



REPORT  
2012

Responsible Development  
of AREVA's Mining  
Activities



# “Confidence in the future”

**Olivier Wantz**

*Senior Executive Vice President in charge  
of the AREVA Mining Business Group*

Between now and 2050, global demand for energy is set to increase threefold. AREVA is addressing this challenge by supplying solutions for power generation with less carbon.

**S**ustainable development has been the driver of our performance ever since the group's inception. Today, our strategic plan ACTION 2016 gives us the opportunity to consolidate our position as a safe and profitable company, committed to innovation and mindful of its founding values, a company that is looking confidently to the future.

Our mining activities are fully integrated into this vision for the future. On a day-to-day basis, this involves continuing to build on the trust that our customers, the communities in which we operate, our partners and our employees place in us.

It is our firm belief that it is possible to build that trust only by acting in an exemplary manner, in terms of health, safety and social and environmental responsibility.

Through 2012, we have succeeded in maintaining the accident frequency rate at a reasonably low level. However, our only goal ultimately is zero accident and we shall pursue our efforts until we achieve this goal, which is already a reality at some of our sites.

In order to be exemplary and to guarantee the sustainability of our business, we are fully committed to improving our management of risk at all levels - economic, environmental and social.

This year, with the adverse market conditions we are facing, it was our responsibility to take some difficult but necessary decisions, including delaying the commissioning of the Trekkopje mine in Namibia and suspending the mining convention in the Central African Republic. Our actions in this respect have been conducted in full transparency with local stakeholders, and the Human Resources Department has put everything in place to provide the best possible support for our employees.

Thanks to tight control over costs, driven by the performance improvement efforts of our teams, AREVA's mining activities hit a new production record and generated revenue to continue to invest and grow our business. In 2012, we continued our investments in the Imouraren mine in Niger and in the Cigar Lake mine in Canada, which will commence production in 2013.

A mining project is always an inductor for major change. It is a catalyst for local economic development, enabling significant investments in infrastructure and creating jobs. These positive effects can only prevail to the extent that people have faith in the company mining and transforming their natural resources.

We believe that to successfully build this trust we must communicate transparently and comprehensibly to all stakeholders. Aware of the importance of consultation, we are playing a full role in the relevant bodies set up in each country and we are initiating dialog actions that bring us into contact with the communities everywhere we operate.

In 2012, AREVA renewed its commitment to the International Council on Mining and Metals (ICMM), which brings together the major players in the mining sector engaged in sustainable development. Keeping mobilized means continuing to improve our performance on criteria that are set with respect to best practices identified in our industry.

Our teams are fully committed to achieving these objectives. This report reflects the energy that we devote to accomplishing our projects in compliance with the principles of sustainable development, and to building relationships of trust with our stakeholders.



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## BOOKMARKS

Working through the chapters, you can identify the principles to which we subscribe, the “10 principles of the ICMM”, using the bookmarks provided.

*\*International Council on Mining and Metals [www.icmm.com](http://www.icmm.com)*



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### “RDR 2012 FIGURES” SUPPLEMENT



In addition to the 2012 Responsible Development Report on AREVA’s mining activities (RDR 2012), we have made the “RDR 2012 Figures” supplement available in the Media Center at [www.aveva.com](http://www.aveva.com).

This document provides information on the relationship between the Global Reporting Initiative (GRI G3.1 - MMSS) indicators and the data available in this document. It also provides an exhaustive account of the scope of our activities for each indicator and the associated results for 2012.

# Report overview



**ICMM principle 10**  
**Implement effective and transparent engagement, communication and independently verified reporting arrangements with our stakeholders.**

## OUR APPROACH

This annual report, prepared by the Corporate Social Responsibility Department of AREVA Mines, is the result of the mobilization of all our teams present at our mining sites as well as those in AREVA corporate support functions (compliance, sustainable development, etc).

Although this report cannot provide an exhaustive response to all our stakeholders, we have endeavored to present the most relevant and high-quality performance data for the period covered.

We would like the various groups of stakeholders associated with our mining activities to become progressively more involved in the preparation of this report. To this end, for the 2012 report, we set up working groups and groups to raise awareness among employees, and included one of our sub-contractors (ESAFOR - Niger) in the preparation of a case study on occupational safety (see page 35).

## SCOPE OF ACTIVITY

The data given cover the assets for which AREVA acts as operator in uranium mining activities: exploration, project development, production and rehabilitation. The consolidated data target activities in France, Canada, Niger, Kazakhstan, Mongolia, Gabon and Namibia.

Activities in the Central African Republic and those linked to La Mancha no longer fall within the scope of this report (sale of assets in 2012).

## SCOPE OF REPORT

By defining AREVA's strategy and policies, this report aims to demonstrate our performance in the key areas of mining activity responsibility: ethics and governance, social report, the environment, occupational health and safety, community involvement, commitments to stakeholders.

## REPORTING PERIOD

This report is the third edition of this annual exercise. The previous reports, including the 2011 edition (published in September 2012) are available on our website [www.aveva.com](http://www.aveva.com).

The results for our main performance indicators are shown for the last three years (2010 to 2012). The reporting period used is the calendar year (from January 1, 2010, to December 31, 2010). Some important information relates to the first half of 2013.

## COMMITMENT TO EXTERNAL INITIATIVES

AREVA is a member of the International Council on Mining and Metals (ICMM). In this context, our policies and commitments in terms of social responsibility are based on the ten sustainable development principles defined by the ICMM, as well as the associated "position statement" documents.

To this end, our specialists are involved in the different working groups that bring together ICMM members to discuss the various sustainable development issues encountered in the extractive sector. Members of our top-level management form part of the Council of this organization.

More generally, AREVA has made a large number of commitments and works with professional organizations and international institutions. A file listing these various commitments is currently being updated.

## REPORTING AND INDEPENDENT AUDIT

Within the scope of mining activities, our teams currently apply the guidelines set out in version G3.1 of the Global Reporting Initiative (GRI), Mining and Metals Sector Supplement (MMSS).

Application level B for this report has been submitted for evaluation by GRI. A copy of the acknowledgement received from the GRI secretariat is supplied in the RDR 2012 Figures supplement. We are aiming to achieve level "A+" by 2016.

This process is being carried out in accordance with the Grenelle environment law, which lays down regulations with regard to the topics to be dealt with in non-financial reporting by companies.

For 2014, we are preparing a third-party audit of the information given in this type of document (RDR 2013). It should be noted that in 2012, the KATCO (Kazakhstan) and SOMAIR (Niger) sites were audited as part of the work carried out by group Statutory Auditors (Deloitte & Associates and Mazars - page 370 of the AREVA 2012 Reference Document) on a sample of sustainable development indicators.



Interim storage of drums of uranate prior to transport, COMINAK, Niger 2012

# 01

## OUR APPROACH TO RESPONSIBILITY

ICMM principles ▶ 1 2 3 4 5 6 7 8 9 10

AREVA's mining activities enter fully into the triple ambition of profitable growth, social responsibility and respecting the environment. Their approach to responsibility is based on the seven group values, which form the cornerstone of its ethical governance policy, and the ten sustainable development principles of the International Council on Mining and Metals (ICMM). Given the numerous and diverse issues associated with responsible development, the Responsible Commitments Plan 2013-2016 sets the priorities to be deployed across all our sites.

# The fundamentals of our approach

The AREVA Values Charter demonstrates the responsibility that the group holds towards all its stakeholders, whether they are directly or indirectly involved in our activities. The seven values laid out in the charter constitute the fundamentals of our approach to responsibility, as much in terms of how we act as the good practices that we follow, or even the innovative initiatives that are implemented by our employees.



Presentation of "AREVA Awards" for Innovation to the COMINAK team, Niger (cf. Focus p. 17)

## AREVA VALUES CHARTER: AN ETHICAL STANDARD FOR OUR ACTIVITIES

Since 2003, the Values Charter has shown the importance that the group attaches to sustainable development, compliance with the Universal Declaration of Human Rights and adoption of the international principles defined by the OECD and the UN. It lays the foundations for the ethical governance of our activities. Available on the AREVA internet site and issued to all of our collaborators, it gives the seven group values to be respected, the principles of action with regard to stakeholders and the rules of conduct applicable within the group.

The rules of conduct deal more specifically 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;
- ▶ Payments;
- ▶ Sponsorship, donations, humanitarian work;
- ▶ Protection of people and assets;
- ▶ Political finance;
- ▶ Competition.

## ETHICAL REPORTING WITHIN OUR SUBSIDIARIES

Every year, AREVA Mines, like all subsidiaries of the group, conducts an internal ethical reporting process on the proper application of the Values Charter and any infringements. Each campaign opens with a letter from the Senior Executive Vice President of the Mining Business Group. The process involves our directors and their managers. Reporting takes place according to the principle that our employees can report any infringements they may have observed without fear of the consequences.

In the same way, if anyone is given an order that clearly goes against the AREVA Values Charter, they have a right to refuse to comply and must raise the issue with group management for confirmation. The nature of corrective actions proposed varies depending on the severity of the failure to comply with the charter. 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 values charter: corruption, conflict of interest, forced or child labor, etc.

## TRANSPARENCY OF PAYMENTS

### IN THE EXTRACTIVE SECTOR

Transparency is right at the heart of the approach to responsible development adopted by AREVA's mining division, which attaches a great deal of importance to meeting its commitments. Consequently, since 2003, by lending its support to 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, Gabon and Kazakhstan, countries in which the group is engaged in its mining activities, have either EITI Compliant or EITI Candidate status. 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 Statutory Auditors of these subsidiaries carry out an audit which results in a certificate of compliance in accordance with the "International Standards on Related Services" (ISRS 4400) standard produced by the International Federation of Accountants (IFAC). Furthermore, AREVA's mining activity entities assess their involvement in the EITI process by means of self-assessment forms. This information is available in full on the group website: [www.aveva.com](http://www.aveva.com).

## AREVA AWARDS: INNOVATIVE

### PROJECTS BY OUR EMPLOYEES

The success of our approach to responsibility also depends on the engagement of all the teams, at all levels and in all areas. In order to stimulate initiatives, promote and support projects in the field and inspire individuals to play an active role in innovation and sustainable development policies, since 2005 AREVA has organized an internal competition that runs every two years: the AREVA Awards. This competition recognizes innovative projects that improve group performance, respect environmental, social and societal issues and set an example for all AREVA entities worldwide. Everyone is invited to participate, regardless of role, discipline or entity.

At the last AREVA Awards, 182 teams within the group entered the competition in October 2012. Twenty-two projects were selected to go through to the finals, and among the eight winners were two teams from AREVA's mining activities.



## THE 7 AREVA VALUES

### SAFETY AND PHYSICAL SECURITY

- ▶ The very nature of our businesses demands an acute sense of professionalism. For AREVA this translates into implementation of the highest standards of safety and physical security on an international level. It also implies superior know-how as well as constant vigilance in the fields of quality and environmental protection. AREVA fosters team spirit and provides the working conditions its employees need to carry out their work and achieve professional fulfillment.

### TRANSPARENCY

- ▶ Transparency, sincere communications and openness to dialog are hallmarks of AREVA's communication programs. The group's goal is to provide reliable and pertinent information enabling an objective assessment of the group's performance in terms of its environmental, financial, social and societal responsibilities.

### PROFITABILITY

- ▶ AREVA considers that it has a duty to achieve and maintain high returns for shareowners, employees and all stakeholders.

### SENSE OF RESPONSIBILITY

- ▶ As a major player in the energy market, AREVA understands its responsibilities, including those towards the wider public, which will ultimately benefit from the group's products and services.

### INTEGRITY

- ▶ Honesty, integrity and fairness govern all AREVA's practices and decisions. The group complies scrupulously with the laws and regulations of every country in which it operates.

### CUSTOMER SATISFACTION

- ▶ Its growth and sustainability as a group, and thus its ability to meet its commitments to stakeholders, are conditioned on customer satisfaction. AREVA applies all its skills and resources to achieving customer satisfaction.

### SPIRIT OF PARTNERSHIP

- ▶ AREVA seeks to build trusting and constructive relationships with all its stakeholders. To meet their needs, the group cultivates a spirit of partnership based on solidarity, receptiveness and dialog. To this end, its policy is to become involved in every one of the communities in which it does business. This partnership is based on respect for local customs and on understanding the wishes of the communities concerned.

# Our key issues in terms of responsibility

The issues associated with responsible development across all our sites are numerous, diverse and complex. We believe it is important to identify these issues in order to provide the best solutions by listening to our stakeholders and applying the best practices within the sector.

In this respect, several frameworks guide our approach to responsibility: the Values Charter, group policies and standards, respect for regulations and our commitment as part of the International Council on Mining and Metals (ICMM).



Meeting with representatives of the communities of Nunavut on the Kiggavik project, Canada.

## IDENTIFYING AND MEETING

### STAKEHOLDER EXPECTATIONS

AREVA has developed a system of methodological principles known as “stakeholder mapping”. It allows our teams to identify, analyze and respond to the expectations of the groups and communities impacted by our activities. Since 2012, we have been producing stakeholder maps for our future mining projects, such as those in Mongolia for example.

Several entities may be involved in this process of identifying and responding to stakeholders:

- ▶ via the dialog and consultation structures present in each country in which mining companies are working;
- ▶ within the Mining Social Committees [Comités Sociétaux Mines], made up of subsidiary and site directors, social leaders, the Social Responsibility Department, the Mining Business Group Communications Department and representatives of AREVA's Sustainable Development Department;
- ▶ within the departments at AREVA Mines Head Office (e.g. social responsibility, strategy, legal, communications, etc);
- ▶ within the sales entities of AREVA, integrating the Front End and Mining businesses (Chemistry, Enrichment);
- ▶ within the support departments at the group Head Office (e.g. financial, sustainable development, public affairs, communications, etc).

We have therefore decided that in each chapter of this 2012 report we will provide information of interest to our internal stakeholders, the International Council on Mining and Metals and our local stakeholders as a priority.



## APPLYING THE BEST PRACTICES IN THE EXTRACTIVE SECTOR

Although the observation and application of regulations is a prerequisite for our activities, 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. To this end, we are a member of the International Council on Mining and Metals (ICMM) and have adopted the associated principles and commitments.

### TEN ICMM PRINCIPLES

*Examples of deliverables within our mining activities*

**PRINCIPLE 1** : Implement and maintain ethical business practices and sound systems of corporate governance.

- Application of the Values Charter: “Sense of responsibility”, “Integrity” and “Customer Satisfaction”
- Ethical reporting

**PRINCIPLE 2** : Integrate sustainable development considerations within the corporate decision-making process.

- Nuclear Safety Charter, policies linked to occupational health and safety and environmental protection
- Application of the Values Charter in our contracts with service providers and customers
- Self-assessment of our CSR practices according to the ten sustainable development principles of the ICMM
- Definition of rehabilitation plans

**PRINCIPLE 3** : Uphold fundamental human rights and respect cultures, customs and values in dealings with employees and others who are affected by our activities.

- Ethical reporting and application of Values Charter: “Spirit of partnership”
- Procedure for raising concerns and filing complaints in the event of alleged discrimination or discriminatory behavior
- Employment policy and collective bargaining agreements
- Staff representative bodies
- “Voice of employees” staff survey
- Definition of employment and community investment commitments via Mining Social Committees [Comités Sociétaux Mines]

**PRINCIPLE 4** : Implement risk management strategies based on valid data and sound science.

- Application of Values Charter: “Safety and physical security”
- Business risk model and analysis/assessment of industrial, environment and health risks
- Procedures for preparing for emergency situations
- Reduction of radiological risks

- Implementation of ALARA principle
- Envir@mines R&D program

**PRINCIPLE 5** : Seek continual improvement of our health and safety performance.

- Application of Values Charter: “Safety and physical security”
- Occupational health and safety policy and associated action plans
- Diagnosis of occupational safety culture
- OHSAS 18001 management system
- Onsite training

**PRINCIPLE 6** : Seek continual improvement of our environmental performance.

- Application of Values Charter: “Safety and physical security”
- Environmental policy and associated action plans
- ISO 14001 management system
- Environmental monitoring and impact studies network
- Group commitment to “carbon neutrality”

**PRINCIPLE 7** : Contribute to conservation of biodiversity and integrated approaches to land use.

- Group commitment to biodiversity
- Biodiversity strategy currently being defined within the scope of our mining activities and engagement of our teams in dedicated working groups (e.g. FEDEM)
- Studies on our sites as part of impact studies

**PRINCIPLE 8** : Facilitate and encourage responsible product design, use, re-use, recycling and disposal of our products.

- Integration of eco-design criteria into our mining project guidelines
- Compliance with European regulations (e.g. REACH)
- Engagement of our teams in working groups (e.g. ICMM)
- Completion of R&D environmental studies (e.g. PNGMDR)

**PRINCIPLE 9** : Contribute to the social, economic and institutional development of the communities in which we operate.

- Application of Values Charter: “Spirit of partnership”
- Stakeholder mapping (identification and analysis of expectations) and implementation or formalization of systems for local communities to voice concerns currently undergoing definition
- Involvement in local communities and common investment funds to finance societal projects. (e.g. bilateral steering committee in Niger)

**PRINCIPLE 10** : Implement effective and transparent engagement, communication and independently verified reporting arrangements with our stakeholders.

- Application of Values Charter: “Transparency”
- Drafting of an annual non-financial report
- Definition of areas for improvement with a view to applying GRI guidelines and performing annual, independent CSR audits
- Involvement in local dialogue and consultation structures

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, see [www.icmm.com](http://www.icmm.com).

