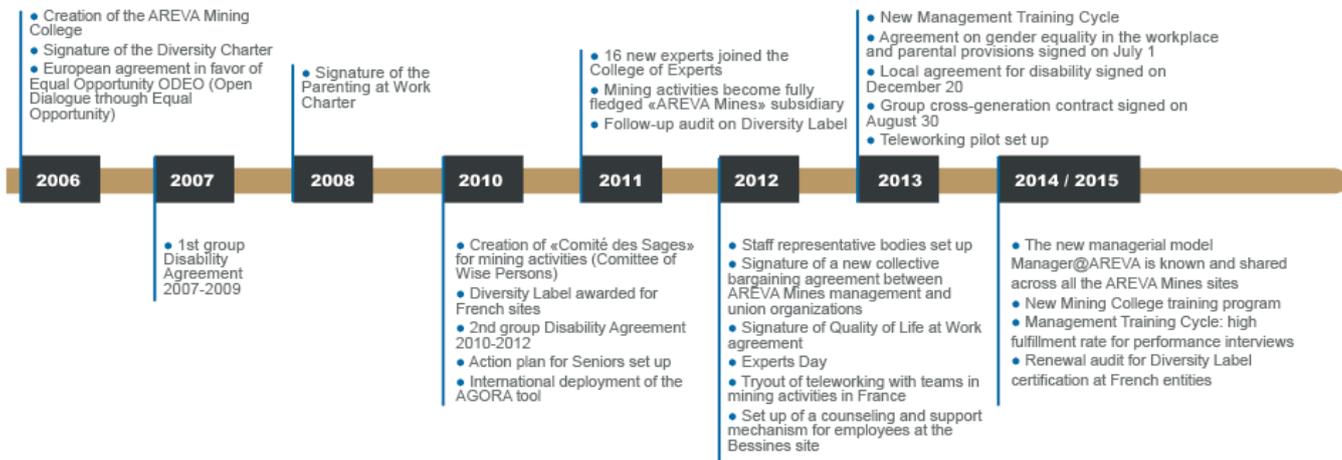


■ Age pyramid (world employees)

Our policy with regard to older employees aims to harness the value of our most experienced workers by ensuring knowledge is transferred. These employees benefit to manage their careers more effectively, in a context in which people are now working longer and planning is needed to fulfil future skills requirements.

With regard to young people, since 2005 the group has been committed to promoting work-study programs, offering annual apprenticeship and vocational training opportunities to young people and jobseekers in France. The aim for 2017 is to ensure that trainees on work-study programs continue to represent 5% of our employees, and to recruit 20% of former trainees annually.

QUALITY OF LIFE AT WORK



■ Programs for work-life balance

■ Work-life balance

The work-life balance holds an important place in the Quality of Life at Work agreement. Following the signature in 2008 of the parenting at work charter, several changes have been made: a pre- and post-maternity leave review has been introduced, and pay is continued during paternity leave.

■ Teleworking

On May 31, 2012, AREVA signed a "Quality of life at work" (QVT) agreement with labor and management. In July 2013, an amendment was made to include a clause on "teleworking", leading to the subsequent introduction of a pilot teleworking scheme at the AREVA Mines sites in France. This scheme was confirmed for 2014 following the success of the pilot. As of the end of 2016, 17% of Paris employees work remotely for one day a week (53% women/47% men).

■ Prevention of psycho-social risks during organizational changes

The "Quality of life at work" (QVT) agreement also launched the draft of common guidelines for all AREVA group entities to evaluate the human impact of organizational changes, as well as the creation, in France, of a joint national observatory for quality of life at work.

Any organizational changes are made with the participation of staff representative bodies (within varying notice periods enshrined in a collective bargaining agreement), and a presentation is given to the Site Committee. In 2016, for example, the working of labor relations within AREVA Mines France was such that management practiced a one-month notification period between the presentation of documents and the consultation. For individual, significant changes of position, a contract amendment is always offered to the employee.

Any project that requires a significant and major development in working conditions must be given special attention and examined in terms of its psychosocial impact, using an analysis table comprising around 20 elements (e.g. clarity of roles, change management, skills development, etc.).

In Canada and France, there is a program offering assistance to employees in difficulty, whether due to personal or professional problems, with a counseling and support service available for employees who so wish.

■ Employee benefits

The AREVA Mines collective agreement signed in 2012 governs the relationship between the company and its employees and demonstrates the joint willingness of the company and union organizations to maintain a good level of employee benefits at its French sites. The agreement deals with all provisions related to union law and management-labor dialog, careers and professional development, working hours (including leave and absences), health and contingency costs, retirement management, etc.

All subsidiaries can take advantage of benefits such as life insurance, medical care, disability coverage and a pension scheme. Only the parental leave and shareholder plans are unique to French sites.

■ Parental Leave

All employees have the right to take parental leave, with their job being kept open for them on their return.

A salary supplement is paid by AREVA Mines for maternity, paternity and adoption leave.

In the case of maternity and adoption leave, a pre- and post-leave review is carried out.

Employees are also entitled to take leave to look after a sick child. This applies to women and men.

There is a 100% employee retention rate following parental leave, across all three types of leave.

EQUAL OPPORTUNITIES

Promoting diversity is vital to be able to guarantee respect for the cultures and differences of all our employees. This is a multifaceted commitment that simultaneously covers the development of gender balance in the workplace, support for employees with disabilities, and diversity in terms of age and social, ethnic and cultural background. As part of this commitment, in 2014 AREVA's mining activities underwent an audit to renew its Diversity Label certification at its French entities.



■ **Gender equality in the workplace**



Agreement on gender equality and parenting

The agreement on gender equality and parenting dated July 1, 2013, aims to guarantee the following provisions within the French entities of AREVA's mining activities:

- Equivalent remuneration levels for men and women;
- Neutralization of the impact of maternity or adoption leave when assessing the performance of managers for their variable share (bonus) and for individual raises;
- Pre- and post-leave reviews for maternity/adoption/parental leave;
- Adjustments to working conditions and hours during pregnancy;
- Use of the leave entitlement ("bank") account (CET) to finance full-time parental leave;
- Reconsideration of working hours.

Equality of remuneration provision

An equality budget of 0.05% allows salary adjustment in the event of a discrepancy for women and older employees.



RATIO OF WOMEN/MEN BASIC SALARY by employee category in 2015 (France)	Technicians	Administrative staff	Supervisors	Engineers and Managers
	1	0.91	1.11	0.78

**source: comparative report completed in first half for 2015*

A presentation is given to union organizations as part of the obligatory annual negotiations.

In France, the total compensation is broken down into:

- Basic salary: basic salary, seniority pay, etc;
- Variable compensation related either to the job (premiums for constraints, on-call duty, etc.) or to individual performance (bonus/variable portion or premium);
- Benefits: health cover, death and invalidity insurance, same as for all companies in France;
- Incentive and profit-sharing schemes, which use certain criteria to remunerate collective performance.

Remuneration depends on the branch agreements and collective agreements. Every year, negotiations are held with the trade union organizations to determine the budget allocated to changes in remuneration.

■ **Provisions for people with disabilities**

On July 4, 2013, a "disability agreement" was signed for the period 2013-2016. The agreement covers the recruitment, integration and training of employees with disabilities, as well as support for the supported employment sector, awareness-raising actions and employee retention measures.



CHAPTER

COMMITMENTS

Mine closure

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Mining site remediation is an integral part of the mining cycle which comprises: exploration, development, mining and post-mining (monitoring and reconversion). Remediation is taken into account right from the exploration and development phases of the mining project. Although some remediation work is carried out while the mine is in operation, and studies are updated throughout the active period, most of the remediation work takes place when mining operations cease due to depletion of resources or for economic reasons. It is followed by a monitoring phase to ensure that the site does not have any impact on the environment, and in some cases by a site reconversion phase. In the mine closure process, it is also essential to take into account, beyond the technical parameters, the social and societal aspects, intended to mitigate the socio-economic effects.

FORMER MINING SITES



In the mine remediation phase, the main obligation incumbent on the operator is to limit the impact of the former mining site on the environment and population to a level that is as low as reasonably achievable, by:

- upstream, optimizing the mine operation options implemented in view of the consequences at the time of closure;
- controlling its impacts throughout the period of operation;
- drawing up the remediation project as far upstream as possible (studies, options and costs);
- making the mining works safe and performing site clean-up;
- dismantling the facilities;
- installing a radiation barrier where necessary (coverage of tailings storage areas);
- remodeling of waste rock piles and revegetation where necessary;
- implementing the environmental and radiological monitoring plan;
- establishing a dialogue with the stakeholders;
- considering options for reusing the site.

All these actions are implemented in accordance with existing regulations, in connection with the competent authorities and in consultation with stakeholders.

All our mining sites are covered by a specific remediation plan.



CLUFF LAKE

The Cluff Lake mining site, located in the North-West of the State of Saskatchewan in Canada, operated for 22 years (1980/2002) and produced 23,500 metric tons of uranium. It consisted of 4 open-pit mines, 2 underground mines, and an ore processing plant with storage of tailings. The site underwent remediation from 2004 to 2006: filling-in of open-pit mines, rendering secure of underground mining works, demolition of the plant, coverage of tailings and revegetation of the entire site. The site continues to be monitored. The environmental results of this monitoring are compliant with regulatory requirements meaning a transfer of responsibility for the site to the State of Saskatchewan can now be envisaged.

THE DIFFERENT REMEDIATION PHASES FROM A TECHNICAL STANDPOINT

There are several phases involved in the remediation of a mining site: a study phase, a works phase and a post-works monitoring phase.

■ Studies

The first study consists of defining the remediation strategy best suited to the site by taking account of its specific constraints: location, topography, climate, real estate and regulatory constraints, type of works, requirements from impact studies, environmental constraints, socio-economic environment, commitments made to different stakeholders (local authorities, residents) and by planning ahead to take into consideration new usages of the land for new agricultural, forestry or artisanal activities, etc.

This involves a detailed inventory of the site before (initial state) and after mining operations, its history, and additional technical studies (hydrogeological, geotechnical, radiological studies, etc.) making it possible to prepare a remediation plan and draw up a proposal to be submitted to the Authorities and forming a basis for dialogue with the stakeholders. Field tests may also be conducted during the operation phase to test out and refine assumptions in the remediation plan.

■ Mining works

Measures for making safe of mining works are determined depending on the nature of the mine and the facilities concerned.

For underground mines, the aim is to ensure the stability of the works and to seal off access to all pit bottom to ground level connecting structures: pits, cross-cuts, ascending and descending shafts. Stability calculations are done for works close to the surface and, depending on the their results, reinforcement works may be conducted. If safety cannot permanently be assured, safety perimeters may be set out on the surface, established physically in the form of enclosures, within which usage restrictions may apply; specific monitoring of upwelling of waters and potential points of emergence is planned for in advance, with particular attention devoted to an improvement in water quality. Hydrodynamic and hydrogeochemical modeling studies aid in the forward planning of additional measures such as water treatment for example.

Open-pit mines may be either filled in with available waste rock or transformed into water features after partial filling-in. The chosen option depends on the commitments made (for example within the framework of requests for mining permits), the configuration of the site, the availability of materials, a specific request on the part of a local authority, and costs, whilst of course treating the safety of local residents as a matter of top priority. Waste rock stockpiles are remodeled and revegetated depending on the local context.

In the case of ISR (in situ recovery) operations, particular attention is paid to the quality of the water table in which the mined deposit is located. In general, regulations require that water quality be restored to a level close to its original level. It is worth noting that the initial quality of these waters (waters that are naturally saline and radioactive due to the local geological context) is such as to prevent anything other than industrial use. There are several methods of restoring these water tables, such as the pumping out of waters, treating them in a surface facility and reinjecting them, or alternatively the injection of reagents enabling the treatment of waters in situ. The preferred method is natural attenuation: naturally-present or newly-formed minerals "trap" the pollutants by adsorption. Numerous studies are currently being carried out to gain a better understanding of this phenomenon and to see how it can be speeded up.

The majority of facilities on the surface are dismantled: such as the headframe, loading hoppers, etc. Certain buildings (former offices and workshops) may be retained to allow a new activity to be developed on the site.



Puy Teigneux (Limousin) – before/after remediation

■ Ore processing facilities

To extract the uranium, the ores are processed by static or dynamic leaching depending on their uranium content (0.03 to several percent) in accordance with the following process: crushing, grinding, leaching with acid or base chemicals, extraction, purification and precipitation. At the end of the process, uranium is put into solid form, known as "yellow cake" with a uranium concentration of around 750 kg/t. The solutions with uranium content pumped out as part of ISR mining operations are processed using the same extraction and purification processes.

When mining activity comes to an end, these facilities, specific to the processing of uranium ore cannot be reused, except for a similar purpose. They are dismantled and demolished. The materials resulting from dismantling and demolition are stored on site (see storage of processing residues).