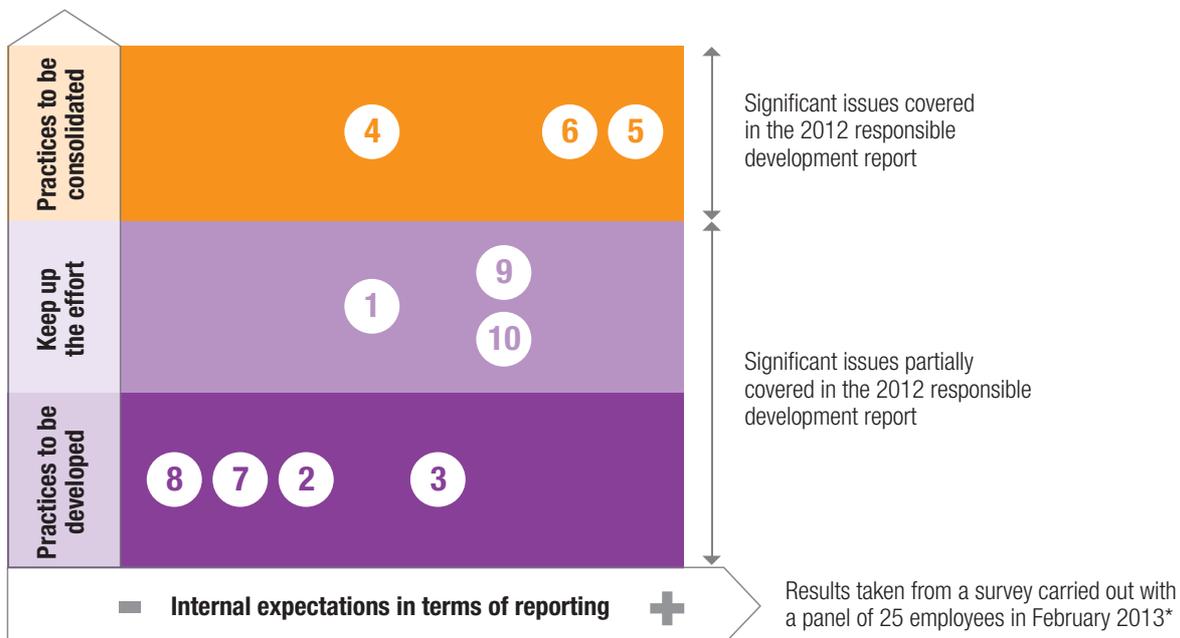
In accordance with our internal policies and commitments, we are applying these principles in the development of our Responsible Commitments Plan 2013-2016. They enable us to better understand the issues faced by the mining sector and act as a support in prioritizing the materiality of associated themes.

## PRIORITIZING KEY ISSUES IN TERMS OF RESPONSIBILITY

In December 2012, we conducted a self-assessment of our sustainable development practices with our directors and specialists on site and at the AREVA Mines Head Office. This exercise was based on the ten principles of sustainable development developed for the mining sector under the International Council of Mining and Metals.

The results enabled us to identify three levels of maturity in our practices for which we identified areas for improvement: the “Responsible Commitments Plan 2013-2016”. This self-assessment will be performed every two years, followed by the deployment of actions adapted according to site maturity, the type of mining activity (exploration, project, production or rehabilitation) and the geographic region. From 2014 onwards, the implementation of these principles will be audited annually within our activities by an independent third party.

### Results of our CSR self-assessment in December 2012\*



\* Self-assessment conducted by the CSR department of AREVA Mines

This graph is to be read as follows:

*“ICMM principle 5 relating to occupational health and safety is an important topic to be covered in the 2012 report according to our employees. The maturity of our approach related to this topic is assessed as high and we must continue to consolidate our experience and our know-how in this area”.*

We also consulted a group of AREVA Mines employees in order to better prioritize the issues to deal with in this report on responsible development. The following diagram shows the subjects that will be prioritized in this document and the maturity level of each of these themes on an operational level. The subjects are labelled 1 - 10 in reference to the ten sustainable development principles of the ICMM.

As principle 5, relating to occupational health and safety, had been identified as important, we cooperated with one of our sub-contractors (ESAFOR in Niger - cf. FOCUS on p35) to produce for the first time a case-study aiming to better explain our mutual involvement in the issue.

## PREPARING FOR THE FUTURE

To meet the growth in global uranium demand, AREVA's mining activities have been preparing to increase production with the aim of reaching 12,000 tonnes of uranium in 2016. Another challenge consists in keeping production costs as low as possible so as to remain competitive with respect to the market price. Finally, a strong, geographically diverse order book composed of an even balance of scalable fixed prices and prices indexed to the market is needed in order to effectively manage risk.

To maintain a level of resources and reserves equivalent to 20 years of production, an ambitious exploration program has therefore been deployed in the most promising regions on the globe (Canada, Mongolia, Kazakhstan, Niger, Gabon, Australia, etc). Major investment and R&D efforts are being made in the development of mining projects, both current (Imouraren, Cigar Lake) and future (Kiggavik, Midwest, Mongolia, etc).

Finally, the "Responsible Commitments Plan 2013-2016" aims to:

- ▶ improve the transparency of our approach to responsibility (GRI reporting, CSR reporting, valorization, etc),
- ▶ maintain a high level of risk prevention and management,
- ▶ continue to develop our social involvement in the regions in which we work (creation of regional Mining Social Committees [Comités Sociétaux Mines] and deployment of social policies adapted to the context),
- ▶ better understand the major environmental issues we are facing (in terms of biodiversity, water, energy efficiency, long-term impact management).

## GOVERNANCE OF AREVA'S MINING

### ACTIVITIES

AREVA's mining activities are grouped under AREVA's Operations Departments as the "Mining Business Group".

Since October 1, 2011, this operations department has been undergone a change in legal status to become a level-1 subsidiary, 100%-owned by AREVA SA: AREVA Mines SA.

This French legal entity, administrated by a Board of Directors, thereby provides an improved interface between its subsidiaries abroad and AREVA Corporate, also enabling greater visibility and stronger governance. AREVA Mines SA comprises two sites in France: the Head Office at the Tour AREVA in Paris La Défense and the Bessines-sur-Gartempe industrial site (Limousin). AREVA Mines is managed by Olivier Wantz, its Chairman and Chief Executive Officer.

The organization, operation and prerogatives of the Board of Directors are set by the statutes and are subject to national law. The Board of Directors meets at least twice a year. It decides how the company orients its activities and monitors their implementation. The Board of Directors comprises 13 administrators: five appointed at the proposal of AREVA, two appointed at the proposal of the CEA (French Alternative Energies and Atomic Energy Commission), three state representatives and three elected staff representatives (first election held in February 2013). A state inspector and a government auditor also attend Board meetings, as well as the secretary of the Central Works Council.

Together, "AREVA Mines SA" and "mining operations abroad" constitute the Mining Business Group, which has been headed by Olivier Wantz since April 1, 2012. He reports directly to AREVA's Executive Board and its Executive Management Board. He presides over the Mining Business Group Management Committee, which is composed of operational directors and support functions (Geoscience Department, Expertise and Projects Department, Operations Department, Human Resources Department, Communications Department, Finance Department, Strategy and Development Department and the Legal Department).

*Detailed information relating to financial performance, the nature of our operations and subsidiaries, the remuneration of chief executives and the various governance committees is available in the AREVA reference documents 2012 and the annual group report for 2012.*



# Challenges to overcome in our activities

AREVA supplies solutions for power generation with less CO<sub>2</sub>. Ranked first in the global nuclear power industry, the group's integrated offering to utilities covers every stage of the fuel cycle: from ore extraction to the design and construction of nuclear power plants, as well as associated services.

Mining activities are the first link in this cycle and in the integrated model of AREVA. They ensure, over the long term, that customers can be supplied with uranium to produce electricity.

Revenue of  
**€ 1,360 billion**  
(15% of AREVA group revenue)

More than  
**5,200**  
employees

**2<sup>nd</sup>** largest  
producer  
of uranium  
in the world  
with an output  
of **9,760**  
tonnes of  
uranium

**16 %**  
worldwide  
market share

**6 %\***  
of world's  
identified uranium  
resources

Present in  
**8** countries  
and across  
**5** continents

## GUARANTEEING SECURITY OF SUPPLY FOR OUR CUSTOMERS

The core purpose of our business is to supply "yellowcake" (uranium concentrate) to our customers in a way that is profitable, safe and sustainable over the long term against a changing economic climate and a global energy market that is in a constant state of flux. In accordance with the group's strategic "Action 2016" plan, launched at the end of 2011, our activities are focused on economic performance, business development and customer satisfaction, and innovation, as well as risk management, occupational safety and staff development.

AREVA was the 2nd largest producer of uranium in the world in 2012, producing 9,760 tonnes of uranium (financially consolidated AREVA share), an increase of more than 70% over the past five years.

In order to guarantee security of supply for our customers, AREVA does its utmost to ensure it has at all times weighted resources and reserves\* equivalent to 20 years of production.

Currently, the group has 6% of world resources and invests 50 million euros annually in a vast exploration program.

AREVA's mining activities have a diverse assets and resources portfolio, which constitutes an important factor in terms of security for utilities seeking long-term guarantees. The group currently has 40 utility customers, approximately 50% of nuclear utility companies worldwide. The 2012 order book came to more than 12 billion euros. It is geographically diverse but concentrated in two main regions: 45% Asia, 38% Europe. Contracts cover an average period of five to seven years, and certain agreements make provisions for deliveries up to 2035.

It is vital for our activities that we maintain a high level of trust among our customers: this involves providing local sales teams ready to listen to their needs as well as ensuring successful fulfilment of the contracts that bind us.

### FURTHER INFORMATION (\*)

**"Reserves"** refers to the uranium whose exploitation is technically and economically viable.

**"Resources"** includes promising uranium concentrations whose technical and economic viability has not yet been confirmed.



Belt filtering of yellowcake at the SOMAIR ore processing plant, Niger

### ADAPTING TO THE URANIUM MARKET...

The global uranium market is characterized by the exchange of low volumes in comparison to those encountered on other energy supply markets. It is a market that has a limited number of producers: around 75% of global production is supplied by six producers.

Uranium production supplies three-quarters of global consumption, while the remainder comes from secondary resources such as those created by US Department of Energy (DOE) destocking, MOX (mixed oxide) fuels, recycled uranium, etc.

In recent years, an increase in mining production levels has made it possible to reach a certain balance between global demand, which stood at 68,000 tonnes of uranium (tU) in 2012 (source: World Nuclear Association - WNA) and uranium production, 59,000 tU.

The WNA estimates that in 2020 demand will be 28% greater than in 2012. Increased consumption from nuclear power facilities worldwide, notably thanks to programs to construct new plants in Asia, and a forecasted decrease in secondary uranium resources of more than 30%, chiefly due to the end of the program to reduce military uranium stocks in the US and Russia, will be the main drivers behind this growth.

### ...AND THE CURRENT SITUATION

Since the Fukushima accident in Japan, there has been a "wait-and-see" attitude towards nuclear power, and the market has seen a drop in spot prices\*. The future sale of uranium stocks made available by the closure or shutdown of Japanese and German reactors, producer delays in selling uranium produced that year and changes to delivery schedules to Japan all combine to give the impression of an abundant supply.

Over the short term, this encourages buyers to wait in the hope that prices will drop still further, while sellers hurry to offload their uranium at a lower price. Furthermore, in order to compensate for weak demand, producers have pushed back or cancelled mining projects and reduced investment. Decisions associated with a drop in global exploration projects confirm predictions of a slowdown in production growth.

However, although the Fukushima accident has changed the outlook in the short and medium term, the fundamentals of the uranium market over the long term remain the same. Demand continues to grow and new mining projects are necessary in order to meet this demand.

### Uranium spot and long-term price trend (2009-2013)

Source: The Ux Consulting Company, LLC, site internet : <http://www.uxc.com/>



### FURTHER INFORMATION (\*)

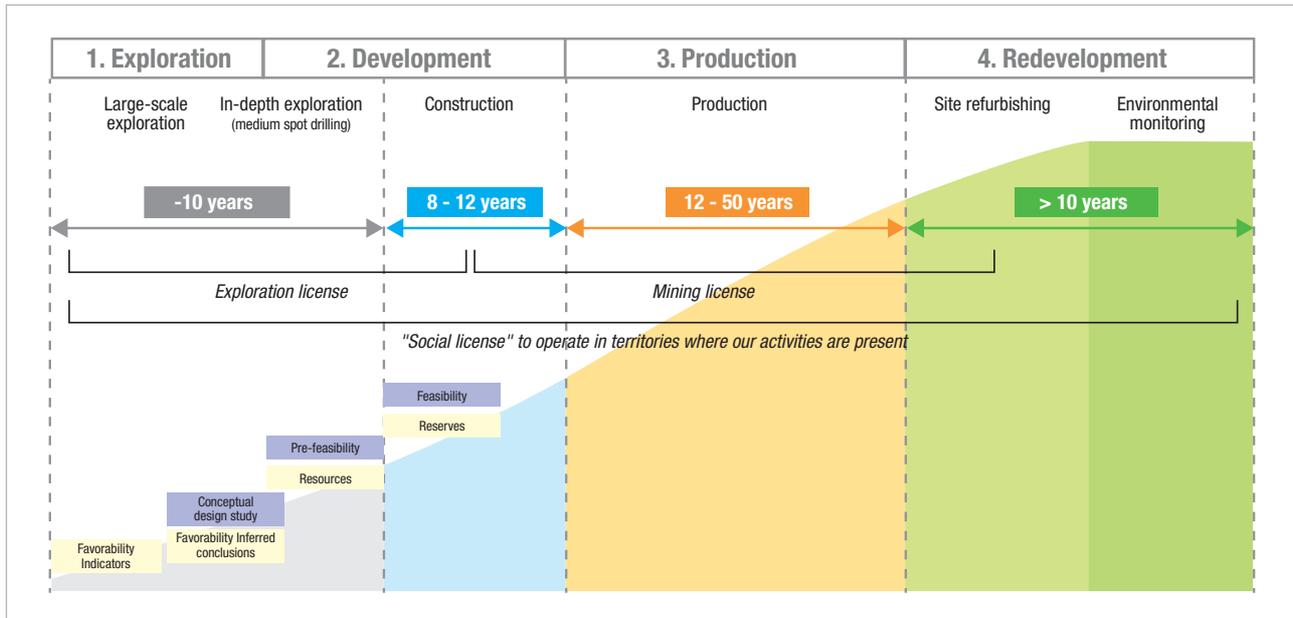
**Spot indicator:** evaluation of the price at which a particular transaction may be concluded concerning a delivery to be made within 12 months.

**Long-term indicator:** estimate of the price of contracts signed for delivery over several years (i.e. beyond the spot price).

### DIVERSIFYING OUR PORTFOLIO OF ASSETS

AREVA is present in 8 countries across all stages of the cycle, from exploration to mining project development as well as production and site rehabilitation. The group has a diverse portfolio of mining projects at different stages of development and located in different geographical regions:

- Projects under development such as Imouraren (Niger) and Cigar Lake (Canada);



- Exploration projects in the study phase, which will enter production in around fifteen years, such as the Kiggavik (Canada) and Zoovch Ovo (Mongolia) projects;
- Projects awaiting a favorable economic climate such as Trekkopje (Namibia) and McClean Underground (Canada).

The exploration process requires around ten years, from the discovery of the very first indicators to the confirmation of a potentially exploitable resource.

The development phase determines the technical, economic and environmental viability of a mining project. This is followed by the construction of the mine and industrial infrastructure.

During the production stage, the uranium ore is extracted according to the characteristics of the deposit, in open-pit mines, underground mines or using in situ recovery (ISR).

After processing, the natural uranium concentrate obtained, known as "yellowcake" ( $U_3O_8$ ), has a uranium content of 80%.

The rehabilitation of mining sites uses civil engineering and mining techniques and calls for expertise from a wide range of disciplines (environment, projects, social). The aim is to return operating sites to their natural state as far as possible.

AREVA's uranium comes from four mines, three of which are run by the group:

Country	Niger	Canada	Kazakhstan
Mines	SOMAÏR	McArthur River	KATGO
<b>Location</b>	Deposit close to Arlit in operation since 1971	In operation since 1999	Deposits at Muyunkum and Tortkuduk in operation since 2006
<b>Partners</b>	AREVA (operator): 63.4% SOPAMIN (Niger): 36.6%	Cameco Corporation (operator): 69.8% AREVA: 30.2%	AREVA (operator): 51% KAZATOMPROM: 49%
<b>Type of mine</b>	Open-pit mine	Underground mine	In-Situ Recovery (ISR)
<b>Type of processing</b>	Dynamic leaching and heap leaching	Dynamic leaching	In-Situ Recovery (ISR)
<b>Average yield</b>	2.8 kg of uranium per tonne (2.8 ‰)	200 kg of uranium per tonne (20 ‰)	0.8 kg of uranium per tonne (0.8 ‰)
<b>2012 production</b> <i>(AREVA's financially consolidated share)</i>	3,065 tonnes of uranium	2,270 tonnes of uranium	3,661 tonnes of uranium

## NIGER



### FOCUS

Integrating our approach to responsibility into our operations



COMINAK ore processing plant, Niger

### BACKGROUND

Since 2012, the teams at Cominak had observed that the chemical process for the processing of ore was consuming increasing amounts of acid while the production of this reagent on site remained limited. These teams, with multi-disciplinary skills (quality, process, manufacturing, maintenance, etc) developed an innovative process helping to achieve a significant reduction in acid consumption, optimize production, improve financial profitability and reduce the site's environmental footprint. This project won an award in the internal AREVA Awards for its "functional and operational performance".

### INNOVATION

This innovation consists of improving how sulfuric acid is injected at different key stages of the chemical treatment process. Until now, the acid was injected at a single point and in excessive amounts. This technical improvement thus helps to ensure better control over the volumes injected and the acid leaching yield, and to achieve this with installations that have already been in operation for over thirty years.

#### STATUS OF SULFURIC ACID

Sulfuric acid is used to transform the uranium contained in the ore from a solid to a liquid in order to undergo chemical treatment.