WASTE ROCK

Waste rock is made up of earth, sand or rocks containing little or no uranium ore. It still needs to be extracted, however, to access the mineable ore itself. These substances present no radioactivity or very low levels of radioactivity. This waste rock are mostly used for the remediation of former mining sites, or stored in piles in the immediate vicinity of where the works were carried out.

Under the PNGMDR, AREVA has conducted sampling campaigns on several remediated sites to characterize the evolution of waste rock storage and its potential risk for the natural environment. A multi-year study is ongoing to develop predictive models of the migration of uranium from the rock piles to the environment.



MINING TAILINGS

Mining tailings are the part of the finely crushed ore which does not contain uranium, or only contains very little, and is produced following the separation of rock and uranium in the ore processing plant (production of uranium concentrate). They are in the form of clayey sand and contain still 70% of initial radioactivity. They are stored near processing plants. Their storage and inspection make up a considerable portion of remediation and monitoring operations.

Under the PNGMDR (Plan National de Gestion des Matières et Déchets Radioactifs - French National Plan for the Management of Radioactive Materials and Waste), AREVA is required to continue the study of the evolution over time of ore tailings stored in France. This action must ultimately be accompanied by the development of models to predict the long-term impact of the tailings, taking into account both normal and degraded scenarios.



WASTE ROCK AND TAILINGS

Philippe Crochon, Remediation and Environment Expert within the Mining BU, talks about the difference between waste rock and tailings. He also explains how the remediation of former mining sites requires a broad range of know-how in particular in geology, hydrogeology and radiometry.

■ Storage of processing residues

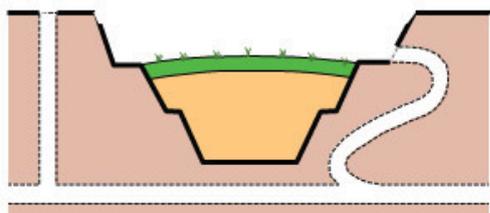
Processing residues are the solid part that is left over and unusable after the uranium has been put into solution when the ore is processed. Residues from dynamic leaching take the form of fine clay sands with the same mineralogical composition as the original ore, along with various other additional chemical precipitates, and contain approximately 5% of the initial uranium content and most descendants of the decay chains of uranium. Their level of radioactivity is around 70% of that of the original ore. Residues from static leaching are of a coarser grain size (10 to 100 mm) and have a uranium content of several tens to hundreds of ppm. These residues are thus naturally radioactive (total radioactivity of several hundred Bq/g) and have a long lifetime.

They are stored in former open-pit mines, in ponds enclosed by containment dikes or behind a dike blocking a thalweg (valley, former river bed). These storage areas may cover tens of hectares and hold millions of tonnes of residue. These pose a major challenge when it comes to remediation.

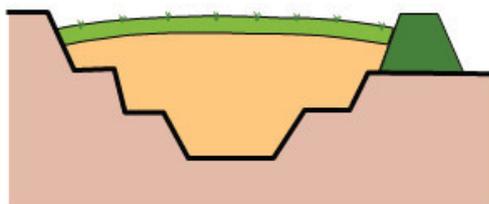
The remediation of residue storage areas: given their dimensions and the tonnages involved, the storage areas formed during the operating period of plants are kept in place at the end of operations. A cover, generally in solid form, is placed over the residues to form a geo-mechanical and radiological protective barrier, with a low level of permeability making it possible to limit risks of intrusion, erosion, dispersion, infiltration and radiological exposure of surrounding populations. This cover, of around 2 m thick, is, where possible, made of the materials available on site (waste rock from mining), creating a topography favorable to the proper management of meteoric waters and taking account of risks of future settling of the ground. When residues from static leaching are present on site, they can be put in the primary layer, which means it is possible to put all the different types of residue together in one place. Depending on the climatic context, a final covering layer of topsoil is added to allow the site to be revegetated. Tests are carried out before the start of works to check the effectiveness of the chosen materials, optimize the thickness and the geotechnical characteristics of the cover.

Storage areas can also be covered by a layer of water, which offers considerable radiological protection, in particular with regard to air quality. Certain sites are enclosed by dikes, while others may be classified as "large dams" ["grands barrages"] in the regulatory sense of the term. Stability studies are conducted and reprofiling or reinforcement works may be undertaken if necessary.

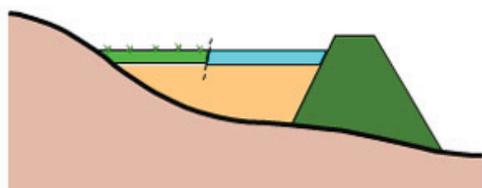
DIFFERENT TYPES OF REMEDIATION FOR RESIDUE STORAGE AREAS



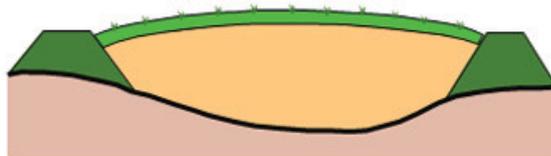
OPEN-PIT MINE (+ UNDERGROUND PIT WORKS)
COMPLETE OR PARTIAL FILLING



OPEN-PIT MINE + DIKE
COMPLETE FILLING



THALWEG BLOCKED BY DIKE
COMPLETE FILLING



TROUGH + BARRIER OR CONTAINMENT DIKE
COMPLETE FILLING

It is worth noting that one of the benefits of the ISR method of mining is the absence of residues to be managed.

Each residue storage area is monitored in a way which is adapted to the particular challenges of each of the sites concerned. These are ICPE-classified environmentally regulated storage facilities (ICPE = Installation Classée pour la Protection de l'Environnement) and therefore covered by the Environmental Code.

■ Monitoring of sites

The role of the mining operator is to limit the impact on populations and the environment to a level that is as low as possible and in regulatory compliance and to verify this through systematic and regular monitoring. This monitoring involves checking the ways in which uranium and its decay products, as well as various other substances related to mining activities, such as drained-off acid, may be transferred at sites and in the surrounding area. The monitoring network established concerns the checking of water (underground and surface water), the atmosphere (dose rate, radon, dust) on site and in its immediate environment, bio-indicators (sediments, aquatic plant life) and the food chain (samples of vegetables, fruits, milk, and fish taken close to sites). If necessary, waters originating from mining works and storage areas are treated to correct one or more of their radiological and chemical characteristics before being released into the surrounding environment. The treatments carried out are of a physical-chemical nature (addition of reagents, resins) or sometimes passive methods may be used (limestone drains, wetlands).



All these checks allow the actual dose added to the local background level of radiation (radiological impact) to be assessed on an annual basis for populations living close to sites. In France, in accordance with the French Public Health Code, this dose must be less than 1 mSv/year. It should be noted that the main factor leading to exposure is generally radon. It is difficult to determine the origin of radon, whether it is of natural or industrial origin, bearing in mind that sites are located in areas where concentrations can be naturally high (areas of granite or with the presence of naturally occurring veins of rock in situ). To adapt to the specificities of each site, measurement stations are installed which are not subject to any influence from mining activity, in an area with similar geological and topographical context to the site being monitored. The results obtained provide a benchmark for the "natural environment", and thus make it possible to reliably assess the potential impact of the site on its environment.



NIGER : PLANNING AND UNDERTAKING REMEDIATION OF THE MINING SITES THAT HAVE BEEN IN OPERATION FOR 40 YEARS

For around 40 years, SOMAIR and COMINAK have exploited the uranium deposits in the department of Arlit, using open-pit mining techniques in the case of SOMAIR and underground mining techniques for COMINAK, and practically the same ore processing techniques to produce the Uranate concentrates for the market.

In accordance with the existing regulations, the mining companies have each prepared a master plan for the remediation of their operated sites and a surveillance network to monitor the effectiveness of the measures.

The objectives of a remediation plan are as follows:

- Ensure long-term stability in terms of public health and safety
- Reduce residual impacts to levels that are as low as reasonably possible (ALARA)
- Limit the land surface subject to usage restrictions
- Successfully integrate the site into the landscape of its environment
- Support the reconversion of the site
- Inform of and share remediation options with stakeholders
- Comply with the regulations in force

These master plans are regularly reviewed as mining operations evolve.

In 2016, an update of the remediation plans was launched taking into account the development plans for the mines over the coming years. The aim is to draw up the various remediation options together with their associated costs in connection with the development plants. To achieve this, "site remediation project" teams have been set up by both companies.

The project objective is to propose and secure stakeholder approval for a technically proven and financially secure solution for the remediation of each site. The technical solutions adopted must meet the requirements of the Nigerien law and international standards, including AREVA standards. The study will also include social issues related to mine closure projects.

A technical committee has been set up to assess the technical studies prepared for these remediation projects. Members include representatives of the different shareholders and the authorities in charge of these areas of expertise.

ENVIRONMENTAL MONITORING IN FRANCE

Monitoring the environment involves checking all the ways in which uranium and its decay products may be transferred at former mining sites and in the surrounding area. This mainly means monitoring water, the atmosphere, the food chain and plants. This monitoring is carried out within the framework of prefectural orders, specific to each of the sites and covered by reports submitted to the Government authorities on a regular basis.

Each year, over 30,000 analyses are performed on the air, water, sediments and the food chain.

■ Air monitoring

This monitoring chiefly consists in measuring exposure to ambient radioactivity, namely ionizing radiation and the air inhaled. Measurements are taken continuously, both at the site and in the nearby area, using specific dosimeters.

■ Water monitoring

Hydrological and hydrogeological studies are performed at sites, allowing better understanding of the environment type and the composition of local water. On certain sites, where necessary, the water undergoes treatment before being released into the natural environment to ensure it meets the environmental standards in force. Our experts design the water treatment processes which are then applied and optimized. One process they have implemented, for example, is so-called "passive" treatment using limestone drains, by adsorption into beds of sludge or turf, and they have also optimized the physical-chemical treatment method, which is currently the method most frequently used.

■ Monitoring of plants and the food chain

In addition, sampling and analysis are regularly carried out on plants and other components of the food chain, including aquatic and land fauna, aquatic flora, the fruit and vegetables produced in nearby gardens, and the milk supplied by animals that have grazed in meadows near sites or drunk from receiving water courses.

MAJOR CHALLENGES OF TODAY AND TOMORROW: MANAGEMENT OF POST-MINING

Following the mining of the uranium ore, mining sites are remediated to limit the residual impact of the past activities both for safety reasons and to preserve the environment.

The remediation and monitoring of these sites falls within a demanding and evolving regulatory framework. We also see this as an opportunity to draw on and promote an area of expertise mastered by our teams covering the major steps of the remediation and post-mining cycle.

This phase must be prepared as far upstream as possible, from the exploration phase. It requires the mobilization of specific scientific expertise as well as technical, economic and social know-how.



We would like to offer you the opportunity to gain insights into the major challenges related to these activities, and to come with us around the world to better understand the main environments in which we work. The principal challenges we encounter in our scope of work relate to:

- Management of waste rock and tailings
- Water management
- Stability of the mine and dikes
- Social acceptability
- Sustainable monitoring and long-term prospects
- Radiological impact
- Economic optimum

■ Preparing for remediation from the exploration phase

Example in Mongolia

Challenges	Identity card of the mining project
<ul style="list-style-type: none"> ■ Environmental and societal acceptability of uranium deposit exploration and mining projects ■ Optimization of ISR (In Situ Recovery) technology 	<ul style="list-style-type: none"> ■ At end 2016: 14 exploration licenses (Dornogobi Sukhbaatar regions) and 3 mining licenses (Umnut, Dulaan Uul and Zoovch Ovoo) ■ ISR (In Situ Recovery) test conducted in 2011/2012 at the Dulaan Uul site ■ Launch of the pre-feasibility study in February 2014 for operation of the Zoovch Ovo deposit, including pilot test

Remediation Plan – Starting Point



- Periodic monitoring through a network of piezometers
- Remediation of drilling platforms
- R&D Program: demonstration of natural mitigation in aquifers
- Hydrogeological studies
- Plantation of Saxaouls (protected local trees) in remediated areas

■ **Planning for the remediation of a mining site in operation for 15 years**

Example in Kazakhstan

Challenges	Identity card of Katco site
<ul style="list-style-type: none"> ■ Start remediation while mining operations still in progress ■ Management of waste generated by mining operations ■ Model the overall behavior of aquifers under remediation 	<ul style="list-style-type: none"> ■ Company created in 1996 ■ Mining of uranium deposits by In Situ Recovery (ISR) using acid ■ Uranium fixing, purification and concentration plants ■ Mine in operation with production of 4,000 tU/year

Mine in operation and remediation work on site



- Closure of production wells at the end of their lifecycle
- Feasibility study to restore the site to its primary use (forestry)
- R&D program to confirm and speed up the remediation of the aquifers tested on-site, mainly through natural mitigation

■ **Planning the remediation of a mining site in operation for more than 30 years**

Example in Niger

Challenges	Identity card for the SOMAÏR site in Niger
<ul style="list-style-type: none"> ■ Remediate a site with a history of several decades in a desert area ■ Social and societal impact of the closure, in particular for the town of Arlit 	<ul style="list-style-type: none"> ■ Site mined since 1971 ■ Mining of uranium deposit in Open-Pit Mines then dynamic and static processing plant ■ Aggregate production of some 60,000 tonnes with annual target of 2,000 tU

Mine in operation and in-depth remediation plan



- Site subject to environmental monitoring
- Remediation plan under development with definition of remediation options for each sector of the site
- Modeling of the raising of groundwater levels at end of the mining lifecycle
- Test area for the implementation of the covering over tailings

■ Preparing the transfer of a remediated site to a supervisory authority

Example in the USA

Challenges	Identity card of the American mines
<ul style="list-style-type: none"> ■ Transfer of a remediated site to the U.S. Department of Energy (U.S DOE) 	<ul style="list-style-type: none"> ■ 2 main sites: Lucky Mc & Shirley Basin, mined from 1953 to 1993 ■ Open-pit mine, underground mining works with processing plant and In Situ Recovery – by alkaline leaching (first industrial application in the USA) ■ More than 27,000 tonnes produced and 20 million tonnes of tailings

Monitoring



- Full remediation and transfer of site to the U.S. Department of Energy (DOE)
- Supervisory authority: US Nuclear Regulatory Commission (NRC), supervising monitoring of the site through the issuing of a license
- Monitoring of the storage of tailings: Lucky Mc (5 boreholes), Shirley Basin (14 boreholes), all analyzed 4 times/year; parameters analyzed: level of water, pH, temperature, heavy metals, uranium, radium and thorium
- Monitoring of two mining sites in their entirety: 26 boreholes, 5 surface water areas, 2 times/year

■ Conducting monitoring and oversight of remediated sites

Example in Gabon

Challenges	Identity card of the COMUF remediated mine
<ul style="list-style-type: none"> ■ Reconstruction of 201 dwellings for the local population following inspections and the detection of a radiologically contaminated dwelling in the former mining town, conducted in cooperation with the Gabonese State 	<ul style="list-style-type: none"> ■ 5 deposits in the Haut-Ogoué in Mounana mined from 1958 to 1999 ■ Open-pit mine and underground mining works with a processing plant ■ 7,600,000 tonnes of ore extracted at 3.73 % ■ Production of Yellow Cake: 26,600 tonnes

Monitoring



- Remediation of the site from 1999 to 2004, validated by the IAEA upon request by the Gabonese authorities: official report - August 2006
- Parameters monitored:
 - ◆ Water: 17 sampling points
 - ◆ Air: 13 dose rate measurement stations and 6 dust measurement points
 - ◆ Food chain: 8 sampling points for kassava and fish
 - ◆ Stability of the dike (topographical measurements)
- Independent environmental inspections performed by the CNPPRI (National Center for Ionizing Radiation Protection and Prevention)

■ Providing a second life for a remiated site

Example in France

Challenges	Identity card of the remiated mine of Bosc-Soumont
<ul style="list-style-type: none"> ■ To achieve the reconversion of the former mining site in an economic framework such that new projects can be located at the site 	<ul style="list-style-type: none"> ■ Site in Hérault mined from 1959 to 1997 and remediation work completed between 2001 and 2005 ■ Open-pit mine and underground mining works, processing plant ■ 4 million tonnes of tailings ■ Production of Yellow Cake: 14,630 tonnes ■ Site reconverted into a zone for artisanal activities and installation of a solar power plant

Site reconversion and community involvement



- December 2005: urban part of the site (around 115 hectares) sold by AREVA to the Communauté des Communes du Lodévois [association of Lodevois municipalities]. This zone for industrial, artisanal and office activities, with a total surface area of 120 ha, is now home to three companies, employing a total of 125 staff
- Launch of the project to install 35,354 solar panels over 16 hectares:
 - ◆ 13,397,000 kw = annual electrical consumption of around 7,400 people living near the solar power plant
- Inauguration of the photovoltaic facility in November 2013



Solar power plant of Lodève (Le Bosc)



Le Bosc Zone for artisanal activities situated on the site of the former plant



CHAPTER

COMMITMENTS

R&D and Innovation

Extract from Responsible Development
report 2016 on Areva's Mining Activities

The complete report is downloadable on :
www.csr-mines.aveva.com

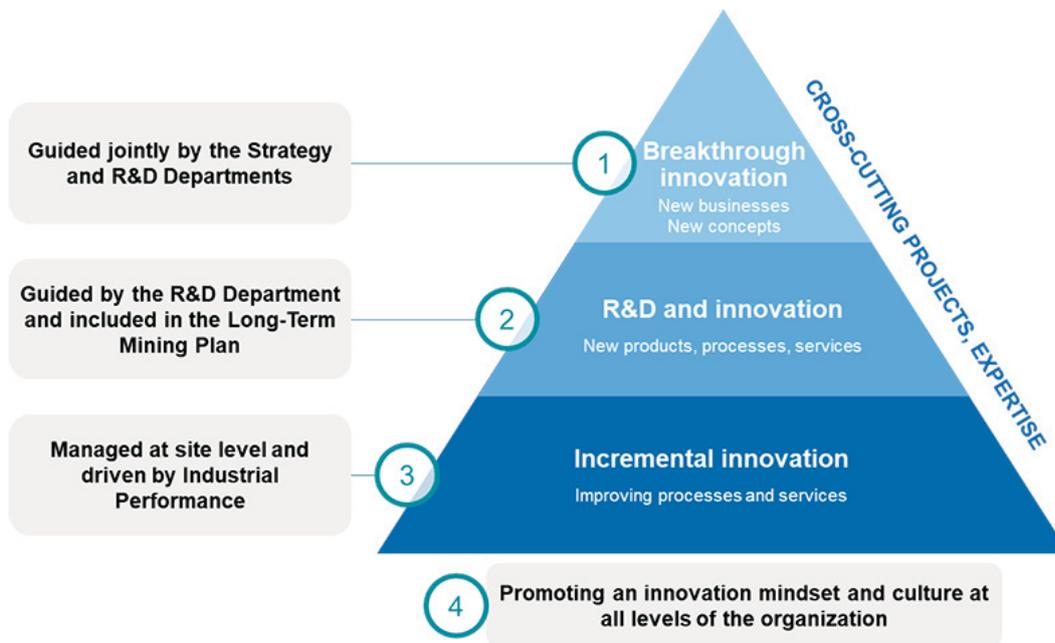


R&D is a strategic element for AREVA Mines, enabling us to discover new deposits, improve the profitability of our operations and better control their environmental impact. Within AREVA Mines, there is a specific program to promote innovation in order to serve performance: Innov'Action. Under this program, a portfolio of around 80 individual studies is currently being developed, covering both short-term topics and long-term topics to prepare for the mines of the future.

INNOV'ACTION PROGRAM WITHIN AREVA MINES

Innov'Action aims to:

- strengthen the culture of innovation,
- encourage teams to propose innovative ideas, and help them make these ideas a success,
- accelerate the rate at which new solutions are developed and brought to market,
- bring technological breakthroughs and new areas of activity to maturity for AREVA.



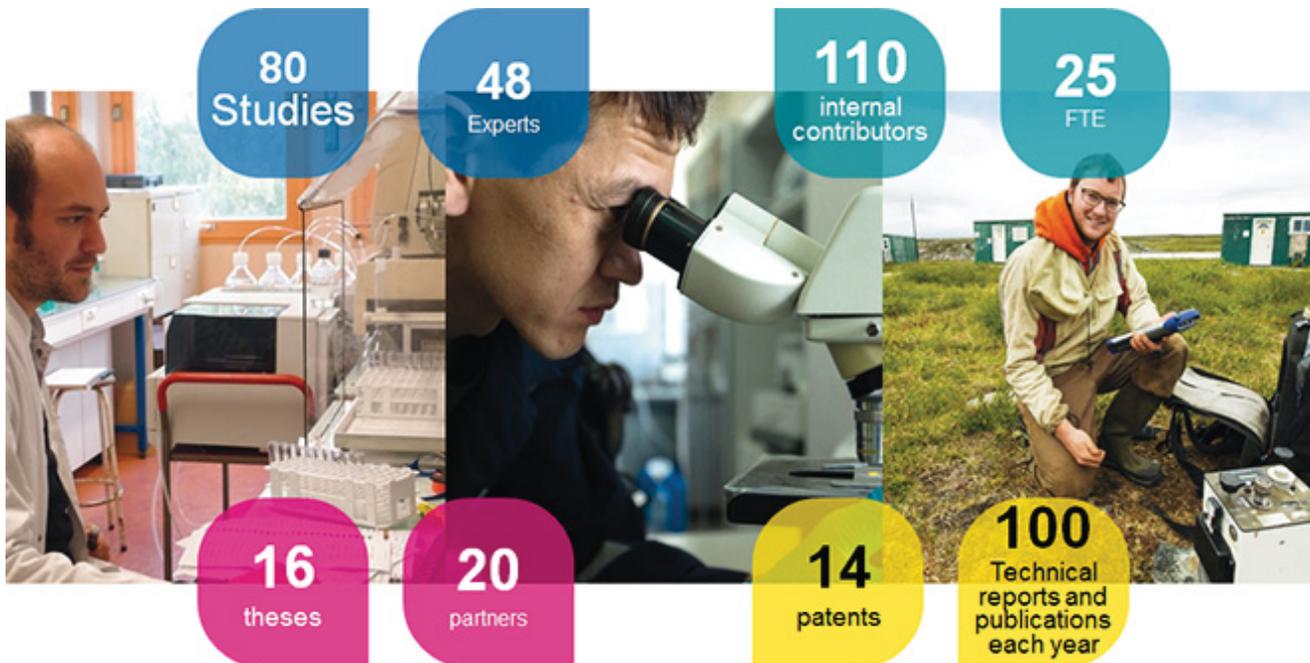
These aims are based on various categories of innovation:

Incremental innovation, which is concerned with improving how our operations work, and comes primarily from sites. It is driven by Industrial Performance.

These incremental ideas regularly give rise to **R&D projects** for the development of new products, services or processes, such as those for the use of membrane technologies to separate or extract uranium, or the modeling of drilling rigs to better estimate grades.

Finally, there is **breakthrough innovation**, which is guided jointly by the Strategy and R&D Departments. The aim is to plan ahead to anticipate new pillars in our production strategy, such as our capacity in the future to extract uranium from phosphates, or to make small high-grade deposits in Canada profitable thanks to the SABRE technique.

At AREVA Mines, an innovation steering committee was created in 2015 to enable decisions to be taken on the pursuit of certain innovative ideas, in particular those with high added value. This committee is chaired by a member of the AREVA Mines Management Committee, the Operations Department, the Geosciences Department or Senior Management depending on the topics addressed.



ENVIRONMENTAL INNOVATION: IDENTIFYING, EVALUATING AND LIMITING LONG-TERM RISKS

R&D serving the environment

Our mining activities comply with the regulations in force and follow the best practices of the sector as part of a dynamic of continuous improvement. It is our responsibility to control and analyze risks by implementing innovative, scientifically demonstrated solutions in line with the expectations of stakeholders (authorities, associations/NGOs, employees, governments, the scientific community, etc.).

More specifically, the environmental issues on which research efforts are focused include:

- issues relating to water management and treatment,
- understanding, predicting and modeling contaminant migration over the long term,
- anticipating regulatory changes and the requirements of the authorities,
- developing new sampling and analysis tools to effectively manage environmental impacts.



INFORMATION

Since 2014, actions relating to the circulars of July 22, 2009, and August 8, 2013 (the completion of environmental assessments and inventories of mining waste rock reused outside mining sites), and to the French National Plan for the Management of Radioactive Materials and Radioactive Waste (PNGMDR) (regarding the stability of dikes, water treatment, the effectiveness of coverings with respect to radon, waste rock stockpile surveys and the study of sedimentary accumulations downstream of sites) have been ongoing, resulting in a number of reports being submitted to the public authorities.

Our expertise, applied on site through close collaboration with operating teams, has been developed thanks to our international teams of researchers and our college of experts, and in partnership with external bodies from academia and the professional world (the universities of Poitiers, Paris VI, Paris VII, Granada, Brussels, Manchester and Washington, and the Ecole Polytechnique Fédérale de Lausanne, as well as the CEA, CREGU and NAGRA).

■ Envir@Mines program

Our teams of researchers and experts are currently working in the following fields under our "Envir@Mines" research and development program:

- the long-term future of processing waste in France, Niger and Gabon,
- the environmental footprint of waste rock in France under the French National Plan for the Management of Radioactive Materials and Radioactive Waste (PNGMDR),
- water treatment, notably in preparation for regulatory changes in France,
- understanding the long-term rehabilitation of aquifers used for in situ recovery in Kazakhstan and Mongolia,
- the development of new measurement technologies.