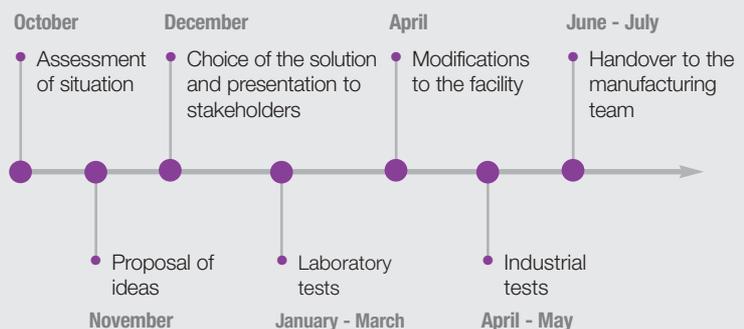
The quantity of acid to be used in the process has not only to be optimized to dissolve as much uranium as possible whilst keeping costs at an optimum, but also has to be sufficient to prevent clogging and deposits which would be harmful to the proper operation of the installations. Sulfuric acid is the leading chemical reagent, in terms of cost and volume, used at AREVA mines in Niger. At COMINAK, it accounts for 10% of production costs and requires more than 20,000 tonnes of sulfur to be transported to the site each year in order to produce the quantity of sulfuric acid necessary.

#### RESULTS

This process which has been in place since 2012 has made it possible to achieve the following results:

- decrease in sulfuric acid consumption by nearly 10% of annual volume whilst maintaining the uranium recovery yield at the same levels as before,
- decrease in production and maintenance costs,
- reduction in carbon footprint (190 tonnes per year, equivalent to 40 trucks transporting 1,800 tonnes of sulfur) and decrease in SO<sub>2</sub> emissions (80 tonnes per year),
- better management of risk of road accidents involved in the transportation of sulfur or sulfuric acid by truck,
- innovation potentially applicable to other AREVA mining facilities, such as the SOMAÏR site which could then reduce its CO<sub>2</sub> emissions by nearly 800 tonnes per year.

#### KEY STEPS 2011-2012





*Radiological inspection being conducted on the Kiggavik project, Canada*

# 02

## OUR RISK MANAGEMENT

All the risks associated with mining activities, including workstation risks, health risks, technological and environmental risks, are taken into account far upstream from any activity. This analysis and prevention approach is essential to controlling risks and has always been a priority of the group. Training, feedback and the sharing of experience are promoted. In addition, the radiological protection of employees and neighboring populations aims to ensure the lowest possible exposure to ionizing radiation.

ICMM principles ► 1 2 3 **4** 5 6 7 8 9 10

# Risk management

Several risk factors can have an impact on the performance and operation of our activities in different areas: industrial, financial, social, workstation, etc.

In addition, our activities can have an influence on our stakeholders. For these two components we strive to identify risk factors and potential consequences upstream in order to manage them better.



## SCOPE COVERED IN TERMS OF RISK

The scope of this report covers workstation risks, health risks, industrial and environmental risks. Risk assessments and approaches with regards to social and ethical aspects are not presented. The implementation of the methodological principles related to these areas is under study and is part of the multi-year responsible commitments to meet by 2016.

Overall management and coverage of risks liable to have an impact on our activities is presented exhaustively in the group's 2012 Reference document (pages 13 to 38).

## GOVERNANCE OF

## OUR RISK MANAGEMENT

AREVA mining activities comply with the regulations in force in the countries where the group is based, as well as with group standards, in order to manage and prevent risks related to our activities. The aim is to prevent any accidental or recurrent situation which can have an impact on people or the environment.

Risk management at AREVA, and more specifically for mining activities, involves the following stakeholders:

- ▶ **The Safety, Health, Security and Sustainable Development Department** of the group (D3SDD) has:
  - A technical expertise division to assist the teams involved in mining activities;

- An internal control division in addition to the AREVA Risks and Insurance Department for the annual review of risks with regards to occupational health and safety, nuclear safety, and the environment.

- ▶ **AREVA Mines' Safety, Health, Security, Environment and Radiation Protection (DSSERp) Department** and operators are responsible for conducting impact studies, hazard assessments, risk analyses, crisis exercises and performance management in conjunction with risk management.

- ▶ The remit of the **Management Committee of AREVA's mining activities** is to set targets, monitor the progress of related action plans and make decisions on any measures deemed necessary for risk prevention and management, in particular for major risk scenarios.

## PREVENTING INDUSTRIAL AND ENVIRONMENTAL RISKS

Industrial and environmental risks relate to incidents which can occur in industrial facilities. They are subject to numerous studies and analyses in order to be characterized as fully as possible in terms of severity, probability, etc.

The deployment of the guide for the completion of environmental risk analyses has therefore continued in 2012. The mining site hazard assessments are currently being finalized. These have highlighted good practices as well as areas in which sites must improve. Based on these

observations, multi-year action plans have been deployed for SOMAÏR, COMINAK, KATCO and McCLEAN to improve the overall level of accident risk management (e.g. the ammonia storage and emptying facility at KATCO was fully reviewed: replacement of containers, review of emptying station).

The mapping of industrial risks have enabled the various scenarios to be classified. In 2012, major-risk scenarios for existing facilities were brought under control for all sites. An update is now underway to classify the remaining scenarios.

External risk factors related to malicious acts do not come under the scope of industrial risk prevention. They are managed by AREVA's Protection of Persons and Corporate Assets Department (DPPP). Under exceptional circumstances related to acts of terrorism, they are managed by the national authorities of the countries in which the group is based and the French authorities.

### PREVENTING CHEMICAL RISKS

#### AT WORKSTATIONS

The prevention of risks at workstations aims to limit the potential impact of activities on the health of employees from the group and from external companies. For most of our sites this is performed within the framework of OHSAS 18001 certified safety management systems.

**Carcinogenic, mutagenic or reprotoxic substances (CMR).** An applicable procedure has been in place since 2008 for all sites in which the group is the main operator. It comprises two components, one related to workstation risk management, and the other to environmental risk management. The objectives of this directive are in particular to identify and eliminate (if technically and economically possible) all 1A and 1B classified CMR substances (in accordance with European regulation 1272/2008 applying the GHS\* in Europe), and manage the traceability of employee exposure through measurements and monitoring.

**Asbestos.** Following the update of internal directive 2009 dealing with asbestos, the reviews conducted in 2010 and the self-assessments of sites, a status report has been drawn up on risks related to the presence of asbestos in facilities. This has led to a number of measures being taken, including asbestos removal and containment.

#### FURTHER INFORMATION (\*)

**GHS: Global Harmonized System for Classification and Labeling of Chemicals.**

### PREVENTING RISKS TO POPULATIONS

Impact studies for facilities take into account effects on the environment, fauna and flora, as well as the effects on people.

First of all, radioactive and/or conventional chemical releases, whether aqueous or gaseous, are reduced at source. Secondly, risk control measures (leak detection, instrumentation, etc) are implemented. The residual impact of releases on health and the environment is regularly assessed and measured through a monitoring network. Other forms of pollution liable to be produced by the site are also monitored.

Under the group's environmental policy, the deployment and/or update of chemical health risk assessments continued in 2012. These studies aim to characterize the potential health effects for people chronically exposed to chemical releases. They are conducted on scenarios based on the normal operation of facilities. They also take into account the various routes of exposure and the most realistic approaches possible. They are conducted anew following each change of note to facilities, and in the light of the latest available scientific knowledge.

### PREPARING FOR EMERGENCY

#### SITUATIONS

Emergency preparedness exercises have a formal, documented feedback and lessons learned process in place. Crisis exercises are regularly conducted at local level. Those involving teams at national and head office level are conducted twice a year for AREVA mining activities. These exercises provide an opportunity to train the various stakeholders (internal and external) and foster their skills and experience, test organizations, procedures and equipment, and define new areas for improvement. Exercises have been conducted recently within mining activities: 1 locally in France at our Bessines (France) site, and 1 involving several levels (local, national, head office) at our site in Kazakhstan.

In 2012 AREVA strengthened its organization in this area by creating a department in charge of safety crisis management within the D3SDD. A new crisis situation management procedure adapted to mining activities has been available since October 2012.

# Radiation protection

Through radiation protection we implement all the prevention measures enabling the exposure to radiation of teams and populations to be limited. We base our work on the national and international recommendations governing limits of exposure of persons to the radioactivity liable to be emitted by an industrial activity, in addition to natural radioactivity.



Preparation of individual dosimeters, SOMAIR, Niger

## FURTHER INFORMATION (\*)

**Radioactivity** is a natural phenomenon. It is caused by the capacity of the nuclei of the atoms of certain radioactive bodies to spontaneously transform into other atoms (radioactive or otherwise), emitting energy-carrying radiation in the process. It can be found in the ground and the materials of the earth's crust (telluric radiation), emitted by the Sun (cosmic radiation) and even in the human body (potassium 40, carbon 14). Whether natural or artificial, radioactivity has the same characteristics and effects.

## OUR APPROACH AT THE WORKPLACE

Our approach in terms of the radiological protection of our employees is based on French regulations, local regulations, international recommendations, the group's Nuclear Safety Charter and related AREVA standards.

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 for sound design. Following this, during normal operation, risks analyses are conducted at workstations.

Employee exposure is assessed and monitored daily. Areas for improvement are identified and work carried out to reduce exposure according to the ALARA principle\*.

In this way, several procedures have been drafted in 2012 at AREVA Mines head office to better standardize our practices:

- ▶ Taking into account of radiation protection during project phases;
- ▶ Guide for reporting events related to occupational health and safety, the environment, and radiation protection in mining activities;
- ▶ Requirements in terms of radiation protection applicable to external companies operating in mining sites.

## FURTHER INFORMATION (\*)

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

## MONITORING OF RADIOLOGICAL

### RESULTS

As part of the quarterly "AREVA Business Review" radiation protection is subject to monitoring at group level. Monthly monitoring is also conducted by AREVA mining activities through "Monthly Scorecards". Therefore, radiation protection officers for our exploration and operation activities can communicate results related to maximum received doses. This network is coordinated by the radiation protection division of the AREVA Mines DSSERP department.

## REGULATIONS GOVERNING RADIATION PROTECTION OF WORKERS

Recommendation 103 of the International Commission on Radiological Protection (ICRP) and Euratom directive 96/29 set the maximum exposure of an employee at 100 mSv over 5 years, without exceeding 50 mSv during the course of a single year. For the global specialists working at the ICRP this limit ensures there is no impact on health. French regulations are more restrictive, imposing a limit of 20 mSv per year.

The group sets a target within our subsidiaries of a maximum exposure of 16 mSv per year for our employees and external service providers alike. Additional specific monitoring is conducted for workers exposed to between 14 and 16 mSv. This internal provision is more restrictive than the regulations in force and applies in every country in which AREVA operates.

Regulatory limit set for employees by	Cumulative annual dose over a rolling 12-month period for exposed workers
ICPR & EURATOM directive	100 mSv over 5 years
Niger	100 mSv over 5 years
Canada	50 mSv
Kazakhstan	20 mSv on average over 5 years without exceeding 50 mSv in any year
France	20 mSv
Namibia	100 mSv over 5 years without exceeding 20 mSv per year
Mongolia	100 mSv over 5 years without exceeding 20 mSv per year
Target set by AREVA Mines	16 mSv

### 2013 TARGETS

#### FOR THE RADIATION PROTECTION OF WORKERS

Group policy in terms of radiation protection aims to limit the exposure of employees as far as possible, within an ALARA approach. That is why we have set as a pre-requisite compliance with 20 mSv/year for all facilities. The target was met in 2012, even if local regulations can be less restrictive.

For 2013 we have set out the following internal targets:

- ▶ 0 persons exposed to an average effective dose of more than 16 mSv per year, and,
- ▶ adopt an ALARA approach to limit the number of people exposed to an average effective cumulative dose of more than 14 mSv as at the end of December 2013.

## EXPOSURE TO IONIZING RADIATION OF POPULATIONS NEAR MINING SITES

The radiological impact of mining sites on neighboring populations likely to be the most exposed is estimated every year. It is expressed in “cumulative effective dose”, for which the unit used is the millisievert per year (mSv/year) and this constitutes a health impact indicator.

This dose is calculated based on the various results of inspections from our environmental monitoring system (dosimeters, sampling, in some cases a metering plan). This network is deployed in the living areas of the populations likely to be the most exposed, called “reference group”. It targets the different routes of internal and external exposure: water, air, soil, food chain. 2012 results are available as at the end of the first half of 2013 for Niger, Gabon and France (and are therefore not presented in the 2012 report). They are also provided to local authorities.

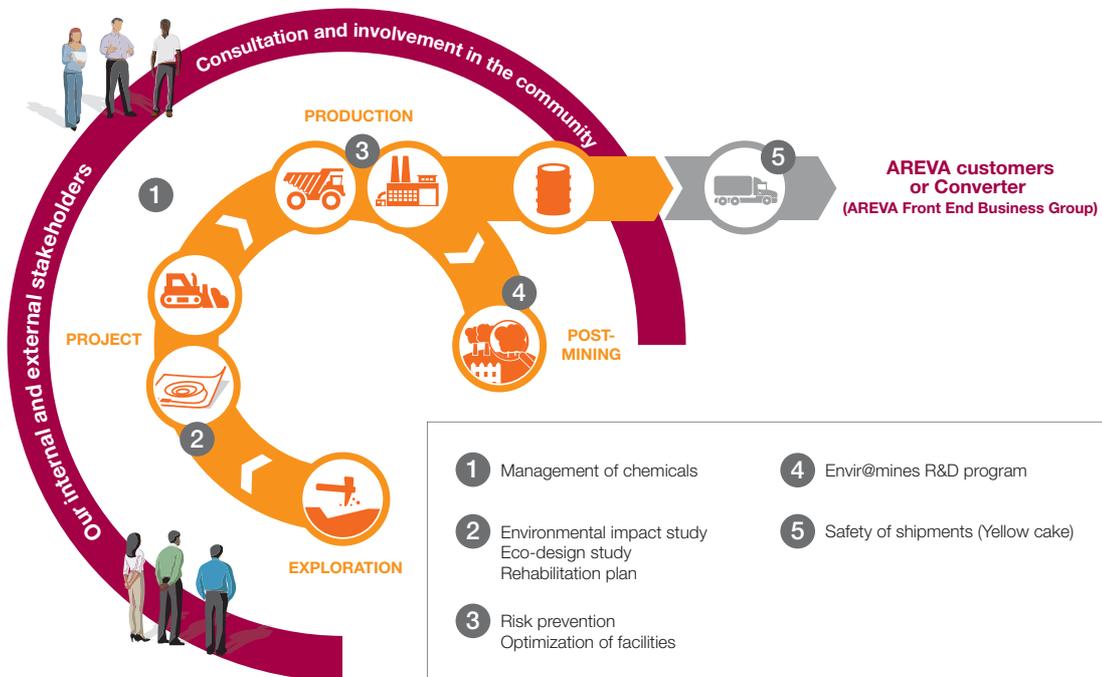
Analyses are conducted by a company specializing in the radiation protection of mining sites. This laboratory is COFRAC-accredited and has several accreditations renewed by the French Nuclear Safety Authority.

The recommendations of the ICRP and the European directive, applied in a number of countries including France, stipulates that the cumulative dose for the public should not exceed 1 mSv per year.

Regulatory limit for populations by country	Cumulative annual dose on top of natural radioactivity
Niger	1 mSv on average over 5 years without exceeding 5 mSv in any year
Canada	1 mSv
Kazakhstan	1 mSv on average over 5 years without exceeding 5 mSv in any year
France	1 mSv
Namibia	1 mSv per year
Mongolia	5 mSv over 5 years without exceeding 1 mSv per year

# Preventing risks throughout the cycle of our activities

We assess and identify all solutions for optimizing our activities throughout the lifecycle of the mine, both in terms of economic and environmental aspects, with the aim of preventing risks as far upstream as possible for the benefit of our employees and the general public.



## MANAGEMENT OF CHEMICAL SUBSTANCES IN EUROPE **1**

AREVA is subject to REACH (Registration, Evaluation, Authorisation and restrictions of CHemicals,) as a manufacturer, importer and user of chemical substances. This regulation establishes a policy for the management of chemical substances within the European Union. The aim is eventually to substitute and replace the most hazardous substances in terms of environmental and health concerns.

Within this context, in 2012 a substitution protocol was updated within the group and is under study for the scope of mining activities. This practice, currently deployed for AREVA

sites in Europe, helps to improve our knowledge and experience in the area. It also enables us to share our knowledge in the ICMM working group devoted to the management of chemical substances.

## ENVIRONMENTAL IMPACT STUDY **2**

As part of AREVA activities, an environmental impact study may be drafted internally or by service providers. Addressed to the authorities and to the public, its purpose is to assess the impact (both positive and negative) of a project on the natural and economic environment. It is an essential phase in moving operation and development projects towards lower-impact solutions and in fostering effective consultation with

the public. This type of study is systematically conducted at each of our sites before the launch of a project and as soon as a significant modification of an activity is considered.

In 2012 an impact study was conducted in Niger for SOMAIR's PUMA project (PUMA standing for Petite Unité pour pallier le Manque d'Acide - i.e. small unit to compensate lack of acid). It was subject to a public hearing and a technical discussion workshop. The awarding of an environmental compliance certificate by Nigerien authorities marked the validation of this study.

### ECO-DESIGN STUDY 2

Eco-design aims to identify the technical and organizational options available to minimize environmental impacts, anticipate regulations and prevent risk factors. AREVA has been committed to this approach since 2008. In general, the eco-design approach has been applied since 2010 to all our new projects, such as for Imouraren in Niger. Indeed, it is a recommendation included in our mining project reference guidelines.