"ENVIR@MINES" R&D IN FIGURES

- 13 collaborative partners
- 7 theses defended since the creation of the program in 2010
- 110 scientific communications since 2010
- 8 public reports
- 2 patent applications filed

OPERATIONAL INNOVATION



Through the development of more economical technologies, R&D contributes to improving returns on operations and optimizing mining projects in the portfolio. As an example, work on the 3D modeling of ISR, which has already proven beneficial at KATCO, is being used to help design prefeasibility studies in Mongolia. In Niger, the aim is to find new processes to improve the profitability of Imouraren.

■ OPERATIONAL PERFORMANCE

The integration of the Operational Excellence principles, such as compliance with standards, continuous improvement, teamwork, presence on the ground and benchmarking, also makes it possible for AREVA Mines to maintain some of the lowest production costs and withstand the current difficult market conditions.



In 2016, the AREVA Excellence System was deployed across AREVA Mines. This system, led by the Management Committee, establishes and maintains a dynamic of continuous improvement.

The deployment of the Excellence System is supported by training modules that involve learning through activities and coaching, with the aim of promoting employee development by improving skills and independence.



The System is being run on a hierarchical basis structured around managers and the Operational Performance Expert network: each manager is trained and coached by their line manager, before training and coaching their own teams in turn, with the support of the Experts.



At the production sites and head office, our Operational Performance Experts are tasked with:

- leading and coordinating the performance plans (action portfolios), which should ensure that the targets set in the Long-Term Mining Plans (the long-term site production plans) are met,
- participating in the process of identifying, assessing and managing risks or opportunities to achieve the production targets,
- helping sites steer their operational performance on a daily basis, and identifying new opportunities to make savings and avoid wastage,
- managing the upskilling of AREVA Mines employees in the field of Operational Excellence through training and coaching.

We believe that in order to succeed it is essential to ensure that all our teams are mobilized, and that we are thorough in ensuring our everyday work is carried out in strict compliance with standards, regulations and procedures.

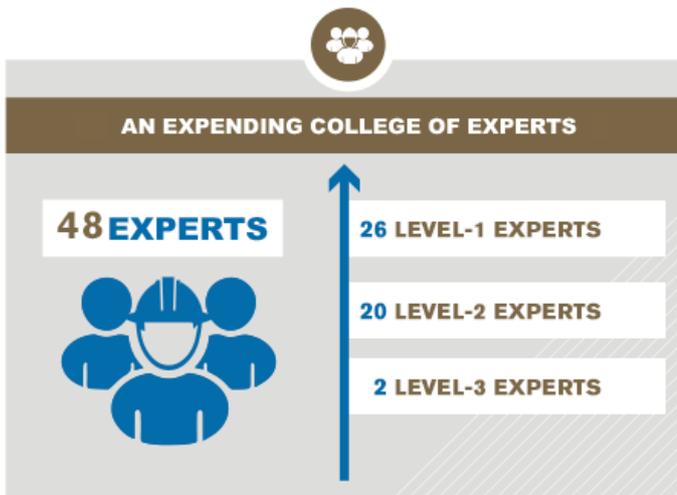
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FIND OUT MORE

In 2016, 200 AREVA Mines employees received training in the first two Operational Excellence modules in Kazakhstan, Niger, Canada and France. Following this training, more than 30 problem-solving topics have been launched using the A3 method.

OUR TEAMS AT THE HEART OF INNOVATION

College of Experts



AREVA Mines intends to mobilize all its expertise to support technological excellence, relying on its experts to achieve this, with a campaign to renew positions every two years. Closely integrated into the operating teams, these experts continually develop their expertise through the conduct of their missions.

Although the majority of experts are still based in France (69%), this share is lower than during the previous campaign. Seven other countries are now represented: Canada, the United States, Niger, Kazakhstan, Gabon, Australia and, since 2015, Mongolia. The experts in our mining activities are specialized in disciplines including geology, mining, processing, radiation protection/environment and medicine.

The results of the 2015 campaign show that **representation has improved, across our sites and at an international level**. This is in line with the geographic diversity goal set by AREVA Mines to better meet the need for specific local knowledge of sites.

In addition, in order to promote operational know-how more actively, a complementary system of "**Specialists**" has been created within the Group. Eight of these specialists have been identified within our activities, some of whom will be able to join the College of Experts in the future.

A new campaign to renew and appoint our experts is planned for 2017.



CHAPTER PERFORMANCE

Extract from Responsible Development
report 2016 on Areva's Mining Activities

The complete report is downloadable on :
www.csr-mines.aveva.com



*Our approach aims to improve our practices based on **six major responsibility commitments**. For us, "Being a responsible mining company" means identifying key challenges and opportunities while prioritizing our actions.*

OBJECTIVES OF RESPONSABILITY

Risk management and prevention form one of the pillars of our day to day management, in particular in the fields of occupational safety and security, radiation protection and the environment. We are continuing the work already begun.

The context of the uranium market has led our teams to focus efforts in the field of industrial performance, to continue to **satisfy our customers whilst meeting optimum production costs** and maintaining our mining activities in the countries in which we have a presence, in compliance with our corporate responsibility commitments.

Around the world, our practices must be strengthened in the fields of **social engagement and post-mining management**. This calls for the identification and implementation of a mid-to-long-term strategy, which has now been devised through the CSR policy drawn up with all of our sites in order to be able to integrate the specific features of each country in which the Mining BU operates.

AREVA's mining activities respect fundamental human rights and put this respect into practice by complying with the regulations in force, implementing the AREVA Values Charter, and managing risks. In 2015 we developed operational tools specific to Human Rights, in 2016 a specific plan for its deployment will be implemented.

Finally, the acceptability of our mining activities is essential, requiring constant dialogue and consultation with our local stakeholders over these key areas of responsibility. We are pursuing these relationships and keeping our commitments in terms of transparency and partnerships.

OBJECTIVES INDEX

Occupational health and Radiation protection

- The AREVA Mines operational roadmap includes the objectives of the AREVA 2014-2016 Health and Safety policy with a particular focus on on the optimization actions.

In 2016:

- The operational roadmap of the Mining BU continues to be integrated, both in France and internationally in the countries where we operate.
- No employee has been exposed to a dose exceeding 20 mSv.
- For the scope of the Mining BU's activities, the average does over the 12-month rolling period (July 2015 to June 2016) for AREVA employees was 2.53 mSv and for employees of outside companies it was 1.47 mSv.

Occupational safety

- Pursue the implementation of the AREVA Mines roadmap, based on four pillars: leadership and culture, organization and skills, standards and procedures, and risk analysis.
- Zero fatal accidents.
- Frequency rate (IR1) of less than 0.7.

Examples of practical implementation in 2016:

- The incidence ratio was 0.74, with 12 lost-time accidents and 1 fatal accident.
- All of the mines in operation are OHSAS18001 certified.
- Safety culture training conducted on the COMINAK site.

Environment & Biodiversity

- Integrate the goals of the AREVA 2014-2016 Environment policy and improvement plans relating to the results of the Health, Safety and Environment risk mapping into the operational roadmap.

Examples of practical implementation in 2016:

- Under group provisions, the 2014-2016 environmental policy continues to be rolled out and applied in France and abroad.
- Exercises in preparation for emergency situations are regularly carried out at our sites.
- All of the mines in operation are ISO14001 certified.

Social involvement and relations with our stakeholders

Our goal is to foster our acceptability everywhere, our action areas being:

- 1. Improving stakeholder knowledge
- 2. Development of consultation and dialogue
- 3. Governance of societal issues throughout Mining BU scope

Examples of practical implementation in 2016:

- Improving stakeholder knowledge: Deployment of stakeholder mapping in Canada, Namibia and Niger.
- A partnership agreement was established with the Athabasca Communities on June 10, 2016, structured around 5 pillars for cooperation: local workforce development, economic development, community engagement, the environment and community investments.
- Continued operation of the Mining Social Committees (CSM), which have gained in maturity in the handling of social issues in addition to validating the societal projects of the countries. 9 committees have been implemented.

Commitment to employees



- Deploy the Management Training Cycle.
- Diversity commitments: 26% women on the Management Committee, promote mobility for the development of skills between the countries in which we have a presence.
- Supporting maintenance and development of technical skills in our core businesses of Mining, Ore Processing and Geology.
- The Mining College training plan for 2016 provided for training of over 170 trainees, with 6 sessions deployed on-site and 17 sessions in France.

Examples of practical implementation in 2016:

- Management Training Cycle: the fulfilment rate for performance interviews in 2016-2017 is 99.5% for managerial categories.
- Through the results of the Group's major risks analysis, the management of critical skills has been identified as one of these risks. New AREVA's unique skill set and high level of expertise must be preserved and fostered on a continuous basis, because it underpins our capacity to offer the market a differentiated and highly specialized offer. Sponsored by the New AREVA Human Resources Department, the critical skills management project was launched in May 2016. It has enabled the identification of critical competencies and competencies requiring vigilance. Short and medium term action plans have been put in place.
- 18 training course were delivered in 2016 (13 in France and five at subsidiaries) to 180 trainees.

Innovation

- Operational performance: develop our results-oriented culture, improve our productivity and generate gains.
 - Explain the prerequisites and fundamentals of Operational Excellence
 - Definitively resolve operational problems encountered using the A3 method and optimize processes on the basis of a standard approach.
- Innov'Action: identify feasibility for two patents in 2015 and in 2016.

Examples of practical implementation in 2016:

- Over 200 people trained in the Principles of Operational Excellence.
- More than 30 "A3" topics launched in 2016, a majority of which were resolved before 31/12/2016 with significant results.
- Innov'Action: four patents filed, goal exceeded.
- Creation of the AREVA Mines innovation steering committee.

Ethics & Transparency

- Define the roadmap relating to the improvement of our operational practices in terms of Human Rights.

Examples of practical implementation in 2016:

- Human rights module integrated into the Mining BU's CSR training program.
- This report has been prepared on the basis of the G4 core level version of the GRI guidelines.

KEY INDICATORS

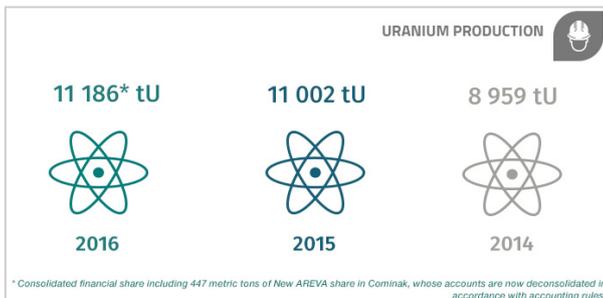
The quantitative data presented is consolidated for all AREVA Mining operations unless otherwise stated.

The data provided covers the period up to December 31, 2016. Indicators pertaining to radiation protection and occupational safety cover "our workers", which in this case refers to both employees and sub-contractors.

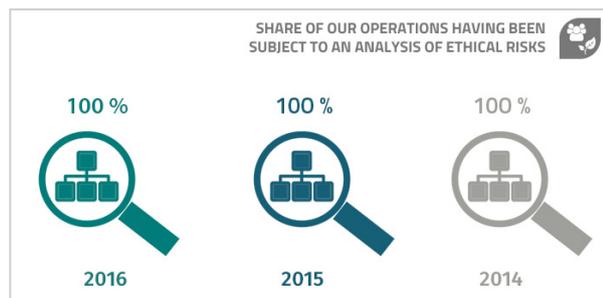
This list is likely to change over the next CSR Reports if the indicators can cover the entire scope and/or if we have been able to deploy new reporting protocols to justify the presentation of other indicators.



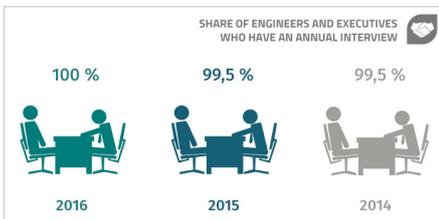
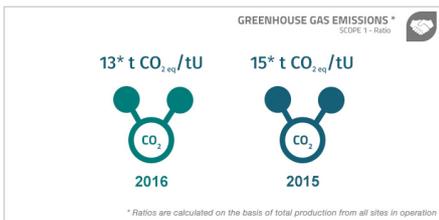
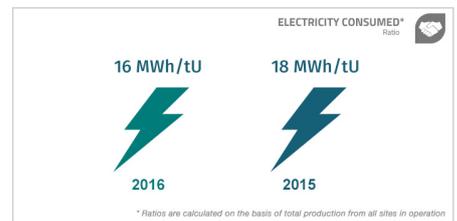
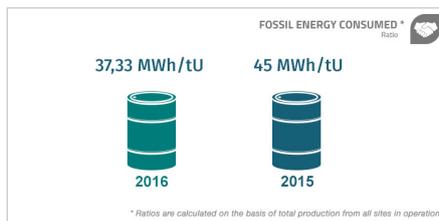
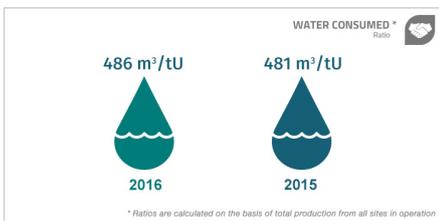
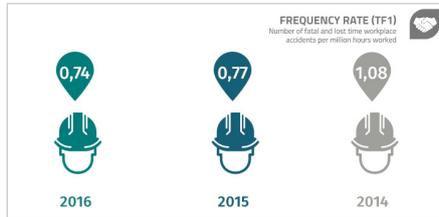
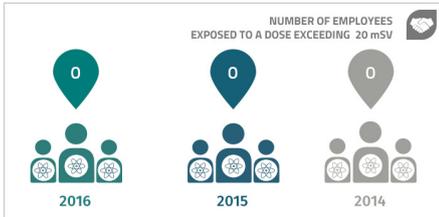
PROFILE



CSR APPROACH



COMMITMENTS





■ “Paperless”

This annual report, the Corporate Social Responsibility Report prepared by the Corporate Social Responsibility Department of AREVA Mines, is the result of the mobilization of all our teams at our headquarters and our sites.

We have created a website completely devoted to this annual report, and have discontinued the production of an entire hardcopy version. Our readers can build their own PDF version of the report, targeting subjects of interest to them, in the “Download” section.

Although this report cannot claim to give exhaustive responses to all our stakeholders, we have endeavored to present the most relevant performance data for the period covered.

In order to better meet their expectations, we would like the various groups of stakeholders to become progressively more involved in the preparation of this report. To this end, we offer a “Participate” feature, so that people interested in our activities can point out their principal subjects of interest to us and contribute to a questions forum in the “Contactez us” section, which we will answer through our CSR Reports.

■ Reporting period

The 2016 CSR Report is the seventh edition of this annual exercise. The previous reports are available for download in the “Media Center” and at the foot of each page of the website.

The availability schedule for the CSR report serves to:

- provide the report to our stakeholders earlier in the year, to allow them to better assess the performance of year n-1;
- align the publication of the CSR Report with that of financial documents, generally published at the end of the first quarter of each year (March / April), to anticipate the requirements of the Grenelle II Law, to which AREVA Mines SA may be subject, and to align the audit period for the AREVA Mines CSR Report with that of the AREVA Statutory Auditors exercise on non-financial information;
- work on the G4 version of the GRI guidelines, integrating an update of the materiality exercise upstream from the CSR Report process, as well as
- an update of our reporting protocols.

2016 CSR Report is a report with the following characteristics:

- it covers our responsible commitments performance for the year 2016, which means the reporting ran up to December 31, 2016;
- it has been prepared in accordance with the orientations of the materiality exercise underway within our activities, which is why we have identified six families of responsible commitments;
- it is based on the essentials or core criteria of the G4 version of the GRI;
- we provide our stakeholders with the “Participate” feature to allow them to take part in process of preparing future CSR Reports.

The 2016 CSR Report will be the outcome of a dynamic reporting approach, with:

- a presentation of the consolidated results of our materiality exercise, integrating the feedback of our stakeholders through the “Participate” feature;
- a more fine-tuned analysis of performance with regards to our commitments;
- improved coverage of international data (for example the “commitment to employees” chapter has given better worldwide coverage);
- in parallel, the ramp-up of the sustainable development reports of our sites.



■ Scope of information

In application of AREVA's strategy and policies and the orientations provided by our 2016 materiality matrix, this report aims to **present the performance linked to the main CSR challenges** of the mining activities under six broad families of commitments: health, occupational safety and radiation protection, environment and biodiversity, social commitment, commitment to employees, mining closure, R&D and innovation.

The CSR Policy section sets out our underpinning commitments.

The data given cover, as did the previous CSR Report, the assets for which AREVA acts as operator in uranium mining activities: **exploration, project development, production and remediation**. The consolidated data target activities in **France, Canada, Niger, Kazakhstan, Mongolia, Gabon and Namibia**. When the scope only covers one given country, this is mentioned (in particular in the commitment to employees chapter).

In the case of certain quantified social data, the only available information is for year n-2.

There has been no reformulation of information in this CSR Report in relation to previous reports.

There are no issues identified outside the organization as relevant.

■ GRI and third party verification

Within the 2016 scope of mining activities, our teams have applied the guidelines set out in version G4 of the Global Reporting Initiative (GRI), as well as the Mining and Metals Sector Supplement (SSMM).

We therefore meet the commitments made as part of our involvement in the International Council on Mining and Metals (ICMM). This process is being carried out in accordance with the Grenelle 2 environment law, which lays down regulations with regard to the topics to be dealt with in non-financial reporting by companies.

This year, once again, we have conducted an independent verification of the content of this report in compliance with the ICMM Audit procedure and the AA1000 ethical auditing principles. The acknowledgement received from the auditing firm is available for [download](#).

Each year the AREVA group conducts an audit on a sample of extra-financial indicators as part of the independent verification of the Reference Document. As such, a number of our mining sites may be selected for the review of these indicators. Our Bessines site in France and our Katco site in Kazakhstan will be audited in 2017.

■ Reporting protocol

For environmental, social, economic and ethical topics, **internal technical protocols** have been available for several years. They enable us to answer to several indicators proposed in the GRI guidelines.

French regulatory constraints do not allow us to report on categories of indicators relating to diversity and covered by other national regulations.

Finally, as far as possible, for all topics on which we do not have or are updating technical protocols, we strive to **take the GRI approach into account** when relevant and applicable to the scope of our activities.



CHAPTER

CASE STUDIES

Extract from Responsible Development
report 2016 on Areva's Mining Activities

The complete report is downloadable on :
www.csr-mines.areva.com

RADIATION PROTECTION

Preventive actions to limit the exposure time and level of workers



The goal: major preventive maintenance actions planned and carried out on industrial sites have made it possible to make operations run more smoothly whilst considerably reducing the number of repairing intervention that have to be carried out, with a beneficial impact on the radiation protection of those performing interventions.

Major three-yearly maintenance program carried out in 2016 on activities 400 and 500 at the plant:

Maintenance of the calciner

- Impact: decrease in leaks from the powder network
- Improvements obtained: reduction in the frequency and length of interventions for repair and maintenance.

Maintenance of the crystallizer

- Impacts: decrease in clogging incidents and a decrease in the quantities of materials deposited on the walls of the crystallizer
- Improvements obtained: reduced intervention times in the event of production incidents and lower ambient dose rate values around the crystallizer.

Renovation of the calciner building on levels 9 m and 11 m to improve the surface of the floors

- Impacts: elimination of the accumulation of dust whilst facilitating cleaning and decontamination.
- Improvements obtained: decrease in the time that operators have to be present in the building and in ambient dust in the building.

These continuous improvement actions highlight the value of the principle of optimization.

Quick change pumps, an innovation to serve radiation protection and occupational



Canada

The goal: introducing standardized pumps in the ore pulp reception and storage areas has made it possible to considerably shorten maintenance times, for the benefit of the health and safety of workers.

Reduced maintenance times

Four hours: that's the length of time that maintenance operators used to spend in the ore pulp reception and storage areas of the McClean Lake mill, when they carried out inspection and repair work on the different pumps. This is a long period of time, because the uranium content of the ore processed at the mill exposes them to around 0.3 mSv* during that period. To reduce the impact of these operations on the operators, the maintenance teams have displayed their innovation by establishing a single model of pump. The innovation has proven to be a genuine industrial success, with operation times falling to around 10 minutes per operation, representing a 96% reduction in exposure of the workers.

Ergonomics completely rethought

The main advantage of these new pumps: their ergonomics. The quick removal system eliminates manual handling operations and enables the use of an electrical device to move the pumps into the maintenance workshop. Injuries and back pain are reduced considerably. Today, operators can replace standardized and interchangeable equipment quickly and safely.

And if proof were needed that health and safety is everyone's business at AREVA, this innovation was one of the winners in the Risk Hunter category at the 2015 AREVA AWARDS.

* The Sievert (Sv) is a unit used in radiation protection which is expressed in "equivalent dose" and takes into account the characteristics both of the radiation and of the irradiated organism. On average, the annual exposure of a member of the public in France is 4.5 mSv.

OCCUPATIONAL SAFETY

■ Introduction and deployment of the DRILLING STANDARD

The goal: ensure that common safety rules are applied for drilling activities in order to avoid accidents

12 safety standards are applicable on all sites belonging to AREVA or operated under the direct responsibility of AREVA (the first 9 since July 2013, the other 3 since January 2015)

Here, a safety standard is understood to be a safety rule for international use, that is simple, clear, not open to interpretation and mandatory, in compliance with local legislations.



Based on this same principle, in 2016, in addition to the 12 AREVA standards already in place, AREVA Mines deployed a standard specific to its own activity: The drilling standard.

As for the other standards, this means that this standard was brought to the knowledge of every employee of AREVA Mines and more specifically of all those who are called upon to be involved in this activity during the course of their professional and functional duties.



WHAT IS DRILLING?

Drilling is the action of digging a "well" into the ground up to depths which can sometimes be very considerable.

The equipment of the well, such as the tubing, and the technical resources used for digging, more generally, vary depending on the size and objectives of the well.

In Areva Mines' activities, we drill in order to:

- prospect and reconnoiter the sub-soil,
- sink hydraulic wells,
- allow the aeration of galleries in underground mines,
- extract ore.

Why a Drilling standard?

The analysis of accident data from previous years showed that drilling is an activity which generates accidents. It was thus essential to harmonize best practices in this area and to share them with all sites where AREVA Mines is operator.

Based on the operating feedback provided from the teams in Kazakhstan and supplemented by operating feedback from our other sites, a standard was drawn up and validated by the Drilling Experts of AREVA Mines and HSE teams.

This drilling standard was then deployed for all employees who have any form of interaction whatsoever with this activity.

This standard brings together different points to which attention must be paid sorted into 6 main families:

- The documentary aspect
- The environment, the installation and layout of equipment
- The equipment to be checked
- Associated lifting activities
- Preparation for emergency situations
- Personal protective equipment

This standard applies to everyone even if it is accompanied by a Check List specific to each site. There may after all be specifications specific to different drilling machines depending on the manufacturer, and these characteristics may mean a specific inspection is required.

To make an analogy with the field of aviation, this means that, whatever the type of aircraft, it is essential to verify that the Check List has been completed prior to take-off. However, the Check List may differ depending on the type of aircraft. The same goes for drilling machines.

Of course, not all the rules and procedures of occupational safety can be replaced by safety standards, but with the drilling standard, the best practices have been formally defined in this safety standard that Areva Mines is deploying and rendering applicable to all of its employees.



SAFETY & ENVIRONMENT DRILLING STANDARD



1 DOCUMENTATION

- + Technical Documentation
- + Maintenance Log Book
- + Unit Initial Start Up Check List
- + Drilling Log Book
- + Safety instructions folder
- + Staff qualifications
- + Permits if required: excavation, gaseous emissions

2 AREA LAYOUT & ARRANGMENTS

- + Drilling Rig levelled, hydraulic pads in place and not leaking
- + Stairs equipped with handrails in good condition
- + Storage areas identified (drilling rods, casing, chemicals if any) and labelled
- + Area lighting organized and appropriate
- + Hazardous areas identified
- + Safe distance with hazardous facilities/equipment
- + All pits permanently fenced
- + Waste management organised and implemented
- + Liner/containment used under vehicle
- + Preserve vegetation
- + No storage of flammable of more than 5 liters, no flammable gas (except in dedicated area)
- + Fire under tools is forbidden
- + Respect the procedures for the rig installation (manage the movement of vehicles)

3 POWERED EQUIPMENT

- + Generator Emergency Stop Pushbutton accessible
- + Generator and Drilling Rig grounded
- + Truck grounded to generator while refueling
- + No fuel storage outside dedicated tanks
- + Generator installed on a levelled surface free of vegetation
- + All electrical cabinets closed
- + No live parts accessible
- + Earth leakage protection (30 mA, 0,2s) installed & tested weekly
- + Pressure gauges and scale available and calibrated
- + Pressure safety valves on pumps
- + Hoses under pressure clearly marked and secured with whip stop device
- + Cages on moving parts

4 LIFTING AND HOISTING

- + Lifting cable in a good condition (not torn)
- + Upper limit switch operational and sound alarm efficient
- + Hook with a safety latch
- + No handmade, modified or poorly repaired equipment
- + No damaged repaired or unidentified slings

5 EMERGENCY PREPAREDNESS

- + Emergency call phone numbers
- + Working means of communication
- + Emergency response instructions known
- + Serviceable firefighting equipment
- + Sealed first aid kit
- + Spillage kit and container for disposal

6 PERSONAL PROTECTIVE EQUIPMENT

- + PPE according to activity and complying to standards
- + Full body harness for any work at height connected to fall arrestor

WHERE	WHO	CS 3017	CS 1105	CS 30047 when RA, CS 41100 or CS 41101	CS 3000	CS 3002	CS 3001	CS 3003	CS 3005	CS 3003
On well field	All	✓	✓	✓	✓	✓	✓	✓	✓	✓
Working on the Rig	Driver	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Assistant	✓	✓	✓	✓	✓	✓	✓	✓	✓
Work at night	Surveillance	✓	✓	✓	✓	✓	✓	✓	✓	✓
	All	✓	✓	✓	✓	✓	✓	✓	✓	✓

SITE:
 SAFETY TEAM:
 Name:
 Phone number:

Mines 2014



June 2016 - Safety month for our employees and our sub-contractors

The goal: to develop a safety culture among New AREVA employees and sub-contractors to move towards achieving the objective of "zero accidents".