In 2012 this initiative was renewed for the SOMAIR PUMA project to optimize sulphuric acid supply. This enables the transportation of acid by truck over long distances to be avoided and reduces the risk of accidents and spills. In addition, this new industrial unit shall be equipped with a gas scrubber to reduce releases into the atmosphere.



Acid production unit,  
SOMAIR, Niger

### REHABILITATION PLAN 2

The rehabilitation plan enables post-mining issues to be anticipated by considering the measures required following the end of mining operations at a site. It also enables an estimation of the financial provisions required for site rehabilitation works. More specifically, it consists of an

inventory of the various items (e.g. waste rock piles, storage of tailings, open-pit mine, etc) which can be a source of environmental impacts. These impacts are then assessed and subject to a project to eliminate or reduce related risks. Technical and financial aspects are regularly reviewed collectively at AREVA.

### ISO 14001 AND OHSAS 18001 3

The prevention of occupational and environmental risks is carried out in most of our mining sites based on a management system which meets the requirements of standards ISO 14001 (for the environment) and OHSAS 18001 (for occupational health and safety).

Location of our sites	Certification status on December 31, 2012	
	OHSAS 18001	ISO 14001
Australia	certified	certified
Canada	certified	certified
France	certified	certified
Kazakhstan	objective 2014	objective 2014
Mongolia	objective 2015	objective 2015
Namibia	certified	not certified
Niger	certified	certified

### OPTIMIZATION OF FACILITIES 3

As part of a continuous improvement approach, our teams strive to develop our facilities to improve risk prevention, costs, and environmental impacts. These approaches are also promoted every two years within the group through the internal "AREVA Awards" competition. Mining sites took part in this process, and an award was handed out to the project presented by our COMINAK site in Niger, which aims to improve our production process by optimizing acid injection (cf. FOCUS p17).

### R&D PROGRAM: ENVIR@MINES 4

An environment-focused R&D program has been implemented within our activities: Envir@mines. This cross-functional project aims to better characterize the risks related to Post-Mining over the long term. It also aims to define the solutions related to the following four key topics:

- ▶ Improve knowledge of our sites;
- ▶ Improve knowledge relating to the transport of contaminants;

- ▶ Assess the potential impact of our sites on people and ecosystems;
- ▶ Assess technical solutions to reduce these impacts.

These topics are addressed through several research projects in the countries in which we are based. A case study on this topic is presented on page 54.

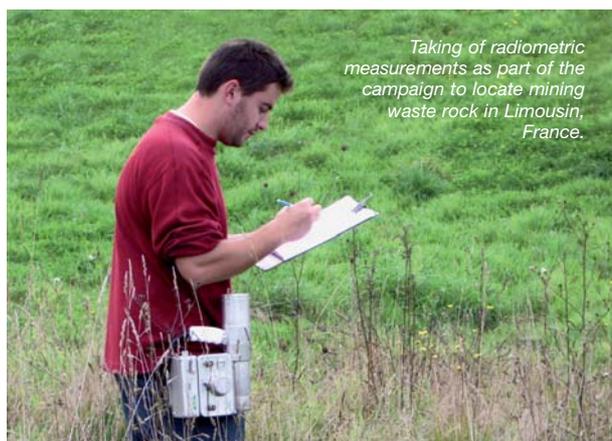
## POST-MINING MANAGEMENT 4

Following the mining of ore, mining sites are rehabilitated to ensure sustainable safe and healthy conditions for the public, and enable landscape integration. An environmental monitoring network has been implemented for all former sites to monitor their long-term development. Since the beginning of the group's mining activities, more than 400 million euros have been committed to the dismantling of facilities and rehabilitation of sites in France, Gabon, the United States and Canada. Post-Mining management requires the mobilization of specific scientific expertise as well as technical and economic expertise.

In France, in compliance with regulations, AREVA manages and monitors 234 former mining sites, of which only 55% were mined by AREVA (through CEA or COGEMA). As part of a continuous improvement approach for the prevention of environmental risks, AREVA teams work actively on the four major areas defined in the memorandum of July 22, 2009, addressed to French préfets by the ASN and the Ministry in charge of the Environment at the time. For each area a series of measures have been taken during the 2009-2012 period:

- ▶ **Inspection of former mining sites:** access to sites has been restricted (implementation of fencing and informative signage), and environmental monitoring is ongoing. Nearly 100,000 samples and analyses are conducted each year for French former mining sites for environmental monitoring purposes.
- ▶ **Improving knowledge of the environmental and health impact of former uranium mining sites:** full reviews of the environmental status of sites are now conducted every ten years (ten-year operating reports).
- ▶ **Management of waste rock:** AREVA has conducted a survey campaign to identify all locations where mining waste rock from French former mining sites was reused. Following an aerial survey completed in 2010, a ground inspection is underway in each relevant area.
- ▶ **Actions to engage, inform and consult:** Local Information and Monitoring Commissions (CLIS - Commissions Locales d'Information et de Surveillance), which bring together representatives from public authorities, the operator and local organizations at least once a year, have been strengthened or created in areas where they did not previously exist (for example: creation of a CLIS in

Brittany in 2012). These enable the sharing of information and engagement with local players on Post-Mining issues.



## SAFETY OF TRANSPORT SHIPMENTS 5

Management and control of the safety of shipments of radioactive and hazardous materials is a strategic component of AREVA activities. This includes safety in the design, manufacture and maintenance of packaging, reliability of transport operations themselves and incident or accident preparedness.

Uranium is transported in sealed steel drums which are delivered to the converter who then manages them as radioactive waste. For example, in France within the Front End Business Group, COMURHEX, responsible for converting Yellow Cake into UF<sub>6</sub>, receives drums from mining activities. They are then crushed and shipped as Very Low Level Waste (VLLW) to the storage site of the French National Radioactive Waste Management Agency (ANDRA), in Morvilliers in France.

In 2006, AREVA senior management assigned to the group's Logistics Business Unit the task of "shipment supervision", which commits the BU to controlling shipments of radioactive materials presenting a specific risk for the whole group. The supervision applies in several areas:

- ▶ upstream of the transport operations, through the permanent deployment of identification, assessment and risk reduction actions;
- ▶ in an operational context, through the monitoring of shipments and the players involved. There is a team of inspectors in place to conduct regular safety inspections and audits of transport service providers (1,300 in-depth inspection operations for all modes of transport used by AREVA since 2007);
- ▶ in a crisis management situation, following an incident or accident. In the event of an actual crisis, the department in charge of supervision within the Logistics Business Unit maintains control and coordinates the deployment of a Transport Emergency and Response Plan (PUI-T).

## KAZAKHSTAN

### FOCUS

Preventing risks related to climatic events



*Crisis exercise, Katco, Kazakhstan*

### BACKGROUND

On January 10, 2013, a large-scale crisis exercise was conducted in Kazakhstan involving teams from KATCO JV LLP, AREVA Mines and AREVA Corporate.

The scenario of this exercise was to manage incidents that may occur in relation to a climatic event: traffic accidents, pollution due to an ammonia cloud, interruption of communications, etc. The incidents involved teams from KATCO (local and expatriate staff), sub-contractors and suppliers. The scenario was devised in order to test how teams would respond in such a context and whether the necessary means of communication were used.

The exercise required the intervention of a number of entities on an international scale: the site at local level (advance command post), the emergency crisis control center (local command and management post), the crisis control center at Almaty (regional command and management post) and the AREVA crisis management center (AREVA command and management post), with the support of the AREVA Mines crisis technical team.

### SIMULATED STAKEHOLDERS

Families of employees, local authorities and media (simulated by the legal department on site) and media in Paris (simulated media pressure).

### GOVERNANCE OF CRISIS MANAGEMENT: 4 LEVELS

- **Level 1 - Advance command post:** teams involved in the scenario (emergency situation response team closest to the scene of the accident, firefighters, medical teams, etc). They are coordinated locally by the emergency situation response coordinator who reports to the emergency control center.
- **Level 2 - Local command and management post:** the crisis management center manages the emergency situation by mobilizing and deploying the resources envisaged under the Emergency Situation Response Plan. It is responsible for alerting, informing and liaising with the local and national authorities.
- **Level 3 - Regional command and management post:** the AREVA Mines crisis control center is the point of contact within the country and is in contact with the authorities. Its main role is to monitor the overall crisis management system in the country and to provide the necessary means of communication with the head office in Paris amongst other things. The communications strategy is proposed to the AREVA command and management post.
- **Level 4 - Direct command post - national level:** the AREVA crisis control center provides its support to the regional command and management post for the making of important decisions, coordinates the different entities of the group if necessary, in particular for the transport of hazardous substances. The communications strategy is validated at this level, in conjunction with the entities concerned.

### EXPERIENCE FEEDBACK

All local and French teams provided positive feedback from experience based on this exercise, with 75% of objectives attained. It provided a means of testing new risk scenarios with local and centrally-based teams and to allow less experienced participants to ramp up their skills for this type of exercise. Through a coincidence of scheduling, the teams had to mobilize themselves again 48 hours after the planned exercise, this time to manage a crisis under real conditions, also relating to a climatic event.



Safety day on the Tortkuduk site, Katco, Kazakhstan

# 03

## OUR COMMITMENT TO OCCUPATIONAL HEALTH AND SAFETY

ICMM principles ► 1 2 3 **4** 5 6 7 8 9 10

AREVA is committed to building a culture of health and safety of the very highest level possible, involving all employees and all sub-contractors for its mining activities. Quality of life in the workplace, the prevention of risks at workstations, and the health of both its employees and local populations are the subject of regular diagnostics and a continuous improvement initiative. All possible measures are taken to encourage employees to behave in an exemplary manner.

# Our occupational health and safety policy

We deploy an active occupational health and safety policy based on prevention, organizational principles and best practices shared between entities. The aim is also for our teams to adopt exemplary conduct in terms of occupational health and safety. The setting up of management systems and making the most of the skills of all our specialists are ways of helping to achieve this objective.



Drum filling workshop on the Trekkopje site, Namibia

## FOCUS ON THREE MAIN ACTION AREAS

AREVA's occupational health and safety policy focuses on the following three main action areas:

- ▶ the continuous improvement of occupational health and safety (culture, risk analyses, employee retention, responses to existing pandemics);
- ▶ stronger recognition of the importance of quality of life in the workplace within our organizations and in our management procedures (prevention of psychological risks, managerial training concerning psycho-social risk factors);
- ▶ monitoring of the impact of our sites' activities on the health of local populations (benchmark health assessment, health risk studies, research programs to study the health of populations living in the vicinity of our sites).

## PROMOTE A CULTURE OF OCCUPATIONAL SAFETY

Safety constitutes one of the five pillars of AREVA's strategic plan, Action 2016. In order to develop a group culture which guarantees the best safety conditions for our employees, AREVA launched the "Safe Together" program in March 2012 with support from the very highest level of the organization. It is devoted to promoting a culture of occupational safety and primarily aimed at managers.

For AREVA's mining activities, this is a goal which is incorporated into their managerial approach to occupational

safety. Associated action plans are being deployed across all our entities with the aim of eliminating hazardous situations, encouraging personnel to be more vigilant and to adopt exemplary forms of conduct.

More specifically, the different goals of "Safe Together" can be broken down into the following points:

- ▶ An improvement plan to promote occupational safety on each site;
- ▶ A system of recognition and reward;
- ▶ Clearly defined and applied standards;
- ▶ Improved group-wide communications;
- ▶ Visits to underscore commitment and sharing to promote occupational safety;
- ▶ Safety objectives defined for each manager.

## SET UP A NEW INTERNATIONAL ORGANIZATIONAL STRUCTURE TO DEAL WITH HEALTH-RELATED ISSUES

Health is something that is of importance to us all and we endeavor to limit the health risks to which our employees may be exposed. In terms of occupational health, and thus in terms of regulations, employees are the responsibility of their entity of origin: Establishing an internal policy is a way of ensuring practices are harmonized.

In particular, our health organization has been undergoing optimization since 2012 on our sites in Mongolia and Gabon. This process of optimization consists of ensuring the better

deployment of aspects related to occupational health and healthcare and ensuring that adequate internal medical teams and structures are in place to address such issues. It also involves defining the different health-related evacuation measures to be triggered in the event that our employees should require more complex medical care.

Within the AREVA Mines Safety, Health, Security, Environment and Radiation Protection (DSSERp) Department, an assistant medical director has been placed at the disposal of mining activities; He works in conjunction with the Medical Director of AREVA, the network of occupational health doctors and the healthcare personnel deployed on all our sites.

### DEVELOP HEALTH AND SAFETY TRAINING

The protection of our employees also means taking action to provide training and raise awareness about health and safety. For new recruits and delegated employees, safety induction and training courses are organized on all our sites. Furthermore, a general training course on occupational health and safety, radiation protection and the protection of personnel and assets has been set up at the head office of office of AREVA Mines. It is primarily aimed at employees going away on delegation and expatriates. Since 2011, this training course has been followed by 324 employees reporting to AREVA Mines Paris.

Other training courses are also delivered as part of our activities: training and refresher courses for first aid instruction; raising awareness on sites about public health issues in the country concerned, as well as health risks, HIV, hepatitis B, tuberculosis; raising awareness about issues of hygiene adapted to local issues (nutrition/sport, balance and well-being at work, basic hygiene); training (and mandatory refresher courses every three years) for employees carrying out their professional duties in restricted areas.

#### MORE INFO:

##### **Safety performance and incentive criterion**

*In order to raise the awareness of employees on the Bessines and Paris sites in France about taking working and safety conditions into account, the AREVA group has integrated performance in terms of occupational safety into its calculation of employee incentives. This criterion is made up of two equally weighted components, consisting of the incidence ratio for lost-time industrial accidents for AREVA Mines on the one hand and analyses of causes conducted as a result of an industrial accident with and without lost time on the other hand.*

### PROMOTE DIALOG WITHIN HEALTH, SAFETY AND WORKING CONDITIONS COMMITTEES (CHSCT)

For the mining activities of AREVA, the labor code relating to the setting up of a Health, Safety and Working Conditions Committee (Comité d'Hygiène, de Sécurité et des Conditions de Travail - CHSCT) applies to the French sites in Bessines and Paris, where the head office of AREVA Mines is located. This regulated instance represents employees on issues relating to health, safety and working conditions. It may make recommendations to the employer on all matters handled by this instance and carry out missions for the purposes of prevention, monitoring, checks and surveys. The Bessines CHSCT has existed since the creation of the site, while the CHSCT for the Paris site held its first meeting on January 27, 2012. In addition to Paris-based employees, this latter committee also represents employees sent on delegations to sites abroad.

The CHSCTs consist of representatives of personnel of the employer, of the labor inspection authority, occupational health doctors, health insurance representatives and other specialists who may be invited to attend if necessary. Ordinary meetings are held on a quarterly basis. They may be supplemented by other meetings in the interim to monitor a particular issue. In the event of a near-accident, an extraordinary meeting may be held within the 24 hours following the occurrence of the event. Since the end of 2012, representatives of the CHSCTs from the two sites have been following training courses to gain a better grasp of the regulations which governs this instance and of how it operates.

There are instances equivalent to the CHSCT in France on our sites worldwide, such as in Niger (Comité Santé Sécurité au Travail), Canada (Occupational Health Committee) and Kazakhstan (Labour Collective) for example. They are all set up within the framework of collective bargaining agreements and perform the same role as the French body. The number of representatives of personnel may vary, while as far as meetings are concerned, they are held on a monthly basis in Niger, on a quarterly basis in Canada and as necessary in Kazakhstan.



Fleet of healthcare vehicles, Niger

# Commitments of our teams

In order to improve our performance in terms of safety, in 2012, we conducted a process of diagnostics to examine our safety culture on several of our sites, in Niger, Kazakhstan, Mongolia, France and Canada. 1,692 employees took part in this survey conducted in order to more effectively identify the types of behavior that help to improve occupational safety. The results of the audit were presented at the start of 2013 to members of the Management Committee of the Mining Business Group and to the managing directors of sites.



Safety day on the Bessines site, France

## IDENTIFY AREAS FOR IMPROVEMENT

### FOR 2013-2015

This seminar made it possible to identify areas for improvement and to determine the next working goals for 2013/2015 based on the four following pillars: "leadership and culture", "standards and procedures", "organization and skills", "risk analysis and prevention".

#### Leadership and culture

- ▶ On all of our sites, share the CEO's vision of occupational safety and take the necessary associated action: set up a safety steering committee, take actions to raise awareness, share our culture of occupational safety with our employees and external partners, organize visits to underscore commitment to and sharing of best practices relating to safety by Top Managers.

#### Standards and procedures

- ▶ Formalize safety practices common to all sites and the associated experience feedback. Strengthen reporting and analysis of events.

#### Organization and skills

- ▶ In addition to the optimization of our safety organization, set at least one applicable safety objective for each employee. Provide the support and medical expertise necessary on site and organize occupational health and emergency measures (health-related evacuations) within each entity for local personnel and expatriates; conduct regular reviews to ensure the adequacy of the occupational health and safety organization.

#### Risk analysis and prevention

- ▶ Reinforce the crisis management system.
- ▶ Conduct systematic analyses of workstation risks, implementing the associated measures.

- ▶ Monitor the impact of our activities by conducting studies of radiological and health risks; provide follow-up for our former employees as part of the Health Observatories initiative.

### BE COMMITTED TO THE OCCUPATIONAL HEALTH AND SAFETY OF OUR SUB-CONTRACTORS



Measures relating to the prevention of workstation risks also apply to AREVA's sub-contractors. They are written into contractual clauses and in practice constitute a commitment on the part of sub-contractors to comply with the group's Value Charter which makes particular mention of occupational health and safety.

In 2012, we regrettably had to report two fatal accidents: the first occurred on the premises of a sub-contractor of our production subsidiary in Kazakhstan, while the second occurred with a sub-contractor on our project in Namibia. Such a situation, in the same respect as any fatality that may affect our personnel, is unacceptable. In June and December 2013, we plan to organize two events to raise awareness and take action in this respect for our various activities and with our sub-contractors.

**Number of accidents in 2012 for all workers involved in AREVA mining activities (employees and sub-contractors)**

Personnel	Fatal accident	Lost-time accident	Accidents without lost time requiring medical treatment	Accidents without lost time requiring first aid
AREVA	0	20	36	50
Sub-contractors	2	14	47	63
<b>Total</b>	<b>2</b>	<b>34</b>	<b>83</b>	<b>113</b>

More specifically for companies to which we sub-contract drilling services, we wish to reinforce the appendices to our contracts: a form to be filled out with specific information on their skills in terms of occupational safety, the protection of the environment, their labor commitments, their technical expertise, etc; and procedures relating to environmental requirements and the management of professional risks (currently being updated and appendices to be introduced by the end of 2013). In addition, health-related recommendations have been in place since 2012 (medical examinations, vaccinations, first aid training).

### PRIORITIZE COMMUNICATIONS AND FEEDBACK FROM EXPERIENCE

Whether it is in the half-yearly employee meeting ("Grand Rendez-Vous" held at the head office in Paris with the CEO and the sites via teleconference), in the field or in Management Committee sessions, safety is always a matter that receives attention.

Each managerial meeting starts with five minutes devoted to safety. These monthly results are always passed onto the Management Committee of the Mining Business Group for consideration and in order to take any operational decisions if necessary, as well as to the occupational health and safety departments and operational departments on sites. They are accompanied by a presentation of the events of the past month, as well as queries, questions or comments by the sites (examples of topics addressed: definitions and procedures for calculating safety indicators, the safety standards of the group, near-accidents, etc).

Certain events are also covered by experience feedback provided from our occupational safety network, from management level of mining activities, as well as from the Safety, Health, Security and Sustainable Development Department of AREVA (depending on their severity, potential severity or potential of recurrence). Feedback from experience is also encouraged through communication about best practices.

# Analysis of results

We track the performance of our safety policy via monthly reporting of industrial accidents (see pyramid: near-accident, first aid, medical attention, lost-time accident, fatal accident). This system of reporting is also intended to gain a better picture of how our employees are being monitored based on medical consultations for active employees, hospital admissions and health-related evacuations carried out, statistics on pathologies etc.

The circulation of results addressing health issues is restricted internally for reasons of confidentiality.

A weekly “safety management chart” is drawn up for more effective operational tracking of results. It is shared with the safety network (consisting of Site Health, Safety and the Environment managers, corporate functions, platform directors, as well as operational and support departments of the Mining Business Group). A system of regular internal audits is deployed on each of our sites in order to measure the effectiveness of our actions to improve performance.

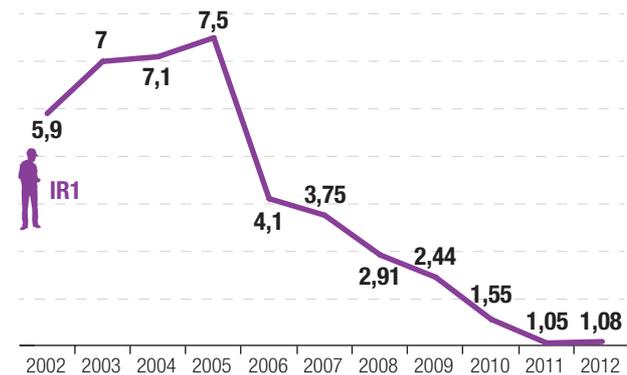


Raising of the awareness of teams about safety issues at the AREVA Tower, France

## MONITOR OUR RESULTS FOR 2012

For over a decade, we have been monitoring the performance of our actions relating to occupational safety in terms of incidence ratio (IR1). Despite a significant improvement in results, the objective of “zero accidents” set in 2012 has not been yet met. At the end of December, the incidence ratio for our uranium activities (employees and sub-contractors included) was 1.08. The bar chart below presents historical data since 2002 for the incidence ratio IR1. The incidence ratio IR2 has been monitored for the last two years: it stood at 3.56 in 2012 and 3.93 in 2011. Our objective is to provide more robust reporting for this latter indicator.

### IR1 results history since 2002



Note: the inclusion in the calculation of IRs for sub-contractors along with those for AREVA employees is to be taken in consideration from 2011.

### FURTHER INFORMATION (\*)

**IR1:** the Lost time injury frequency (LTIF) rate or IR1 is the number of fatal industrial accidents with lost time per million hours worked.

**IR2:** the Total recordable injury rate (TRIR) or IR2 is the total number of industrial accidents (fatal, with lost time, and without lost time: medical care) per million hours worked.

Two fatalities regrettably occurred at our sub-contractors in Namibia and in Kazakhstan. As a result of these events, analyses of the causes and associated action plans were presented to members of the Management Committees of the Mining Business Group and of AREVA head office.

The fatalities were caused by a falling object and a fall from height. In addition to corrective actions, campaigns to raise awareness were deployed on all sites.

#### Accident research data for mining activities in 2012



### TAKE ACCOUNT OF ALL HAZARDOUS SITUATIONS ASSOCIATED WITH OUR ACTIVITIES

#### The main categories of accident in our activities

The main activities liable to give rise to accidents in our mining activities are manual handling, the use of vehicles, and movements on foot. We have also observed that in the second half of 2012 accidents due to rushing and bad working postures are on the rise.

Other causes of accidents remained "stable" in relation to the previous half-year. These are non-compliance with standards, the use of unsuitable/worn working tools or equipment and the non-compliant use of equipment.

#### The ongoing fight against HIV in Niger

AREVA is heavily involved in the fight against the AIDS virus in Niger through actions to raise awareness and educate its 1,600 employees and their dependents (approx. 20,000 persons), as well as the population of the local health district, in particular in the towns of Arlit and Akokan.

It is also actively involved in helping to raise awareness about AIDS-related issues among groups of people who are at risk and vulnerable, such as young people, pregnant women, sex workers, migrant populations and truck drivers. The action taken by the group also aims to strengthen the capacities of hospitals in the region so that they are able to provide better treatment to people infected with the virus.

#### Vaccination monitoring and health risk assessments

A program to check the vaccination status of our employees was conducted in 2012 as part of occupational medicine procedures and in response to current public health issues. The ultimate aim of this program is to implement vaccination recommendations.

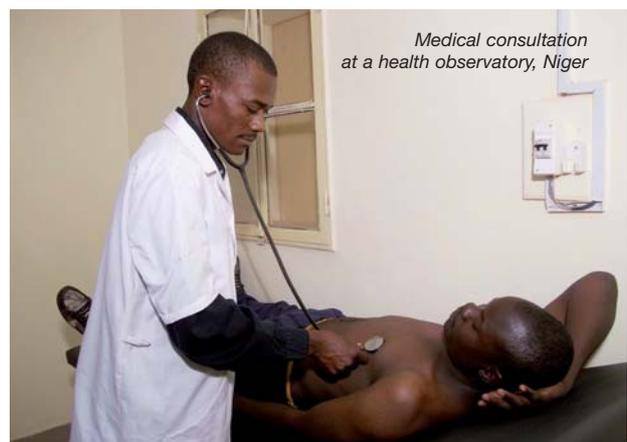
As part of a modification to the Imouraren project in Niger, the health risk assessment was updated in 2012.

#### Health Observatories

The Health Observatories are an innovative social initiative for our activities. There needs to be further improvement in how they operate, with the main difficulties encountered concerning changes of doctors and delays in the consultation process. To this end, a process to adjust the statutes is underway based on the experience feedback from the initial years of the initiative to render it more effective. The composition of the multi-party group also changed in 2012 as a result of the Sherpa association leaving the group at its own initiative. This change does not affect the multi-party governance system of the Health Observatories which continue to operate locally, with the local community continuing to be represented.

#### ► OSRA: Health Observatory for the Agadez Region (Observatoire de la Santé de la Région d'Agadez), Niger

A meeting of the Board of Directors of the Health Observatory for the Agadez Region (OSRA) was held on May 29, 2013 in Niamey. A statutory auditor's report on the audit of the financial statements as at December 31, 2012 was presented at this meeting. The first report on OSRA's activities records 140 medical consultations in 2012, while 557 former workers were registered in Arlit, and 225 were examined between January 2012 and March 2013.



Medical consultation at a health observatory, Niger

#### ► OSM: Health Observatory for Mounana (Observatoire de la Santé de Mounana), Gabon

A meeting of the Board of Directors was held on February 28, 2013 in Libreville. Items on the agenda included an update to the composition of the Health Observatory for Mounana (OSM), the report on its operations and activities for 2012, the plan of

action for 2013 and the assessment of the annual budget for the financial year. Since the start up of the Health Observatory for Mounana (OSM), 614 consultations have been carried out and 31 cases have been submitted to the Scientific Council, four of which have also been submitted to the Medical Committee.

### The prevention of psycho-social risks

The group is deploying mechanisms for the prevention of risks to psychological health in the workplace on all its sites in France, with the objective of extending their scope internationally.

In 2012, a survey was conducted in Mongolia to identify the structures to be established. The initiative will also be extended to Gabon in 2013. In addition to this, a helpline and support contact was set up at AREVA Mines in Bessines in April 2012, with similar setups having been established on 80% of the AREVA Group's sites in France.

Furthermore, a working group set up at national level in France made it possible to negotiate and reach a Group Agreement on the "Quality of life at work" in May 2012.

### OBJECTIVES FOR 2013

For the 2013, the ultimate objective is "Zero accidents". We are also setting intermediary objectives for the Lost-Time Injury Frequency rate (LTIF / IR1) of less than 1.1 and for the Total Recordable Injury Rate (TRIR / IR2) of less than 5.

The 2012 action plan for occupational safety will be carried over into 2013 taking into account the analysis of our accident research data, the results of the diagnostics of our safety culture, as well as the ongoing deployment of the Safe Together project!. Reporting is another point on which we need to remain vigilant both in terms of reporting times, as well as ensuring that investigation of near-accidents goes as far back upstream as possible.

Analysis of the needs of sites, the sharing of best practices and internal communications are essential here. In addition, raising the awareness of sub-contractors is also a point of key importance, and this will soon be addressed in the form of a specific "Safety Day" devoted to the issue.



Below we present a focus produced in conjunction with one of our sub-contractors in Niger: ESAFOR



## NIGER



### FOCUS

Ensure the occupational safety of all our staff, both employees and sub-contractors



Drilling on the Imouraren Project, Niger

### BACKGROUND

In 2012, ESAFOR reported two lost-time accidents and one non-compliance on a machine observed during a site visit. The management of AREVA Mines thus contacted the teams at ESAFOR to help them to improve their occupational safety conditions and set up their safety management system.

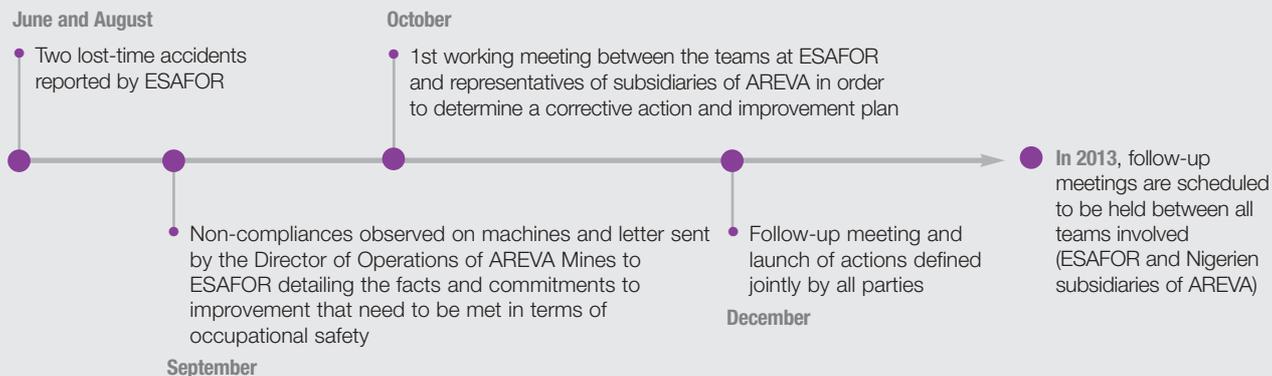
## ESAFOR IN BRIEF

- ESAFOR is a Nigerien drilling company which is a sub-contractor to subsidiaries of AREVA.
- The Senior Executive President of ESAFOR is Mr. Ismaël Noureddine.
- The company was created in 1993 in Arlit, in the region of Agadez, as the result of acquisition of the assets of the French specialist drilling company SOREIS.
- In 2012, ESAFOR had a workforce of 425 employees.
- 1,372,800 hours worked in 2012, with a frequency rate of 1.45 and a severity rate of 0.03.



ESAFOR drilling team, Niger

## KEY STEPS 2012



## ACTION TAKEN BY ESAFOR

- Audit of machine population and ancillary equipment on AREVA worksites.
- Safety organization specified in greater detail at all levels and recruitment of a qualified safety engineer.
- Request put out for risk analysis consultancy services.
- Procurement of new machines.

## ACTION TAKEN JOINTLY BY ESAFOR AND SUBSIDIARIES OF AREVA (SOMAÏR, COMINAK, IMOURAREN)

- Training provided by the Nigerien entities of AREVA, in the form of “buddy system” mentoring, in order to set up a preventative maintenance system.
- Continuous monitoring of action plan.
- Participation of the management of ESAFOR in Safety & the Environment visits organized by Nigerien entities of AREVA.

## Message from the Senior Executive President of ESAFOR

« Our company helps to create jobs and contributes to the development of the region of Agadez, and, on a broader scale, of Niger as a whole. But, none of this could be possible without a sustainable development policy, which in particular undertakes to preserve and protect the environment, support local communities, build basic infrastructure, as well as provide educational and health support, etc.

At the same time, as our health, safety and the environment policy requires and aware that the safety of our employees is our responsibility, several measures have been taken to prevent risks related to our activities (raising of awareness, training, inspections of machines by a private company, medical monitoring of employees, etc). (...) For 2013, it remains our objective to achieve “zero accidents”, an objective which requires a great deal of effort and innovation in terms of our management system to ensure it is realized.

ESAFOR is actively involved in the integrated management system procedures of the Nigerien entities of AREVA by taking part in safety visits, machine inspections and audits. We comply with all procedures applicable to the drilling activities of the Mining Business Group of AREVA, reinforced by our own safety instructions with a view to reducing the risks relating to our activities as much as possible.

Nevertheless, we are persuaded that when it comes to safety it is difficult to ever say that one that has ever acquired all the skills & knowledge one needs. This is why we must be doubly sure to remain vigilant by the raising of awareness among our employees and effective communication with them, as well as by implementing any corrective action necessary as a result of every instance of feedback from experience ».



Training in the operation of machinery, Imouraren Project, Niger

# 04

## OUR SOCIAL AND COMMUNITY INVOLVEMENT

The diverse, multicultural situations in which the group's mining activities take place constitute a real asset. In order to develop the skills and talents of those who work with us, AREVA uses tools and processes that help each individual to progress. In the same way, ensuring responsible integration into communities is a constant concern and this is expressed through constructive dialog with all stakeholders and the development of projects to benefit local people.

ICMM principles ► 1 2 **3** 4 5 6 7 8 **9** 10

# Our social involvement in 2012

Our social involvement as part of our activities has grown throughout the past ten years, as much through the establishment of structures to develop employee skills as through the gradual integration of issues linked to diversity or the work-life balance. "People" constitutes one of the five pillars of AREVA's strategic plan, Action 2016. It is based upon objectives that aim to improve mobility between the different career paths offered by the group, promote professional development and improve skills, and harness the diversity of all our employees.

Workforce by type of contracts France

**431** permanent contracts,  
**9** fixed-term contracts and  
**23** apprenticeships

Workforce by type of contracts Overseas

**4,343** permanent contracts,  
**466** fixed-term contracts

Total workforce (salaried employees and temporary staff)

**5,272**

Percentage breakdown of total workforce into employees and temporary workers

**+ de 99%** employees  
**- de 1%** temporary personnel

Total number of employees having left the Mining BG in 2012

**573\*\***

\*\* Figure includes retirements, resignations, redundancies, transfers and other causes

## DEFINING INDIVIDUAL DEVELOPMENT

### ACTIONS

Tools and processes in favor of skills development have been put in place to promote the professional development of every employee. The IT tool AGORA, which was rolled out as part of this objective in 2011, makes it possible to monitor the careers of employees in a rigorous and transparent manner.

**97%**  
Annual reviews carried out with managerial and engineer categories (world scope)

In 2012, 97% of mining activity engineers and executives completed their annual performance review, an ideal opportunity for employees and their managers to review the year, set objectives and decide upon professional development actions. In addition, 100% of executives were assessed as part of the people review, a process for identifying and developing talents.

the "Droit Individuel à la Formation" (DIF - a system offering individual entitlement to training) offers 20 hours of training credits per year on the employee's initiative.

In 2007, the group set up the AREVA Mining College, whose aim is to support the early careers of our employees and promote the sharing of know-how. Training courses are delivered by our internal experts or external experts from mining schools, geology schools, universities, consultancies, etc. More than a hundred employees, chiefly working on platforms, have benefited from these training courses. There is also the AREVA University, an internal training facility available to our employees.

In France, employees also have opportunities for personal development and/or to develop new skills by taking statutory or contractual leave in accordance with the AREVA Mines SA collective agreement. This leave can be taken by using the leave entitlement account for established by the collective agreement of December 7, 2012, between the company and union organizations. Several types of leave can be taken into consideration: parental leave, business start-up leave, personal convenience leave, pre-retirement leave, etc.