The 2016 edition of the Safety month was structured around the activities that generate the most accidents on the Mining BU's sites: those such as moving vehicles and mining machinery, and drilling operations.

For Jacques Peythieu, Senior Executive Vice President, Mining BU "Safety should not be seen as a constraint but as an opportunity to work more efficiently by protecting one's own safety and that of others. Every employee must be aware of their role and be a responsible and united player in this safety process".



SITES	DATES
SOMAIR	June 2 and 3
COGGOBI et AREVA Mongol	June 3
Bessines	June 9
AREVA Resources Namibia	June 9
ARC Mc Clean Lake	June 18 and 25
COMUF + AREVA Gabon	June 20
KATCO	June 23
COMINAK	June 23
Niamey + Akokan (Imouraren, AREVA Mines Niger, SOMAIR, COMINAK)	June 24

AREVA Mines Niger



Niger

June 2 and 3, 2016

More than 2,000 people take part in the Safety day at SOMAIR

The agenda for the SOMAIR Safety day consisted of a series of activities centered on raising awareness and achieving the goal of zero accidents: these included speeches by members of management, the showing of films about safety, presentations of the safety results for SOMAIR and AREVA Mines, sketches by the MCO theater troop to illustrate the major risks on the site, such as chemical risks or traffic accidents.



The administrative and local community authorities, representatives of the general public from Arlit, as well as a number of managers from the departmental defense and security forces also took part in this safety day.

■ Bessines-sur-Gartempe (France)



June 9, 2016

France

Safety day at Bessines-sur-Gartempe, France

After a plenary session given by the managers of each entity on results and key events in the area of safety, all of the site's employees and around twenty subcontractors tested their knowledge and shared best practices.

Divided up into 9 teams, they took part in a variety of different practical and creative workshops, directly related to our 12 safety standards: moving carefully was the central theme of this day linking together each of the workshops set up all around the site.



■ Namibia



June 9, 2016

Namibia

Focus on the assessment of driving risks and hazards in Namibia

As Namibia has a very high rate of road accidents, specific activities were organized to remind those present, including both employees and subcontractors, of the hazards of driving on national roads.

The day was mainly devoted to the assessment of risks to which a large number of people are exposed in their daily professional lives: driving, office work, conditions on the mining site and radiation. The risk assessment exercises were conducted by groups of employees during the two weeks prior to the Safety Day and a summary of the results was drawn up during the course of the event.



■ KATCO (Kazakhstan)



June 23, 2016

Kazakhstan

Safety day at KATCO

The Safety day organized on June 23 on KATCO's sites at Tortkuduk and Muyunkum brought together employees and contractors who in particular took part in exercises in protection of the environment.

Activities on the agenda included an emergency exercises relating to the ignition of a transformer, a presentation on safety and quality standards for the construction of pipelines and a first aid demonstration. Testimony was paid to the commitment of employees who have carried out their duties for 10 years without any June 23 lost-time accidents.



■ McClean Lake (Canada)



June 18 and 25, 2016

Canada

Safety day at McClean Lake

After a reminder of the fundamentals of safety and a presentation of safety results followed by numerous discussions, each day was organized around a "The Price is Right"-type of event on the topic of safety at McClean Lake, after which employees started their day's work except for a dozen of them who took part in workstation observation activities with a member of the management team.



Each member of the management team tried their hand at a range of tasks and unique situations, depending on their observation partner. Once the activities had been completed, management and employees met up once again to share their experiences and observations from the day.

■ Niamey (Niger)



June 24, 2016

Safety day in Niamey

The day began with a few words from the Managing Directors of COMINAK, IMOURAREN, SOMAÏR and from the Director of AREVA Mines Niger, followed by a series of presentations by employees of the Niamey site.

These rich and varied presentations took stock of the situation of mining companies in matters of safety and crisis management. This year, a new module on emergency response was included to allow employees to learn the right reflexes when confronted with a situation involving an accident or health incident.



■ AREVA Mines Niger



June 24, 2016

Safety day at the COFITECH base in ARLIT

This 4th Safety Day was organized based on the theme: "Come to work in complete safety - Work in complete safety - Go home in complete safety!"

Organized by the Geosciences team of AREVA Mines Niger, the event was attended by 60 operators, subcontractors and guests.

Organized around an agenda heavily focused on raising awareness, the day strongly emphasized the exploration department's commitment to meeting current challenges.

For the first time, employees from the subcontractor ESAFOR were fully involved in the day, actively taking part in events. A presentation also given on their safety outlook for the next two years.



■ COMINAK (Niger)



June 23, 2016

Safety Day at COMINAK

The Safety Day at COMINAK involved both presentations and workshops.

Representatives from the management of COMINAK and the Mining BU provided a recap of the main goals of the safety initiative at BU level and of the results obtained, notably the fatal accident involving their colleague that occurred on April 13, 2016, as well as the two accidents with high severity potential, that cast a shadow over 2016.



The workshops organized at the mine and in the plant were devoted to the topics of Lockout Tagout (LOTO)/Lockout Tagout (LOTO) removal and fire rescue. Representatives from the authorities (labor inspectorate, departmental mining department, national social security fund) and HSE managers from sub-contractors also took part in proceedings on this day held on June 23, 2016.

■ Gabon



June 20, 2016

Safety day in Gabon

The Safety Day on the COMUF site in Mounana was attended by 100 people, of whom 53 were from AREVA Gabon and COMUF, and 47 were from our suppliers and partners.

The mandatory phase provided the opportunity to present the safety results of the Mining BU, AREVA Gabon & COMUF for 2015 and mid-2016 to the assembled audience, then to review the 12 safety standards, present the drilling safety standard deployed on all Mining sites and the 5 priority actions of the BU.

As for the open phase, it allowed personnel to make their contributions, raising such issues as road risks, risks relating to work tools, emergency response in a professional environment, risks related to drilling and the movements and postures to adopt in the workplace.



ENVIRONMENT AND BIODIVERSITY

■ Mongolia: taking concrete action to protect fauna and flora



The goal: to help herders control the diseases affecting their livestock in the Ulaanba-drakh region, not only by providing access to care, but also by familiarizing them with basic hygiene practices.

Mongolia

AREVA Mines has been present in Mongolia since 1997. While the activities are still at the exploration stage in the region of the Sainshand and Dariganga basins, AREVA Mines has already set up local programs for the protection of the fauna and flora.

Currently, AREVA Mines holds three exploration licenses in the Dornogobi area covering 53,292 ha and 14 exploration licenses in Dornogobi and Sukhbaatar region, corresponding to a total surface area of 400,779 ha. The land is also used as pasture for the herders' livestock. Eight families have also established camps, mainly for wintering purposes.

Several biodiversity protection programs have been launched by AREVA Mines in the Gobi region, particularly in support of wild species, which we provide food for in winter. In 2014, AREVA Mines launched a veterinary project to help herders control the diseases affecting their livestock in the Ulaanbadrakh region, not only by providing access to veterinary care, but also by giving instruction to herders in basic hygiene practices. The company is continuing to support this project and is committed to ensuring the initiative remains in place over the long term.

Plants to combat desertification

In the field of flora protection, AREVA Mines is continuing its actions to protect saxaul trees, one of the most important vegetation features of the Gobi Desert.

- The research program in partnership with experts from the Laboratory of plant physiology and genetics at the National University of Mongolia is being maintained, with the objective being to gain a better understanding of the spread of the species and improve the natural regrowth of vegetation.
- Large scale monitoring of the vegetation: this methodology is based on comparison of remote sensing images shot at different dates. This study is being supported by observations made in the field.
- The optimization of drilling platforms is having positive results with regard to the protection of vegetation.

The Brudene Bulag Nature Reserve is one of the closest areas to the project site that is "specially protected by the State" and is located 60 km away. Other protected areas are located more than 100 km from the project zone. However, 2,512 hectares of "locally protected" Khar Zag land are located at the edge of the Zoovch Ovoo site. It is therefore necessary to organize regular awareness campaigns for project employees and subcontractors.

Overlapping with the perimeter of our license areas, the Bayanshiree is a site known for its richness in dinosaur fossils from the Cretaceous period. In December 2014, the Mongolian government proposed that this site be inscribed on the UNESCO's tentative list of world heritage sites. AREVA Mines is thus committed to handing back part of its lands.

Inventories of animals present on our license areas have been carried out, in 2009 and 2015, as part of the baseline studies for our licenses for Zoovch Ovoo and Umnut.

Thus, if we take the class of the Aves (birds, IUCN status): 11 species classified as of LC and 1 species classified as NT were observed.

Inventories of other animal species have been drawn up in accordance with the classification of the red list for Mongolia. These notably include the presence of the gazella subgutturosa (VU) and equus hemionus (EN), of 7 species classified as LC and 4 classified as NT. It should be noted that the gazella subgutturosa is also classed as VU by the UICN, but equus hemionus is recognized by it as NT.

■ Trekkopje in Namibia: a sanctuary for reptiles



Namibia

The goal: currently mothballed, mining of the AREVA's Trekkopje project has not yet begun. The mining licence area covering 37,368 hectares is however still under the supervision of our HSE (Health, Safety and Environment) team, which continues to monitor biodiversity.

The Trekkopje project is located near the Dorob National Park in the central Namib Desert and near the Namib-Naukluft National Park. The Namib-Naukluft National Park contains the Namib sea sand that is classified as World Heritage sites by UNESCO. The Namib, thought to be the oldest desert in the world, harbours many species that have adapted to the harsh and extremely arid environment over millions of years. The Namib Desert may appear barren, but its climate, soils and diverse landscapes are home to a great variety of animal species. However, none of the fauna or flora species occurring at Trekkopje mine is listed in the IUCN red book for extinction risk. The greatest diversity is found in groups that often go unnoticed: reptiles and invertebrates. This area is considered a "hotspot" of biodiversity for these groups, especially geckos, sand lizards, beetles, and scorpions.

■ Measuring impact for better control

Mining activities can affect biodiversity by reducing the size of habitats or disrupting ecological processes. This may threaten the survival of species of plants or animals that are perfectly adapted to the central Namib Desert and found only in small, localized areas.

However, the impact of the Trekkopje mine on biodiversity cannot be evaluated in isolation, as there are other mines and projects nearby. Each of these developments potentially contributes to the degradation or fragmentation of habitat through mining, ore processing and the construction of linear infrastructure. Habitat loss is harmful to endemic or endangered plants and animals.

Most potential impacts on soils, which were identified in the EIA (Environmental Impact Assessment) for the Trekkopje mine, affect the conservation of ecosystems and fauna and flora habitats. Any deterioration of the soils due to mining or construction will reduce their ability to support plants and animals. Soil disturbances that jeopardize the functioning of ecosystems can lead to long-term changes in their use after closure of the mine. It is therefore essential to take these factors into account at a very early stage in order to minimize them.

■ Restoring the vegetation

Once in operation, the main impact of the mine on biodiversity will be on the local flora, which includes many endemic plants, especially grasses found only in the Namib Desert. To mitigate the impact of the mine, the area of operations will be minimized and the affected land will be restored as far as possible to its original state. Since 2010, AREVA Mines has been testing methods for restoring vegetation and monitoring the regrowth of plants on reclaimed land. This monitoring takes place every year and includes: identification of species, quantitative estimates of vegetation density and physical and chemical analysis of soil samples.

For this method to work optimally, it is necessary to determine the distribution of plant species. The habitats of the Trekkopje mine were mapped in 2009, and the map was updated in 2011 when vegetation cover was especially dense due to the heavy rains. This study brought to light rare and critical ecosystems, based on the distribution of flora, as mapping of fauna remains a challenge in the Namib. To monitor the evolution of the habitats, AREVA Namibia is using the Biotope Method developed by the Swedish power company Vattenfall. The classification of biotopes as general, rare or critical, is based on the number of rare and endemic species in a given area.

■ Water and electricity savings: our employees get involved with simple but effective changes in behavior.



Niger

The goal: continue the measures of reduction of the consumption of water thanks to the recycling of effluents.

■ The Cité SOMAÏR compound now powered with solar energy

Since the end of April 2016, 90% of the lamps used for street lighting and collective buildings in the compound are electrically powered by photovoltaic panels installed on the roofs of the houses and the SOMAÏR hospital, resulting in a reduction of more than 50% in installed power for the same level of lighting.