## FACILITATING ACCESS TO TRAINING

Employee skills are also developed through training, as well as through further professional experience. One of the tools offered is the Training Passport, which offers an average of 30 hours training per year per employee. In the same way, in France

**30 h**  
Average number of hours of training per annum per employee

## PROMOTING EXPERTISE

The excellence of AREVA's mining activities is underpinned by a school of experts that works closely with operational teams. Forty-eight experts are involved across all areas of mining. They are classified by skill level, from 1 to 3 (level 3 represents the highest skill level). Two level-3 experts within mining activities are among the 25 level-3 experts across AREVA as a whole.

It is especially important to increase the number of experts in the fields of mining techniques, the environment and geostatistics. It is vital that these experts come from local teams, as this makes it easier for them to share their experience with sites that have new needs in terms of scientific and technical knowledge. Two Nigerien and five Canadian employees have therefore joined this school, as well as an expert at level 2.



# 48

experts identified  
in our activities

Since 2010, the mining activity “Comité des Sages” has united experts from levels 2 and 3. Along with the Functional Committee, it contributes to the development of strategic areas that will have an impact on activities over the medium and long term. In 2012, ten new experts joined the “Comité des Sages”. On July 2, 2012, the 3rd Experts Day provided the chance to work on improving the mining process by further increasing the cooperation between project managers and experts.

## PROMOTING QUALITY OF LIFE AT WORK

On May 31, 2012, AREVA made another commitment to promoting quality of life at work by signing an agreement with management and labor representatives on Quality of Life at Work. Significant progress was made: a pilot scheme for remote working, in which mining activities are actively involved, wider availability of listening and support provision, including that at the Bessines site, the implementation of an

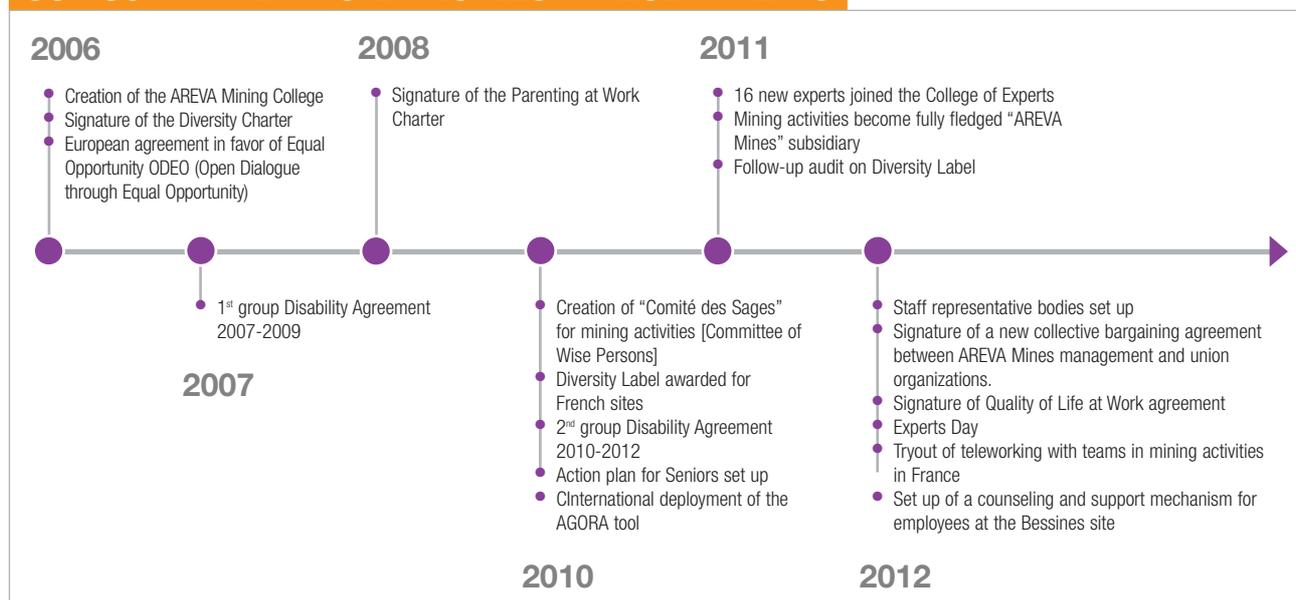
alert and complaints system for escalation in case of alleged discrimination or discriminatory behavior.

The agreement also launched the drafting of common guidelines for all group entities to evaluate the human impact of organizational changes, as well as create, in France, a joint national observatory for quality of life at work. Finally, the issue of work-life balance occupies 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: more creches have been set up, a pre- and post- maternity leave review has been introduced and pay is continued during paternity leave.

## MAINTAINING A VERY GOOD LEVEL OF EMPLOYEE BENEFITS

The new AREVA Mines collective agreement signed in 2012 regulates relations between the company and its employees and expresses the shared willingness of the company and union organizations to maintain a very good level of employee benefits at French sites (the current report does not cover similar provisions outside France as reporting is in progress). This agreement deals with all provisions relating to union law and management-labor dialog, careers and professional development, working hours including leave and absences, health and contingency costs, retirement management, etc. A copy has been distributed to all AREVA Mines employees.

## OUR COMMITMENT TO EMPLOYEES IN RECENT YEARS



# Promoting diversity and equal opportunities

Promoting diversity is essential when it comes to guaranteeing respect for the cultures and differences of all our employees. This constitutes a multi-faceted commitment that includes the promotion of a mixed working environment, support for disabled employees and diversity in terms of age, social background, ethnicity and culture.



## EMPHASIZING OUR COMMITMENT THROUGH THE DIVERSITY LABEL



Since 2010, AREVA has carried the Diversity Label for all its activities in France. AREVA's mining activities, characterized by their international and multicultural dimension, see themselves as a driver for the worldwide expansion of the group's diversity policy and work towards equality at all international

sites. However, the various national contexts and regulations involved do not make this an easy task, and do not allow consolidation of the associated reporting. This expansion across all sites is done by sharing good practices in terms of diversity and equal opportunities. Reporting therefore primarily focuses on France, i.e. the Bessines and Paris sites. The audit for renewal of the Diversity Label will take place in 2013 at the AREVA Mines Head Office as well as at nine other group sites in France.



Diversity is also a social, ethnic and cultural issue. To this end, it constitutes the principal asset of the group's mining activities, which have a presence on five continents. In order to consolidate this strength, mining activities promote the professional integration of employees from all backgrounds. They participate notably in the AfriCTalent forum. In 2012, we also took part in the round table held at UNESCO on the occasion of the tenth anniversary of AFIP (Association pour favoriser l'intégration professionnelle - Association for the promotion of professional integration). Diversity management training is provided for human resources managers and employees, as well as staff representatives. By 2015, the group will have trained around 4000 people in diversity.

## PROMOTING A MALE/FEMALE MIXED WORKING ENVIRONMENT

In order to promote gender equality and equal opportunities, the group's mining activities work to recruit women at all levels of the organization. As a result, in the past four years 40% of posts in technical disciplines within mining have been given to women.

In addition, a group agreement regarding gender equality at work was signed in December 2012 for each French entity. AREVA also has a budget for equal pay to gradually correct any discrepancies in salary.



\*source: comparative report 2012. It should be noted that this figure is an average of all professional categories and that the average age of male employees is 5 years older than the average age of female employees.



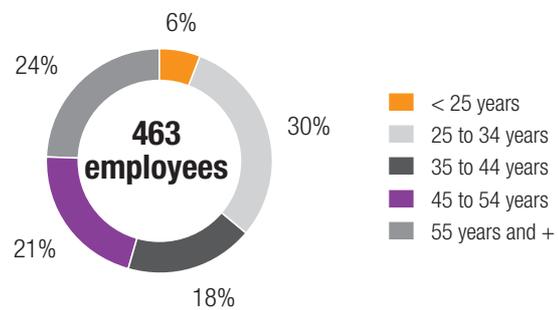
## PROMOTING AGE DIVERSITY OF PERSONNEL

Our policy with regard to senior employees aims to value more experienced workers by ensuring knowledge is passed on. These employees benefit from support to manage their careers more effectively, which is particularly important given that people are now working for longer, and to plan for future skills requirements.

With regard to young people, since 2005 the group has been committed to promoting work-study programs and offers

apprenticeship and vocational training opportunities to young people and jobseekers in France. The aim is to maintain the level of work-study participants at 5% of our employees in France. Each year, AREVA's mining activities welcome interns, work-study students and people undertaking international corporate volunteer (VIE) programs. In 2012, they represented 7.6% of employees.

Age pyramid in France for 463 employees



## IMPROVING INTEGRATION OF EMPLOYEES WITH DISABILITIES

With regard to improving integration of employees with disabilities, and in accordance with the commitments made as part of the group's Disability Agreement, an emphasis is placed on employee integration and retention. The Agreement also makes provision for employee support and adjustments to workstations, as well as transport assistance if necessary. In 2012, a workstation was adjusted for an AREVA Mines employee with official recognition of his status as a disabled worker (RQTH - Reconnaissance de la Qualité de Travailleur Handicapé).

In addition, in order to facilitate the retention of disabled employees and improve the anticipation of preventive solutions, AREVA took the initiative of setting up multidisciplinary teams on its sites, comprising in particular the



occupational health doctor, the social worker and the head of Human Resources. This team deals with the employee retention issues associated with fitness for work or incapacity due to medical reasons. Communication and awareness-raising initiatives have also been organized for employees in order to change views on disability: participation in forums, the Théâtre à la Carte initiative, interviews with paralympic champions and opportunities for disabled interns.

In 2012, as part of the DOETH disabled workers declaration, our mining activities in France declared a rate of 3.8 disabled employees on our sites.

# Our community involvement

We attach great importance to integrating our activities into the economic and social fabric of the territories in which we operate and promoting dialog with local stakeholders at the earliest opportunity. Obtaining a social license to operate carries serious responsibilities for our mining activities, which are assumed on a daily basis by the directors and social leaders within our subsidiaries with the support of the teams at AREVA's mining activities Head Office. Given the complexity of different contexts, past events within our activities and the nature of our future projects, our aim is to promote a trusting dialog with our stakeholders and contribute to the development of projects that benefit all those involved.



*Track providing access to the municipality of Timia financed by AREVA*

## ENGAGING AND CONSULTING

In each of the countries in which we operate, dialog and consultation structures are set up and led by operators, staff representative bodies, community representatives and civil society, among others.

They form part of an approach that aims to make a long-term commitment to our local and internal stakeholders. They are also based on the need to identify these stakeholders, understand their expectations and concerns, and initiate actions that will establish trust and cooperation for mutual development.

### Internally with our employees

A responsible social dialog, 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 March 2012, a new agreement mechanism was signed by AREVA Mines management and union organizations. It is the result of several months of joint work between Management and labor and union representatives, and demonstrates a shared willingness to offer employees a very good benefits package. Since the mining subsidiary was created, numerous employment

agreements have also been signed: a collective company agreement, as well as agreements relating to profit-sharing, seniors, etc. In other countries, management-labor relations are based on local legislation.

► **In France, the staff representative bodies (IRP - Instances Représentatives du Personnel)** of AREVA Mines are made up of a Central Works Council (CCE - Comité Central d'Entreprise) and two Works Committees (Comités d'établissement) for the Paris and Bessines sites. These constitute consultation and information bodies that also make proposals concerning the running of the company. Their members are elected for three years. The CCE includes representatives from each Works Committee. It is informed about and consulted on major economic and financial projects. Other staff representative bodies include: Staff Representatives, elected for three years, who ensure that employee rights are upheld; Union Representatives and Health, Safety and Working Conditions Committee (CHSCT) representatives.

Staff representatives have access to the AREVA Mines SA Board of Directors in order to facilitate dialog and consultation with regard to all employee concerns. In addition, joint working groups are regularly set up between union organizations, staff and management to deal with certain specific subjects.

## Locally with our external stakeholders

The creation of internal Mining Social Committees (CSM - Comités Sociétaux Mines) contributes to expanding this approach to dialog and consultation, which we recognize is in a developmental phase in the majority of regions in which we are present. In this 2012 report we do not specifically report on each of the commitments made to all categories of stakeholder. This is an area to improve on in future editions of this annual report.



Working meeting with stakeholders, Niger

► **In France: Local Information and Oversight Committees (CLIS - Commissions Locales d'Information et de Surveillance).** Local Information and Oversight Committees (CLIS) at former French mining sites have become Site Monitoring Committees (CSS - Commissions de Suivi Sites) following a reform introduced by the decree of February 2012 (Decree 2012-189 of February 7, 2012). CLIS provide a structure that encourages information-sharing and dialog with local stakeholders: elected representatives, residents, associations, authority representatives and employees. They are created for ICPE-classified environmentally regulated sites (ICPE - Installations Classées pour la Protection de l'Environnement) upon the initiative of the prefect. The purpose of the committee is to provide information on the facility's impact on health and the environment. In particular, it gives opinions on impact studies and may call upon the skills of recognized experts, especially when preparing third-party expert assessments. The operator issues the commission with a summary of site activities, with a focus on risk prevention, at least once a month.

► **In Canada: a "Stakeholder issues management database".** In Canada, there is a range of dialog structures associated with the communities living in the regions where AREVA operates. Whether in Northern Saskatchewan or Nunavut, AREVA Resources Canada has initiated or participated in a number of forums, workshops and visits. All information concerning these exchanges are now recorded in a "Stakeholder issues management database".

► **In Niger: Local Information Committees (CIL - Commission d'Information Locale).** Since 2005, mining company representatives have made annual reports on their industrial performance and sustainable development to local stakeholders via Local Information Committees (CIL). The groups present may be representatives from regional authorities (the préfecture), the town hall, traditional chiefs, non-governmental or socio-professional organizations, etc. The committees also provide a space for discussing and debating major local issues and stakeholder expectations.

### DEVELOPING OUR PRACTICES

#### IN SUPPORT OF INDIGENOUS RIGHTS

This commitment forms part of the AREVA Values Charter. The way in which we approach and deal with the questions surrounding this complex issue is inscribed in an improvement initiative linked to our Responsible Commitments Plan 2013-2016. In this respect, we are seeking to become involved in the associated ICMM working groups, develop specific training on mining issues and human rights and better study the applicability of the Voluntary Principles on Security and Human Rights.

### CONTRIBUTING TO THE FUNDING

#### OF SOCIAL PROJECTS

Within AREVA there are several mechanisms that contribute to financing social projects (philanthropic actions and community investments\*) for our stakeholders. All these mechanisms are based on multi-party agreements and/or multi-year agreements jointly validated by internal AREVA entities (e.g. the AREVA Foundation, mining subsidiaries) and the representatives of various stakeholder groups (e.g. Associations/NGOs, bilateral steering committees in Niger, the Athabasca Working Group in Canada, etc).

#### FURTHER INFORMATION (\*)

**Community investments:** all spending which goes to recipients external to AREVA subsidiaries and sub-contractors. This therefore excludes spending for the benefit of employees and dependents as well as infrastructures for their use or the functioning of the company; spending on legal activities or any other investment for purely commercial purposes on the part of the company; and any investment whose primary aim is meeting the needs of the company and/or direct economic profit.

## Entity at AREVA's Head Office

### ► The Foundation

Since its creation in 2007, the AREVA Foundation has focused its general interest and solidarity actions on education and health. Extended for another five years in 2012, it has also added a new element in the shape of access to culture for the underprivileged.



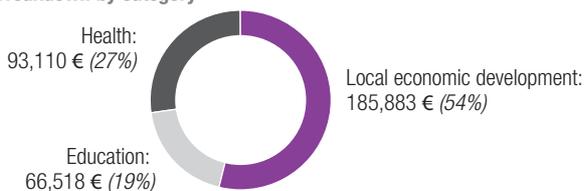
All the information relating to the AREVA Foundation is available on the following website: <http://www.aveva.com>

## AREVA's mining activity entities

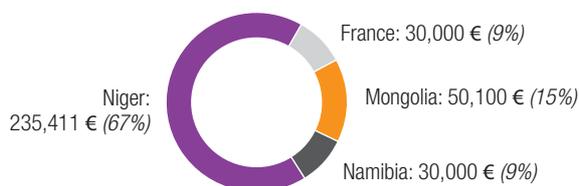
### ► Mining Integration Committee (CIM - Comité d'Intégration Mines)

Since 2009, the Mining Integration Committee (CIM), composed of Mining Business Group and AREVA Head Office directors, has been self-funding (in some cases with contributions from the AREVA Foundation) a number of integration projects in the regions where our operations are located. The vocation of the Mining Integration Committee is to centralize demands addressed to Head Office entities, whether from AREVA or mining activities, and play a decision-making role with regard to the financial commitments associated with the selected projects. It also monitors the progress of approved projects.

#### Breakdown by category



#### Budget breakdown by country



In 2012, AREVA committed a budget of €345,500 to supporting social projects within the scope of its mining activities. This support has enabled a total of 21 projects to be undertaken in four countries, with 54% involving local economic development, a major concern for the neighboring communities of the group's mining sites. 2012 marked the last year of the CIM, which is being replaced by Mining Social Committees (CSM - Comités Sociétaux Mines) for each country from February 2013.

### ► Mining Social Committees (CSM)

From February 1, 2013, Mining Social Committees (CSM) replace the Mining Integration Committee. Their mission is to define priority projects, the outlook in terms of local development and engagement with stakeholders and multi-year action plans and associated budgets for each country. Three CSM are now in place in Niger, Gabon and Mongolia. Another is currently being set up in Kazakhstan, with a projected launch date of September 2013. These committees bring together the executive directors of the subsidiaries, local social leaders, and operations, communications and social responsibility managers as well as their respective teams. A representative from the group's Sustainable Development Department is also involved.

In line with the local societal expectations expressed by the host country governments, civil society and employees, CSM should make it possible to carry out more social projects that generate revenue and jobs, thereby strengthening AREVA's involvement in communities. Furthermore, setting up CSM demonstrates the group's willingness to respect good international practices in the sector and define and implement a strategy of engagement with stakeholders as well as a community investment strategy.

### ► Mining companies

It has not yet been possible to consolidate the financial report for social projects self-financed by AREVA Mines subsidiaries for 2012, which is not therefore covered in this document. It should be noted however that the budget stood at several million euros per year and contributed to financing tens of projects in the fields of local infrastructure, education, health, culture, etc. This indicator is being studied more closely in order to measure the local economic impact.

## Examples of interfaces with local stakeholders

### ► Bilateral steering committee (CBO - Conseil Bilatéral d'Orientation)

Set up in May 2006 to strengthen the local governance of social projects for residents, bilateral steering committees unite local elected representatives, the relevant authorities and civil society alongside AREVA. They define local development policies, identify priority areas for intervention, issue opinions on projects and provide financing for the latter. AREVA's mining companies in Niger make an annual contribution of 500,000 euros to the CBO.

### ► Athabasca Working Group

The Athabasca Working Group has been in place since 1993 and is composed of members of the mining companies (AREVA Resources Canada Inc. and Cameco Corporation) and six communities in the province of Saskatchewan. In 2012,

these stakeholders renegotiated 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 and benefits for the communities.

### Examples of social projects carried out in each country in 2012

#### NIGER

- ▶ Participation in creating **tropical gardens** in the Sahel through the development of innovative water-saving techniques. In 2012, a vegetable production area of 9000m<sup>2</sup> was set up in the “Women’s Garden”, an experimental site in the Arlit urban area.
- ▶ Contribution to creating **a branch of the Niger Union Crédit Mutuel** in Agadez, a project that aims to provide banking services to the town’s population to accelerate socio-economic development in the region.
- ▶ Construction of **rural access roads** for the village of Timia.
- ▶ Support through **the donation of 650 school desks** to public schools in the Arlit urban area. The desks were locally produced, which also provided revenue for the local area.
- ▶ Participation in **digital solidarity projects** to provide the access to information and communication technology needed for the country’s development. In 2012, the group and the French association Ateliers Sans Frontières (ASF) contributed 110 computers along with peripheral equipment in order to create a patient monitoring network at the National Hospital in Niamey, a national reference centre.



Vegetable production area, Niger

#### MONGOLIA

- ▶ Continuation in 2012 of the project begun in 2006 **to rebuild the livestock** of poor families in Dariganga affected by difficult climate conditions.
- ▶ Financing for the **construction and maintenance of infrastructure, particularly water infrastructure:** pump equipment for the Zuunbayan commune central well, the boring of a new well for the nomads of the Ulaanbadrakh district (which is located in a desert zone with high exposure to water stress), etc.

- ▶ Continuation in 2012 of **sponsorship actions for underprivileged children**, particularly in support of the State orphanage and the Fraternité Notre Dame orphanage at Oulan Bator.
- ▶ Financing to build and equip a **dental unit at the Zuunbayan hospital**. There is a high incidence of dental diseases in this region, particularly among children.

#### FRANCE

- ▶ Support for the activities of the BIP Humanitaire association, which acts as an inter-association platform, a collection centre for refurbished medical equipment and a logistics partner. It has made significant donations of consumables and **small medical equipment** to the Arlit and Agadez public hospitals in Niger and the Oulan Bator and Sainshand hospitals in Mongolia.
- ▶ Purchase in 2012 of a **medical equipment** collection truck for BIP.

#### NAMIBIA

- ▶ Support for initiatives in the Erongo region (within the scope of AREVA’s mining activities in Namibia). In particular, contribution alongside the Erongo development foundation to the co-financing of **micro-loans** for the creation of small local enterprises. In 2012, 30 enterprises benefited from this assistance to build capital and purchase equipment or stock.
- ▶ Support for the improvement of infrastructure in the town of Arandis, which has seen a significant influx of people seeking work. This notably involved **the construction of an open market for around thirty traders**, the construction of a new classroom in the Fondation Kolin school and the construction of sports facilities for the Talitha Kumi Christian Academy, which has almost 130 pupils.

#### CANADA

- ▶ AREVA Resources Canada (ARC) contributes to the financing of social projects in the various regions in which we are active: Northern Saskatchewan, Saskatoon and Nunavut. In 2012, slightly more than one million euros was allocated to various categories of project (e.g. culture, education and young people, community programs, environmental programs, health, etc). The financing of these projects directly responds to the needs of local communities and is spread so as to reach the greatest number of people (for example 23 communities in Northern Saskatchewan).

### PROMOTING LOCAL ECONOMIC ACTIVITY

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. Actively participating in local economic

development enables us to strengthen our involvement in communities and ensure greater acceptability of our work. Today, 49% of our purchasing volume comes from the countries in which we are based, and 48% 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.

COUNTRY	Volume of local purchases (in thousands of euros)
Niger	109,400
Kazakhstan	113,847
Namibia	1,646
Mongolia	12,910
Canada	28,000
<b>TOTAL</b>	<b>265,803</b>
<b>as a % of total purchases made by AREVA's mining activities</b>	<b>49</b>

For example, in Canada, for similar contract bids, preference is systematically given to "local" suppliers as per their status under Canadian legislation. A company has "local" 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.

In the same way as in Mongolia, criteria linked to community involvement are included by AREVA in the evaluation grids for catering and camp management bids. Contractual commitments become key indicators, which are monitored over time. For example, every three months the local supply provided by the supplier is evaluated. The proportion of local food purchases and the traceability of the countries of origin and processing are examined.



COUNTRY	Number of local suppliers
Niger	1,746
Kazakhstan	1,615
Namibia	30
Mongolia	435
Canada	82*
<b>TOTAL</b>	<b>1,473</b>
<b>as a % of total suppliers to AREVA's mining activities</b>	<b>48</b>

\* This figure only applies to the Northern Saskatchewan region. The other figures given are national figures for the country concerned.

## PROMOTING LOCAL RECRUITMENT OF EMPLOYEES

AREVA's social policy expresses a commitment to promote the local recruitment of our employees. We also pay particular attention to indigenous communities, which may find it difficult to take advantage of our employment opportunities. More specifically, this is an issue that arose in Canada, in Northern Saskatchewan, a region which has seen numerous initiatives to promote access to employment (cf. Focus p46) and select local entrepreneurs as a preference (cf. Promoting local economic activity).

### Breakdown of total workforce by region



Concerning other mining activities outside France, the formalization of reporting in this respect is currently being studied.

Currently, whether in Niger, Canada or Kazakhstan, the majority of employees (at all levels of the organization) are of local nationality. The percentage of French expatriates does not exceed 2%.

## CANADA



### FOCUS

Creating new opportunities locally for developing skills and recruiting qualified employees



Training of interns from the communities of Northern Saskatchewan, Canada.

### BACKGROUND

Residents of the remote communities in Northern Saskatchewan, for the most part Indian, have very limited opportunities for employment or skill development. In this context, we decided to offer them training programs, thereby also allowing us to have qualified staff ready for the restart of the McClean Lake mill in a few months time, and for years ahead.

This project has won an award in the internal AREVA Awards program.

### STAKEHOLDERS WHO CONTRIBUTED TO PROJECT *(partial list)*

Northern Saskatchewan communities, our internal teams, three community liaison officers based in Wollaston/Hatchet Lake, Black Lake/Stony Rapids and Fond-du-Lac/Uranium City/Camsell Portage, Saskatchewan, representatives of educational institutions in Northern Saskatchewan.

### OUR GOAL

The challenge we face is to hire and secure employment at the McClean Lake site for over 90 % of the young people who we train through the "Unearthing Potential by Providing Opportunity Project". Through this project, our teams are working to develop a long-term solution for the recruitment of new skilled workers who will be able to access more technical positions such as laboratory technicians or supervisors, etc.

### MAIN CHALLENGES

Our teams and stakeholders had a number of difficulties to overcome in implementing this project in Northern Saskatchewan:

- Managing the transportation of residents in a region where distances can quickly reach several hundred kilometers and where resources are limited ;
- The rotation system adopted for the teams involved in the training program having an impact on the communication required between the different stakeholders ;
- The choices to be made between the young candidates from the Northern Saskatchewan communities.

### A STRUCTURED AND TAILORED APPROACH

The success of this project has been made possible by the commitment of all the stakeholders, and by the setting of SMART goals:

- **Specific:** development of skills required for McClean Lake
- **Measurable:** recruit 100 people between 2013 and 2015
- **Attainable:** fill recruitment needs
- **Realistic:** train in small groups to ensure successful outcomes
- **Timely:** launch proactively to meet timeline for restarting the mill



Taking of water samples on the McClean Lake site, Canada

# 05

## OUR COMMITMENT TO PRESERVE THE ENVIRONMENT

Every activity of the lifecycle of a mine, from exploration to site rehabilitation, has an environmental impact which our teams continuously strive to reduce. There are many environmental challenges: climate change, greenhouse gases, energy consumption, biodiversity, waste management, etc. Facing these challenges requires sustained effort, in particular when our activities are ramped up, to ensure that our environmental footprint is kept as small as possible.

ICMM principles ► 1 2 3 **4** 5 6 7 8 9 10

# Our environmental footprint

Our mining activities are an essential link in the nuclear power cycle and therefore contribute to the group's overall results. The footprint of our activities can undergo considerable fluctuations over time (launch or end of mining projects, adoption of new technology, diversity of ecosystems, etc), which is why we strive to define the commitments which will enable us to focus our efforts better and keep our impact to a minimum.

2012 is a transitional year which will enable us to define our commitments until 2016.



*Environmental inspection on the redeveloped site of Bellezane, France*

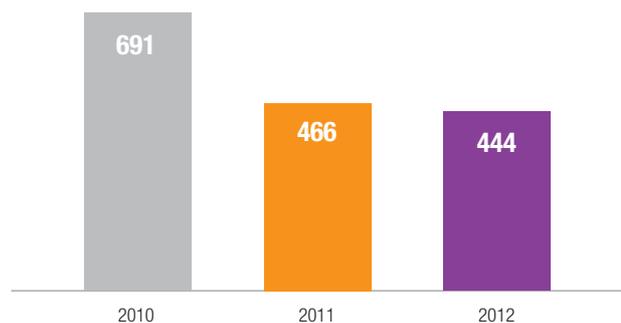
## THE GROUP'S ENVIRONMENTAL PERFORMANCE

Thanks to a responsible environmental approach based on the reduction of the consumption of natural resources, the management and control of releases and the optimization of waste management, AREVA has managed to considerably reduce its environmental footprint (against constant revenue compared with 2004): -91% for water consumption, -84% for energy consumption. In 2012 the group also emitted 65% less greenhouse gases compared with 2004, and implemented a carbon-neutral policy which made it one of the first carbon-neutral industrial groups.

This policy is applied by identifying greenhouse gases at all sites, reducing these emissions and implementing offsetting programs. Measures include the implementation of processes which consume less energy, the use of less carbon-intensive substitute sources of energy and more eco-friendly behaviors. Mining activities are an integral part of the group's commitment against climate change and constantly strive to find innovative solutions to reduce greenhouse gas emissions. At COMINAK, for example, the teams have implemented "cleaner" technology to optimize sulphuric acid consumption (cf. case study, page 17).

Greenhouse gas emissions which cannot be reduced are offset through the purchase of carbon credits. In 2012,

Group total compensated direct greenhouse gas emissions (in thousands of tonnes of CO<sub>2</sub>)



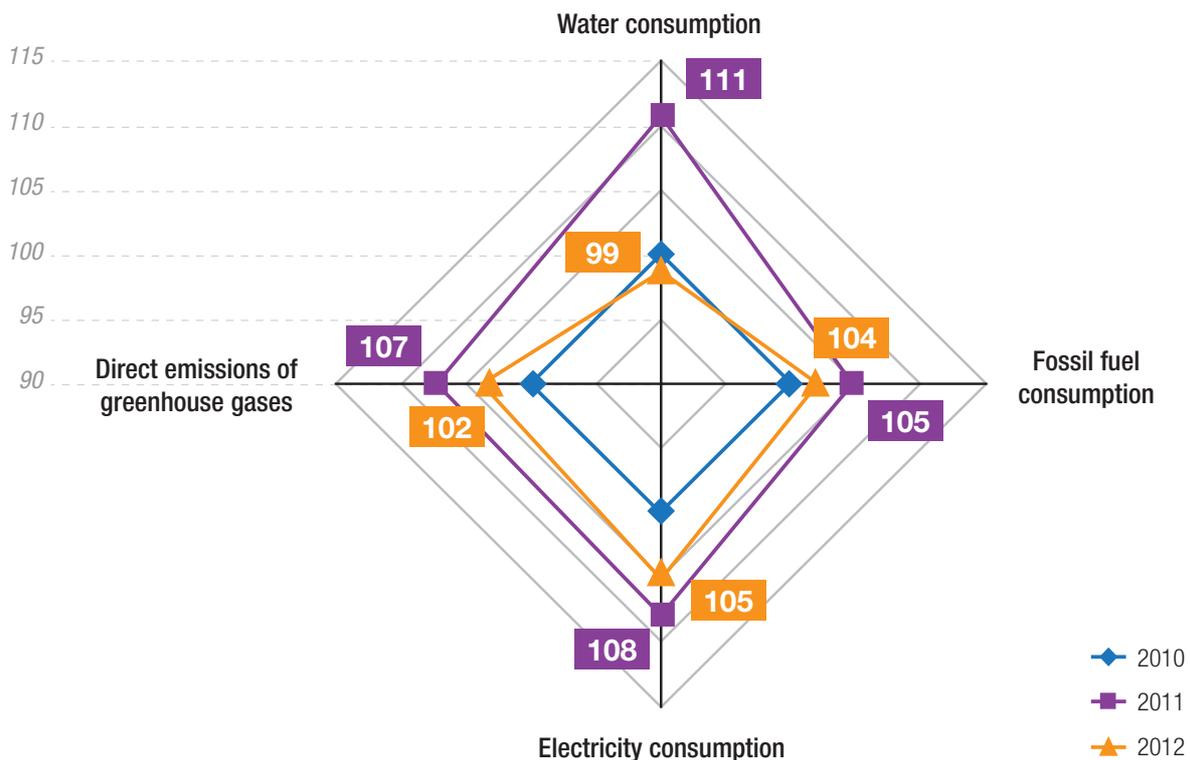
AREVA greenhouse gas emissions subject to emissions permit requirements under the EU Emissions Trading System stood at 40,330 tonnes of CO<sub>2</sub> equivalent. This year, mining activities alone emitted 227,726 tonnes of CO<sub>2</sub> equivalent. But since they are not located in European Union, they are not required to purchase carbon credits for these emissions. That is why AREVA pro-actively took the initiative to offset its direct greenhouse gas emissions through the purchase of credits from certified organizations such as its Renewable Energies Business Group. In 2012 the group purchased 444,944 carbon credits corresponding to the financing of emissions reduction programs, in particular in emerging countries. All direct emissions from our activities are therefore offset by equivalent reductions elsewhere.

## MONITORING THE DEVELOPMENT OF OUR FOOTPRINT

Our activities have an impact throughout the lifecycle of a mine. The most intensive phases in terms of the consumption of resources and emission of greenhouse gases are the construction of the mine, and the mining phase itself. Although environmental performance measures should focus on these phases, exploration and site rehabilitation are also crucial steps which will play a determining role in managing the challenges facing our activities over the long term.

AREVA mining production has increased considerably, from 7,773 tonnes in 2011 to 8,484 tonnes in 2012, also leading to an increase in resources consumed and waste produced. To take this change into account, the graph below illustrates the changes to four environmental indicators, with constant production since 2010 (for sites in which AREVA is the mining operator). The changes are represented on an index basis with 2010 as the base.

### Changes in environmental footprint of AREVA mining activities since 2010



#### MORE INFO: HOW TO READ THE GRAPH

2011 and 2012 consumption and emissions have been adjusted to 2010 production levels (8,226 tU).

Calculation example for 2012 electricity consumption:

$$100 \times (2012 \text{ Consumption} / 2012 \text{ Uranium production} \times 2010 \text{ Uranium production}) / 2010 \text{ Consumption} = 105$$

The results are read as follows: "In 2012, with uranium production at a constant level, the electricity consumption of our mining activities increased by 5% compared with 2010".

# Our commitments for the protection of the environment

Following the update of AREVA environmental policy at the end of 2012, in 2013 our teams are working on a multi-year action plan to apply the group's six commitments for the protection of the environment.



Environmental monitoring, France

## STAYING THE COURSE

Our commitment to the environment is part of a continuous process, with a multi-year environmental program which generates benefits in the short, medium and long term.

In this regard, in addition to the measures to implement as part of the group's new environmental policy, we are also staying the course with regards to prior commitments made:

- ▶ Close out the most significant accident risk scenarios and strengthen the reporting of minor events;
- ▶ Reduce water and energy consumption and releases against a constant level of uranium production;
- ▶ Complete the surveys underway on the improvement of the management of environmental liabilities;
- ▶ Deploy environmental management systems for all industrial sites.



## DEFINING THE NEXT ROAD MAP

The next commitments for the protection of the environment within mining activities shall be made for 2013/2014, based on the four following pillars:

- ▶ **Leadership and environment culture:** share AREVA's environmental policy (undergoing an update) and related operating targets across all of our sites. Mobilize workers on major environmental challenges, raise awareness and promote our measures. Our involvement in dedicated ICMM working groups is also a structural component of this pillar. Compliance with regulatory requirements is a prerequisite in countries in which we operate, and is the first standard which we apply. When possible, we go further than the regulations in force.
- ▶ **Documentation:** formalize our practices by updating standards and procedures, share good practices within our network of specialists and update our reporting protocol.
- ▶ **Organization and skills:** create a targeted training plan, map out the skills and responsibilities within our network of resources, deploy ISO certification 14 001 in all our sites. At present eight of our sites in Niger, France, Canada and Australia are certified. We would like to pursue this approach in Mongolia and Kazakhstan for 2015.
- ▶ **Emergency response:** continue to deploy the procedure and exercises related to emergency preparedness; more generally, the prevention of industrial and environmental risks remains at the heart of our approach (risk assessment / analyses, hazard studies, etc).