This innovative project with a positive environmental impact also aims to reduce SOMAÏR's energy costs and ensure the compound's energy autonomy in terms of public lighting. Other actions will soon be implemented (blocked regulators on AC, solar water heaters, light detectors for the outdoor lighting of the dwellings, etc.).



■ COMINAK reduces water and electricity consumption in the mining town compound

The goal: to change patterns of behavior, both individually and collectively, and to reduce consumption by at least 10% per year over 3 years, without compromising people's quality of life.

In the spring of 2014, a working group was set up within COMINAK at Arlit for the purpose of conducting a policy to reduce electricity and water consumption in the Cité Minière compound involving all stakeholders, both internal and external.

This initiative follows the considerable cost of electricity observed in 2013, when it accounted for one-third of COMINAK's total electricity expenditure, taking in the industrial site, the homes of the Cominak employees and families in Arlit, and the public places in the compound.

Several initiatives were therefore implemented, including:

- information meetings with employees and families to gain a better understanding the individual water and electricity meter readings in order to manage them better; upgrade of facilities where necessary to bring them up to the standards; switch off light bulbs in rooms benefiting from daylight; inspect plumbing and repair any water leaks, in other words, reinstate virtuous behaviors.

These information meetings were coupled with awareness campaigns via local radio. Internally, a broad information campaign was also deployed within Cominak.

As a result of changes in daily habits and behaviors, water consumption in the living areas fell by 2% in 2016.

We should stress the role of the 700 women and wives of COMINAK employees who contributed greatly to this change.

■ Environmental monitoring program with the participation of local communiti in Mongolia



The goal: to analyze and monitor water samples, in order to produce reports, assessments and recommendations.

In addition to the work conducted on the flora and fauna, AREVA Mongol is maintaining its participatory environmental monitoring program, in order to make its approach open and transparent with respect to the authorities and the local population. This has been successfully deployed since 2013.

The participatory environmental monitoring program was initiated by AREVA Mongol and COGEOBI in order to make the approach open and transparent with respect to the authorities and the local population. It has been successfully deployed since 2013.

This year again, the AREVA Mongol team has decided to focus on pedagogical training of the local population on various environmental protection areas, as well as on water monitoring. The team continues to respond positively to requests from herders to analyze the well water they consume.

In line with the program underway, the local population, official representatives and independent experts and scientists, and school children are regularly invited to accompany the teams from COGEOBI* when they carry out sampling on land in the districts of Argalant, Bayanbogd and Zuunbayan. The samples are sent for analysis to the certified laboratory at the Nuclear Research Centre and to the Central Geological Laboratory. The results are then made public.



■ Mongolia: The local commissions assess environmental remediation work positively

Each year, COGEOBI* submits its environmental monitoring plan to Mongolia's Ministry for the Environment, Green Development and Tourism, for approval. Once the exploration activities are complete, the sites are inspected by the environmental monitoring department and several local commissions.

The results of these inspections carried out in November 2015 demonstrated that the measures taken in the field following the end of the drilling campaign fulfilled 83%** of the commitments of the environmental monitoring plan. The Commissions held in 2016 commended all of the initiatives undertaken by COGEOBI in favor of environmental protection: the setting up of a system of flags indicating to the trucks which tracks to take on the drilling sites in order to avoid creating new unnecessary tracks; planting of saxaul seedlings.

AREVA Mongol and COGEOBI are making every effort to minimize the impact of their activities on the environment and local communities. The approach of the on-site teams is to apply best practices and international standards while drawing on their own experiences.



* company responsible for exploration work in Mongolia

** one of the highest ratings obtained by mining companies in the Gobi region

SOCIAL COMMITMENT

■ Creating new opportunities locally for developing skills and recruiting skilled employees



The goal: to meet needs for the recruitment of skilled employees on our sites.

Mongolia

■ Local communities forming a talent pool

One of AREVA's objectives in Saskatchewan is to maximize the number of employees who live in the communities of the north of the province in the area where the McClean Lake site is located. To support the recruitment of young northerners, AREVA has set up a training program targeting the local communities. The aim is twofold: to secure recruitment needs, whilst equally playing a positive role in terms of local socio-economic activity.

■ Skill-enhancing training initiative

Over recent years, AREVA Resources Canada has implemented an extensive training project designed for the isolated communities in the Athabasca basin situated closest to the McClean Lake site in northern Saskatchewan. For the most part aboriginal, these communities have very limited opportunities for employment or skills development.

Since 2012, AREVA Resources Canada has developed a number of dedicated training programs with six focus areas:

- **Employability:** informing and preparing young people from these Northern communities for the world of work;
- **Training operators:** modules adapted to the very technologically advanced McClean Lake mill;
- **Training of supervisors:** developing knowledge and skills through mentoring, but also introducing leadership training;
- **Training in a range of disciplines or trades,** offering learning opportunities on site and in partnership with technical institutes offsite;
- **Promoting workplace observation placements** for secondary school students;
- **Career guidance** for opportunities in mining upstream of apprenticeships.



■ Shared benefits over the long term

This program allows the teams at McClean Lake to secure their future recruitment needs and contribute to the economic and social development of the region. With convincing results. Since 2012, 84 young people from the region have completed their operator training and 71 of them have been recruited. 56 of these employees continue to work on the McClean Lake site today. Participants in the program who complete their training and who are not recruited or who have left AREVA succeed in finding a job in the region, thus putting their apprenticeship to good use. In 2016, AREVA delivered a 3-month training program which resulted in eight participants completing their course of training.

Due to the production cycle and the restricted recruitment plan, it was not possible to recruit these eight trained operators when the course of training ended in December 2016 but two of them were subsequently recruited over the course of the winter, with the six others being taken on in the spring of 2017.

As the number of applications continues to increase, more partnerships have been set up with representatives of the local community, educational establishments and financing bodies. This exemplary project won an award in the internal AREVA Awards program in 2013.



MINE CLOSURE

R&D program relating to the remediation and environmental monitoring of former mining sites



France

The goal: forward planning to remain compliant with regulatory requirements and address social concerns relating to the management of former mining sites as effectively as possible.

The "Envir@mines" R&D program was created in 2010. It aims to meet and plan ahead to maintain compliance with the requirements of the National plan for the management of radioactive materials and radioactive waste (PNGMDR) on the question of mine closure risks.

Though the Envir@Mines program concerns all the mining sites of the group, here we focus on **our actions in France**, on mines that have already been remediated. Our goal: to improve **knowledge** of the environmental footprint of mining sites and offer new technologies to optimize the **management and treatment of water**.

13 academic partners (Université Paris VI, Ecole des Mines de Paris, Université de Poitiers, Université de Bruxelles, the University of Manchester, the University of Granada, and the CEA, etc.) are working with teams from AREVA Mines. Their research work is focused on **3 themes**: management of waste rock, management of tailings and management of aqueous discharges. A review of the progress that has been made so far as well as the work currently in progress is provided below.

Management of waste rock

AREVA has conducted several **sampling campaigns** on remediated sites to characterize the evolution of waste rock storage and its potential impact on the surrounding environment. A **multi-year study** is ongoing to develop predictive models of the possible migration of substances from the rock piles to the environment.

Monitoring of tailings

AREVA is studying the evolution of ore tailings and working on the **development of models to better predict their long-term environmental impact**, based on a normal scenario and degraded scenarios.

Aqueous discharges and bioavailability

The **future French standards** on the environmental quality of aquatic environments will take into account the bioavailability of contaminants. In order to meet these new requirements, AREVA is **building its knowledge on the bioavailability** of several metals of interest (Uranium, Radium, Barium, Aluminum, Manganese and Iron) and the potential risks they pose for ecosystems.



Gabon: Mounana 200 project



Gabon

The goal: demolition and reconstruction of 201 affected houses in the municipality of Mounana identified subsequent to a change in the regulatory limit for radiological exposition of members of the public concerning the Annual Actual Dose Added (Dose Efficace Annuelle Ajoutée - DEAA) from 5 to 1mSv, and validated by the Gabonese authorities.

At the time when the site was being mined (in the 1970s-1980s), radiologically contaminated products were used in the concretes used in the construction of certain houses in the municipality of Mounana (including the Cité Rénovation).

Subsequent to a change in the regulatory limit for radiological exposition of members of the public concerning the Annual Actual Dose Added (DEAA) from 5 to 1mSv, in 2006 and 2007, the CNPPRI drew up an exhaustive inventory of housing in the Cité Rénovation.

Between 2007 and 2009, the first works were carried out in the municipality of Mounana, leading to the demolition and reconstruction of 18 affected houses in the Cité H.

The inventory was extended, between 2008 and 2011, to the entire municipality of Mounana, and in 2011 AREVA Mines made a commitment to rebuild the 201 radiologically affected houses in Mounana, including 124 houses in the Cité Rénovation in the former workers compound and 69 houses in Mounana demolished/and reconstructed in the same place.



The definitive list of the radiologically affected houses was validated by the technical committee (COMUF, CNPPRI, Gabonese State) in 2013. The location for the reconstruction of the houses currently situated in the Cité Rénovation was discussed and validated the same year by the inter-ministerial committee, and was subject to a declaration of public interest (Déclaration d'Utilité Publique – DUP).

Concerning the reconstruction of the 124 houses in the Cité Rénovation, it has been enacted based on an agreement, according to which the State of Gabon will be responsible for the construction of the Roads and Utilities (Voiries et Réseaux Divers – VRD) while the COMUF shall manage the construction, demolition and handover of the deeds of ownership. The project is divided into 3 stages (24, then 48 and 52 houses), in order to allow an economic activity to develop over a period of several years in the municipality of Mounana. The employment of local personnel is thus to be privileged for the entire project.

The first works commenced in June 2016, with the deforestation and earthworks in the areas where the 124 houses are to be located.

Work on the construction of the first 24 houses started in November 2016: work on the elevations has started and this first worksite should be completed in the summer of 2017.



■ Remediation of the mining site of Bellezane



France

The goal: the environmental impact of a mining site is considered for all stages of the site's life cycle, and that includes in the context of subsequent additional remediation work.

The former open-cast mine at Bellezane (Limousin, France) underwent remediation between 1992 and 1997. It is now used to store residues from the processing of uranium ore, and is an ICPE (Installation Classée pour la Protection de l'Environnement / French classified facility for environmental protection) subject to regular monitoring carried out within the framework of prefectural orders.

A project has been launched to build a new storage capacity, designed to accommodate radioactively contaminated sediments resulting from the dredging of local water bodies. The installation is dimensioned for a maximum capacity of 200,000 m³ and is located above where the processing residues from the ore mined during the mining of the site are stored.

Several environmental studies including inventories of fauna and flora have been conducted and validated by the authorities upstream of the project. AREVA has taken additional measures to preserve biodiversity during the construction phase, such as for example:

- Adjustment of the work schedules according to the seasons and the life cycle of animals to limit the impact on wildlife (especially birds: falcons and skylarks)
- Construction of a barrier for amphibians to limit the risk of burial during trenching operations
- The creation of ponds to attract amphibians outside the construction area
- Collaboration with an association and a specialist in bats, to plan work in an old gallery according to the inventories performed.

An independent expert has verified that the actions presented have been implemented and effective.

This new sediment storage capacity is now in use and has already been used to accommodate sediments resulting from the dredging of two local water bodies in the Haute-Vienne.

■ Mine tailings survey campaign



France

The goal: use of mine tailings in the public domain: a large-scale survey

In 2009, the Ministry of Ecology, Energy, Sustainable Development and the Sea entrusted AREVA with the public service mission of carrying out a survey of the mine tailings present in France in the public domain, and resulting from former mining sites, whether or not operated by AREVA. AREVA devoted major human and material resources to this project, an initiative that is in line with AREVA Mines' CSR approach.

■ Tailings

Between 1947 and 2001, 76,000 tonnes of uranium were extracted from French soil, from 237 mining sites located throughout the territory. To access these deposits, it was necessary to remove 187 million tonnes of earth, sand or rock containing no or little uranium, referred to as tailings.

In accordance with the regulations in force at the time, some of these materials were used in the public domain for backfill. From 1984, AREVA set up a register providing traceability of tailings from mining activities carried out by of AREVA and its subsidiaries, but this was not the case for other operators.

■ A helicopter and men

Within the framework of this project, in 2009 and 2010, AREVA started performing aerial surveys of areas across the country covering a surface area of 3,000km² where waste rock may have been used. This was done via overflights using helicopters equipped with special geophysical measuring apparatus (gamma spectrometers), in all regions where waste rock could have been re-used (Auvergne, Bretagne, Languedoc-Roussillon, Pays de la Loire, Limousin). With the help of specialized independent companies, AREVA then conducted analyses and inspections on the ground, between 2011 and 2013, to characterize these zones (in total, 1,348 zones with tailings).

■ Decontaminating the zones

Of these sites, 60 zones exceeded the reference threshold of 0.6 mSv/year*, beyond which remediation work must be performed, and 245 zones were found to be between 0.3 mSv/year and 0.6 mSv/year, requiring consultation to determine whether an intervention was necessary. Having studied and prepared the areas to be treated, in autumn 2015 the AREVA teams started the cleanup work by removing the tailing material. This work is being carried out in agreement with the local administrations, who are allowing them to be stored at sites where studies have shown their lack of impact on the environment and people. The work has now already been completed in Haute-Vienne, in the Auvergne and in the Loire, and will continue in 2017 and 2018 in certain other départements.



* The Sievert (Sv) is a unit used in radiation protection which is expressed in "equivalent dose" and takes into account the characteristics of the radiation and of the irradiated organism. On average it amounts to 2.4 mSv per year in France. This value depends partly on the geological setting and can range from 1 mSv in the Paris basin to 4 mSv in granitic regions (Limousin, Brittany, Auvergne, etc.). In accordance with the French Public Health Code, this dose must be less than 1 mSv above the natural background level. The circular of August 8, 2013 describes a generic methodology for the management of areas affected by the presence of mining waste. It sets a guideline value for the added dose, triggering performance of work from a value of 0.6 mSv/year.

R&D and INNOVATION

■ A tool for environmental R&D studies: DGTs (Diffusive Gradients in Thin Film)



The goal: based on the principle of the diffusive gradient, this technique makes it possible to pre-concentrate contaminants which are of interest in soluble form (U, 226Ra, Se, As, etc.) for more effective detection.

The technique was developed in 1994 by Hao Zhang and William Davison at the Lancaster Environment Center of Lancaster University in the United Kingdom. Diffusive Gradients in Thin films (DGTs) are mainly used in environmental chemistry to detect elements and compounds in aqueous media in natural waters, sediments and soils. The technique involves using a specially-designed passive sampler that houses a binding gel, diffusive gel and membrane filter. The element or compound passes through the membrane filter and diffusive gel and fixes itself to the binding gel. Post-deployment analysis of the binding gel can be used to determine the concentration of the element of interest in the solution in which the DGT was located.



In 2012, Environmental R&D launched a research program, in partnership with the Université de Bruxelles in order to use the tool primarily for the measurement of the total uranium dissolved in solution, as well as to measure other contaminants of interest. DGTs were tested and optimized in the laboratory under controlled conditions. In a second phase, they were also successfully deployed on several mining sites, for use both in surface waters, as well as in porewaters from sediments.

This system is now operational: it is used for the environmental monitoring of targeted sites, and means that it is no longer necessary to use more limiting methods such as ultrafiltration.



FOR FURTHER INFORMATION

Phrommavanh V., Leermakers M., de Boissezon H., Nos J., Koko M.B., Descostes M. (2013). Characterizing the transport of natural uranium and its decay product 226Ra, downstream from former mines in France. *Procedia Earth and Planetary Science* 7, 693-696.

Drozdak J., Leermakers M., Gao Y., Phrommavanh V., Descostes M. (2015). Evaluation and application of Diffusive Gradients in Thin Films (DGT) technique in uranium mining environments. *Analytica Chimica Acta* 889, 71-81.

Drozdak J., Leermakers M., Gao Y., Elskens M., Phrommavanh V., Descostes M. (2016a). Uranium aqueous speciation in the vicinity of former uranium mining sites using Diffusive Gradients in Thin Films and Ultrafiltration techniques. *Analytica Chimica Acta* 913, 94-103.

Drozdak J., Leermakers M., Gao Y., Elskens M., Phrommavanh V., Descostes M. (2016b). Novel speciation method based on Diffusive Gradients in Thin-Films for in situ measurement of Uranium in the vicinity of the former uranium mining sites. *Environmental Pollution* 214, 114-123.

Leermakers M., Phrommavanh V., Drozdak J., Gao Y., Nos J., Descostes M. (2016). DGT as a useful monitoring tool for radionuclides and trace metals in environments impacted by uranium mining: case study of the Sagnes wetland in France. *Chemosphere* 1

Life Cycle Greenhouse Gas Emissions from Uranium Mining and Milling in Canada

David J. Parker*†, Cameron S. McNaughton*††, and Gordon A. Sparks†

† Department of Civil and Geological Engineering, University of Saskatchewan, Canada

Increase in throughput in the solvent workshop at the COMINAK plant



The goal: to increase the throughput of the solvent workshop at the COMINAK plant in order to meet the U production tonnage specified in the Mining Plan.

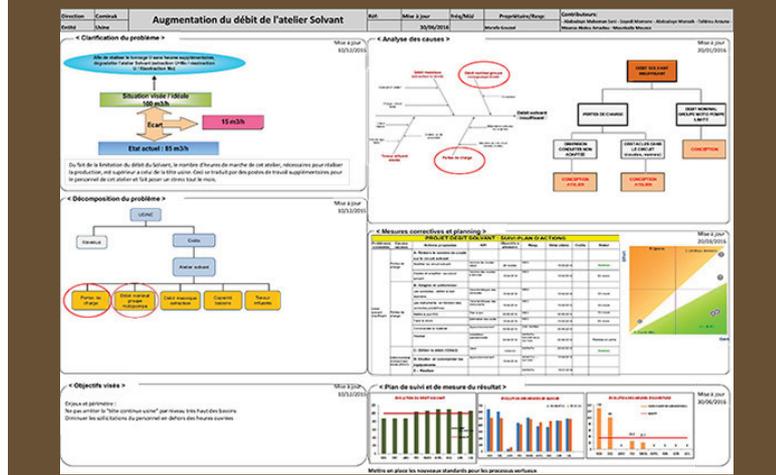
With the capacity upstream greater than that of the solvent workshop, it was absolutely necessary to increase throughput of this workshop in order to meet the U production tonnage specified in the Mining Plan without requiring that the teams work overtime.

An A3 project was therefore carried out by the workshop's shift manager and his team, led by the Plant manager.

Within a matter of weeks, the teams identified the priority actions to be undertaken (modification of the piping system, adaptation of the pump unit and the pipework...) to arrive at a sustainable solution corresponding to the need.



INCREASE IN THROUGHPUT IN THE SOLVENT WORKSHOP





CHAPTER ANNEXES

Extract from Responsible Development
report 2016 on Areva's Mining Activities

The complete report is downloadable on :
www.csr-mines.areva.com

INDEX GRI

The AREVA's mining activities CSR Report 2016 has been prepared in accordance with the GRI G4 guidelines. The mining and metals sector supplement (MMSS) has also been used.

We report primarily on the general standard disclosures called « core ». Then the table set out in details the specific standard disclosures called “essentials” and the indicator linked to each identified material aspect. All of these informations consider the mining and metals sector supplement.

GENERAL STANDARD DISCLOSURES

Strategy and Analysis

Disclosures	Description	Link to the information
G4-1	Statement from the most senior decision-maker of the organization	■ Statement from the top management

Organizational Profile

Disclosures	Description	Link to the information
G4-3	Name of the organization	■ Governance and organization
G4-4	Primary brands, products, and services	■ Uranium market
G4-5	Location of the organization's headquarters	■ Governance and organization
G4-6	Company's countries of operation	■ Worldwide presence
G4-7	Nature of ownership and legal form	■ Governance and organization
G4-8	Markets served	■ Governance and organization
G4-9	Scale of the organization	■ Overview ■ Governance and organization ■ Worldwide presence
G4-10	Breakdown of employees	■ Commitment to employees ■ Governance and organization ■ Worldwide presence
G4-11	Percentage of total employees covered by collective bargaining agreements	■ Governance and organization ■ Commitment to employees
G4-12	The organization's supply chain	■ Overview ■ Uranium market ■ Social involvement
G4-13	Changes during the reporting period	■ Worldwide presence
G4-14	Precautionary approach or principle addressed by the organization	■ Risk management ■ 2016 Reference document of the AREVA Group

G4-15	Externally charters, principles, or other initiatives subscribed	■ Voluntary initiatives
G4-16	Memberships of associations and national or international advocacy organizations	■ Voluntary initiatives

Identified material aspects and boundaries ▼

Disclosures	Description	Link to the information
G4-17	Entities included in the organization's consolidated financial statements	■ 2016 Reference document of the AREVA Group
G4-18	Process for defining the report content	■ Materiality
G4-19	Material Aspects identified in the process for defining report content	■ GRI
G4-20	Aspect Boundary within the organization	■ GRI ■ Reporting Parameters
G4-21	Aspect Boundary outside the organization	■ Reporting Parameters
G4-22	Restatements of information provided in previous reports	■ Reporting Parameters
G4-23	Changes from previous reporting periods in the Scope and Aspect Boundaries	■ Reporting Parameters

Stakeholder Engagement ▼

Disclosures	Description	Link to the information
G4-24	List of stakeholder groups engaged by the organization	■ Our approach
G4-25	Basis for identification and selection of stakeholders	■ Social involvement
G4-26	Stakeholder engagement	■ Social involvement
G4-27	Key topics and concerns that have been raised through stakeholder engagement	■ Social involvement ■ Materiality

Report profile ▼

Disclosures	Description	Link to the information
G4-28	Reporting period	■ Reporting Parameters
G4-29	Date of most recent previous report	■ Our last CSR Reports (website footer)
G4-30	Reporting cycle	■ Reporting Parameters
G4-31	Contact point for questions	■ Contact us
G4-32	'In accordance' option the organization has chosen	■ GRI
G4-33	External Assurance	■ EY Certificate

Governance		
Disclosures	Description	Link to the information
G4-34	Governance structure of the organization	■ Governance and organization

Ethics and Integrity		
Disclosures	Description	Link to the information
G4-56	Organization's values, principles, standards and norms of behavior	■ Ethics and Human Rights

SPECIFIC STANDARD DISCLOSURES

■ ECONOMIC

Economic performance		
Disclosures	Description	Link to the information
G4-EC4	Financial assistance received from government	■ Governance and organization

Market Presence		
Disclosures	Description	Link to the information
G4-EC6	Proportion of senior management hired from the local community	■ Social involvement

Indirect economic impacts		
Disclosures	Description	Link to the information
G4-EC7	Development and impact of infrastructure and services supported	■ Social involvement

Procurement practices		
Disclosures	Description	Link to the information
G4-EC9	Proportion of spending on local suppliers at significant locations of operation	■ Social involvement

■ ENVIRONMENT

Energy		
Disclosures	Description	Link to the information
G4-EN3	Energy consumption within the organization	■ Environment and biodiversity

Water ▼

Disclosures	Description	Link to the information
G4-EN8	Total water withdrawal by source	■ Environment and biodiversity

Biodiversity ▼

Disclosures	Description	Link to the information
G4-EN14	Total number of IUCN red list species	■ Environment and biodiversity

Emissions ▼

Disclosures	Description	Link to the information
G4-EN15	Direct greenhouse gas (GHG) emissions (Scope 1)	■ Environment and biodiversity

Effluents and Waste ▼

Disclosures	Description	Link to the information
G4-EN23	Total weight of waste by type and disposal method	■ Environment and biodiversity

■ SOCIAL / LABOR PRACTICES AND DECENT WORK

Employment ▼

Disclosures	Description	Link to the information
G4-LA1	Number and rates of new employees hires and employees turnover	■ Commitment to employees
G4-LA2	Benefits provided to full-time employees	■ Governance and organization
G4-LA3	Return to work and retention rates after parental leave	■ Commitment to employees

Labor/Management relations ▼

Disclosures	Description	Link to the information
G4-LA4	Minimum notice periods regarding operational changes	■ Commitment to employees

Occupational health and safety ▼

Disclosures	Description	Link to the information
G4-LA5	Workforce represented in formal joint management-worker health and safety committees	■ Governance and organization
G4-LA7	Workers with high incidence or high risk of diseases related to their occupation	■ Health, safety and radiation protection

Training and education

Disclosures	Description	Link to the information
G4-LA9	Average hours of training per year	■ Commitment to employees
G4-LA11	Employees receiving regular performance and career development reviews	■ Commitment to employees

Diversity and equal opportunity

Disclosures	Description	Link to the information
G4-LA12	Composition of governance bodies and breakdown of employees	■ Governance and organization

■ SOCIAL / HUMAN RIGHTS

Non-Discrimination

Disclosures	Description	Link to the information
G4-HR3	Total number of incidents of discrimination and corrective actions taken	■ Ethics and Human Rights

Assessment

Disclosures	Description	Link to the information
G4-HR9	Human rights reviews	■ Ethics and Human Rights

■ SOCIETY

Local communities

Disclosures	Description	Link to the information
G4-SO1	% of operations with implemented local community engagement	■ Social involvement

Anti-corruption

Disclosures	Description	Link to the information
G4-SO3	% of operations assessed for risks related to corruption	■ Ethics and Human Rights ■ Key indicators

■ MINING AND METALS SECTOR SUPPLEMENT

Sector specific disclosures

Disclosures	Description	Link to the information
MM9	Sites where resettlements took place	■ No relocation of populations during the concerned period
MM10	Closure plans	■ Mine closure