## MONITORING PERFORMANCE

Monitoring of consumption and emissions is carried out using the group reporting tool STAR (Sustainability Tools Advanced Reporting) and AHEAD for the reporting of environmental events. Associated technical protocols are being revised to properly take into account the new requirements on extra-financial reporting under the Grenelle II law. In addition, the technical protocols of the Global Reporting Initiative are being studied in relation to materials and biodiversity issues.

Each year the group conducts an audit on a sample of environmental indicators managed in STAR, as part of the work carried out by Statutory Auditors. As such, a number of our mining sites may be selected for the review of these indicators. In addition, follow-up and renewal audits recognizing each of our ISO 14001 certified sites have been conducted, with annual audits to come, carried out from 2014 by an independent third party as part of the assessment of the extra-financial reporting of AREVA mining activities.

# Our main environmental challenges

By their nature, mining activities modify the environment (consumption of resources, emission of greenhouse gases, landscape modification, etc). Through their effect on the ground, water, air, fauna and flora, they have an impact on biodiversity. Mining activities are conducted over periods of decades. In this time, environmental standards, requirements, knowledge and mentalities can change. The expectations and concerns of stakeholders are also growing.



Air quality inspection, Canada

**The format of this report does not enable a comprehensive description of all the environmental challenges faced by our activities. Nevertheless, we would like to present the main results related to energy, greenhouse gases, biodiversity, water, waste, mining waste rock and tailings. Additional indicators are provided in the RDR 2012 Figures Supplement.**

## ENERGY AND GREENHOUSE GASES

If we take into the account the increase in production, energy consumption (fossil fuels and electricity) and greenhouse gas emissions remained stable between 2011 and 2012.

In terms of gross consumption, an increase in the use of fossil fuels should be noted for AREVA's main mining operations. This increase is mainly related to:

- ▶ the increase of Katco activities in Kazakhstan (+13.6 GWh)
- ▶ the ramp-up of the Imouraren project in Niger (start of topsoil stripping and earthworks [+62 GWh])
- ▶ the increase in production of the Cominak site in Niger (+6.1 GWh)
- ▶ extension works for the McClean plant in Canada (+4.2GWh).

## WATER

Water is an essential resource for mining activities, both for people and for the production processes such as the removal of dust from mines. The locations of our sites (Niger, Kazakhstan, Mongolia, Namibia) and the diversity of

ecosystems have led us to view this resource as a strategic challenge. For this reason we are involved in the ICMM working group on water management in order to improve our knowledge and consolidate our practices. We have contributed to the presentation of a case study on the seawater desalination plant in Namibia for the "Water management in mining: a selection of case studies" report published by the ICMM in May 2012 (available at [www.icmm.com](http://www.icmm.com)).

Faced with water resource challenges, we are conducting qualitative and quantitative monitoring programs for aquifers which could be affected by our sites. In Niger, where this issue is especially present, a working group was formed in 2003 with the aim of preparing for the future of water resources for all sites in the country. This working group, called "Aman", carries out periodic monitoring campaigns on a wider scale than those conducted by site operators, and is building a resource forecasting model.

Four annual surveys are planned for quality monitoring, and one a year for water quality. In addition, since 2010 more in-depth hydrogeological and hydrogeochemical studies have been conducted by independent design offices ANTEA and ARCADIS for the SOMAÏR and COMINAK sites.



Taking samples of water for analysis, Niger

More generally, the gross consumption of water has been reduced, despite the increase in production, decreasing from 7,605,854 m<sup>3</sup> of water in 2011 to 7,393,125 m<sup>3</sup> in 2012. This decrease can be attributed in part to the start of maintenance on the Trekkopje project in Namibia. It is also due to the optimization of the ore processing procedure at SOMAÏR, where part of the water used in the process is now recycled.

## WASTE

This report covers conventional waste, and will not present detailed results related to radioactive waste. There are two categories of conventional waste:

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

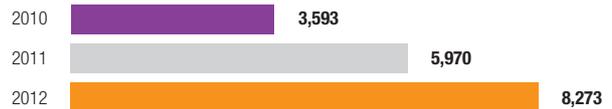
They are related to normal activity (as part of normal production) or exceptional activity (as part of works, projects, etc).

Waste is said to be recovered when it is recycled, reused, processed or used to generate heat or energy.

The increase in the overall tonnage of conventional waste between 2011 and 2012 is in part due to an incident which occurred at our Canadian site. This incident was related to a hydrocarbon leakage incident. The consequences of the leak were controlled and ground clean-up measures implemented.

The share of recovered conventional waste from normal activity is increasing, up from 21% in 2011 to 38% in 2012 (e.g. in Niger: continuation of the recovery of used engine oil at SOMAÏR and COMINAK; in Kazakhstan: 87% of waste produced at the KATCO site is recovered in reprocessing facilities).

## Trend in total production of conventional waste due to normal activity (tonnes)



## BIODIVERSITY

AREVA is committed to the preservation of biodiversity. Our approach is part of an improvement initiative in relation to our 2013-2016 Responsible Commitments Plan, which aims to apply international recommendations for the sector. To standardize our practices and better take biodiversity into account throughout the mining cycle, a specific biodiversity strategy is currently being defined. Specific reporting associated with this aspect is currently under study. We are taking part in working groups from the Fédération des minerais, minéraux industriels et métaux non ferreux (FEDEM - French Federation of ore, industrial minerals and non-ferrous metals) and the International Council on Mining and Metals (ICMM). This contribution enables us to share the best practices of the sector, foster thinking about new tools and about the discussions to be had with stakeholders.



Farmer who has received aid from AREVA to build a greenhouse (for info, he is seen in front of a bed of onions)

## 2010 COMMITMENTS IN NIGER

In 2010 with local Nigerien stakeholders and an international non-governmental organization for the protection of the environment we set out areas for improvement related to water (knowledge of our water consumption and quality, restoration of networks, strategy to diversify sources of supply, the supply of Arlit and Akokan), the radiological inspection of contaminated materials outside industrial sites and the rehabilitation plan for our sites taking into account the long-term management of tailings.

The objectives related to our commitments were only met in part in 2012, amongst other things because of security issues in the region. The related action plan is being updated for the areas of improvement which have not yet been closed out. The 2013 responsible growth report shall strive to give a fuller account of the work completed

### SURVEY OF CONTAMINATED WASTE

#### ROCK IN FRANCE

Following the memorandum of July 22, 2009, addressed to French préfets by the ASN and French Ministry for the Environment, in 2009 AREVA launched a series of surveys of locations contaminated by waste rock. This survey program, broken down into three phases, aims to identify the areas to examine (e.g. helicopter-borne spectrometry, flyovers, etc) and inspect them on the ground, analyze survey data and process areas of interest. Monitoring is conducted with local authorities and stakeholders.

### LONG-TERM IMPACT ASSESSMENT

AREVA has conducted several studies as part of the French National Plan for the Management of Radioactive Materials and Waste (Plan National de Gestion des Matières et Déchets Radioactifs - PNGMDR) from 2010 to 2012. In particular, these studies have focused on long-term environmental

impact assessment for the storage of waste rock and tailings, as well as the monitoring and processing of aqueous releases (see FOCUS p54 for more details). The PNGMDR is a document that presents a comprehensive and regular assessment of French policy on the management of radioactive substances. It assesses new needs and sets targets in terms of studies and research. Published for the first time in 2007, it is updated every three years.

#### FURTHER INFORMATION (\*)

*Waste rock is made up of earth, sand or rocks which do not contain mineable uranium ore, or contain no uranium at all. But it still needs to be extracted to access the ore itself. These substances are not radioactive, or have a very low level of radioactivity. They are stored in former mining sites. They are not waste.*

*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 resemble very fine sands and contain 70% of initial radioactivity. They are stored near processing plants. Their storage and inspection make up a considerable portion of rehabilitation and monitoring operations.*



Redeveloped mining site at Puy de l'Age, France.

## FRANCE



### FOCUS

Anticipating to optimize management of our environmental footprint over the long term



Taking samples of sediment from Lac de Saint-Clement in the Forez region of France

### BACKGROUND

In recent years, regulatory requirements and societal concerns over the environmental risks of post-mining sites have multiplied. In order to respond appropriately, research and development studies are needed.

Order to anticipate and adapt to the legislation, AREVA has undertaken an environmental R&D project specific to its mining activity: Envir@Mines. The aim is to enable AREVA to satisfy the requirements of the authorities and of the National plan for the management of radioactive materials and radioactive waste (PNGMDR).

### DESCRIPTION OF THE ENVIRONMENTAL R&D PROJECT: “ENVIR@MINES”

The challenge of this transverse project is to develop an approach allowing societal demands and those of the authorities to be anticipated. The answers must be underpinned by a robust scientific understanding of the issues, which can serve as a basis, in particular, for environmental impact calculations. Objectives of this project are as follows:

- To improve our understanding of the environmental impact of mining sites, through the development of models to estimate the long-term migration of contaminants\* of interest, in order to optimize the current environmental monitoring and anticipate solutions for rehabilitation of the sites.
- To propose new technologies to optimize water management and treatment.

### PARTNERSHIPS

Several academic partnerships have been set up to help AREVA in its response to the scientific challenges. This collaborative approach means our R&D teams can enhance their work through a contribution of new perspectives and skills. It is also the opportunity to gain greater legitimacy on the reported results.

On post-mining issues, we have established partnerships with institutions including Université Paris VI, Ecole des Mines de Paris, Université de Poitiers, Université de Bruxelles, the University of Manchester, the University of Granada, and CEA.

### KEY FIGURES

- 234 former mine sites under the responsibility of AREVA in France.
- Nearly 100,000 samples and analyzes performed per year.
- A team of 25 people dedicated to the management of these former sites.
- Annual budget of around 10 million euros.

Glossary (\*)

**Bioavailability:** Bioavailability is the fraction of a substance immediately available for absorption by living organisms.

**Contaminant:** a contaminant is a substance found in a place where it is not normally found.

**GEP (Pluralistic Expert Group):** established in 2006, composed of more than twenty experts of diverse origin (French and foreign institutional members, associative members, independent experts and industry representatives). The group's role is to take a critical view of the technical documents pertaining to monitoring of mining sites in order to advise the government and operators on the long-term management and surveillance of the installations.

## SCOPE OF THIS CASE STUDY

The Envir@Mines project involves all group mining sites. Here we will focus on our actions in France, i.e. on mines that have already been rehabilitated. Three themes are addressed: the management of waste rock and tailings and the aqueous discharges.

### Management of tailings

Under the PNGMDR, AREVA is required to continue the study of the evolution 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 a normal scenario and degraded scenarios.

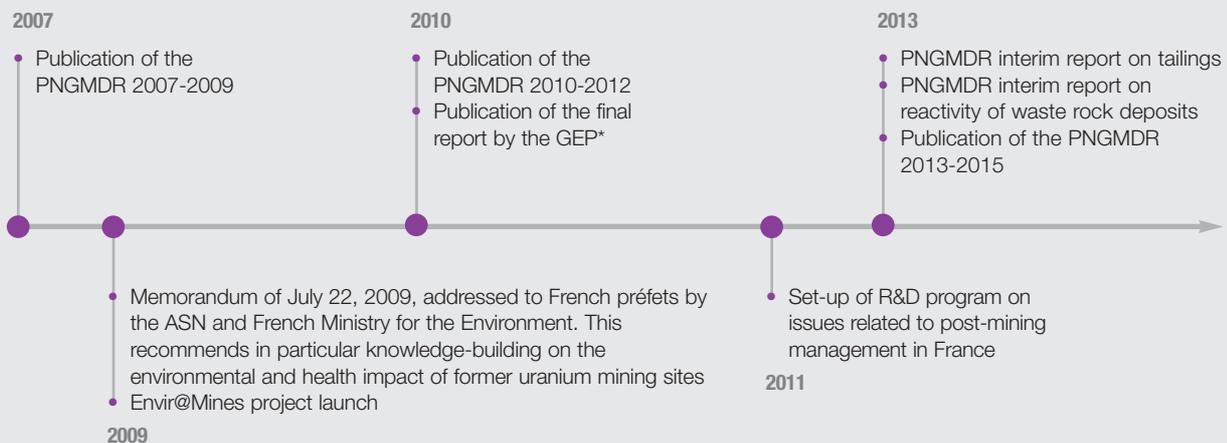
### Management of waste rock

Also under the PNGMDR, AREVA has conducted sampling campaigns on several rehabilitated 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 migration of uranium from the rock piles to the environment.

### Aqueous discharge and bioavailability\*

AREVA is preparing for future legislative developments in France on the environmental quality of aquatic environments. The definition of these new standards will take into account the concept of bioavailability of contaminants. To be able 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 their potential risks for ecosystems. A tool for directly measuring the bioavailability of dissolved elements in the aquatic environment is being developed and new methods of water treatment are being studied.

## A FEW KEY DATES



## FOR MORE INFORMATION

Descostes M., Kanzari A., Poquet T., Bonheure E., Phrommavanh V., Gerard M. (2013). *Study of reactivity of waste rock on the former uranium mining sites of the Limousin area in France*. AREVA Mines report AMS-DEXP-DRD-RT-0005.

Descostes M., Boizard A., Nos J., Peiffert C., Cathelineau M., Phrommavanh V. (2013). *Characterization of tailings from uranium ore processing at mining sites in France (Lavaugrasse, Bellezane, Ribière, Cellier)*. AREVA Mines report DEXP-DRD-RT-0002.

Descostes M., Fedon-Petrova S., Gibeaux A. (2011). *Evaluation of current water treatment practices at the former uranium mining sites in France and investigation into alternative processes*. AREVA Mines report BGM/DI/DRD RT 11/084.

Nos J., Boizard A., Peiffert C., Phrommavanh V., Cathelineau M., Descostes M. (2013). *Geochemical characterization of uranium mill tailings*. Goldschmidt Conference, Firenze, Italy.

Phrommavanh V., Gibeaux A. (2013). *Bioavailability of contaminants in the mining context*. AREVA Mines report AMS-DEXP-DRD-RT-0008.

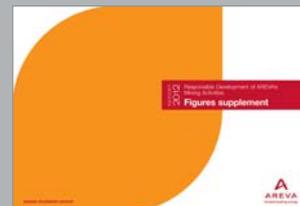
Phrommavanh V., Leermakers M., De Boissezon H., Nos J., Koko M.B., Descostes M. (2013). *Characterizing the transport of natural Uranium and its decay product <sup>226</sup>Ra, downstream from former mines in France*. WRI-14, Avignon, France, June 9-14.

# 06 ▶

## MAIN RESULTS 2012

### **ICMM principle 10: Implement effective and transparent engagement, communication and independently verified reporting arrangements with our stakeholders.**

In addition to the 2012 Responsible Development Report on AREVA's mining activities (RDR 2012), we have also made an RDR 2012 Figures supplement available on our website. It comprises a browsing index in accordance with GRI guidelines and additional quantitative data, mainly related to the environment.



For the sake of clarity, in Chapter 6 we have selected a restricted group of indicators, representative of the topics considered a priority by our employees (cf. matrix p.12). The results are therefore related to the following topics: occupational health and safety, radiation protection, environmental protection, community involvement and commitment to employees.

We have also produced a status report on the targets set out in the 2011 Responsible Development Report on AREVA's mining activities, which is now available.

\* Global Reporting Initiative™

# Read the RDR 2012 Figures supplement

The Responsible Development Report on AREVA's mining activities 2012 (RDR 2012) has been prepared in accordance with the GRI G3.1 guidelines. The RDR 2012 appendix, the "RDR 2012 Figures Supplement", indicates the sections of the report and any other document published by the group presenting information corresponding to that indicated in the GRI guidelines.

- It explains the different application levels of the GRI and the information we need to provide to meet level B in 2013 and level A+ in 2015.

Application Level	C	C+	B	B+	A	A+
Standard disclosures	<b>Profile disclosures</b> Report on: 1.1 2.1-2.10 3.1-3.8, 3.10-3.12 4.1-4.4, 4.14-4.15	Report externally assured	Report on all criteria listed for level C, plus: 1.2 3.9, 3.13 4.5-4.13, 4.16-4.17	Report externally assured	Same as requirement for level B	
	<b>Disclosures on Management Approach</b> Not required		Management Approach Disclosures for each Indicator Category		Management Approach Disclosures for each Indicator Category	
	<b>Performance Indicators &amp; Sector Supplement Performance Indicators</b> Report fully on a minimum of any 10 Performance Indicators, including at least one from each of: Social, Economic and Environmental.		Report fully on a minimum of any 20 Performance Indicators, including at least one from each of: Economic, Environment, Human Rights, Labor, Society, Product Responsibility.		Respond on each G3 core and Sector Supplement indicator*, with due regard to materiality principle, by either reporting on the Indicator or explaining the reason for its omission.	

\* Sector Supplement in final version



- It presents the certificate issued by the GRI for the application level met by RDR 2012.
- Finally, it sets out the scope covered by the quantitative indicators presented in RDR 2012.

Element	Description	Reporting	Location / Access for analysis	GRI Reference
<b>3. Report Assessment</b>				
3.1	Reporting period	Full	G1 - Report annex	10
3.2	Date of most recent period report	Full	G1 - Report annex	10
3.3	Reporting cycle	Full	G1 - Report annex	10
3.4	Content point for assurance regarding the report or its contents	Partial	G12 - Board and activities and our commitments	10
3.5	Process for selecting report content	Full	G1 - Report annex	10
3.6	Materiality	Full	G13 - Identifying and leading stakeholder conversations G14 - Prioritizing key issues in terms of responsibility	10
3.7	Limitations on scope or availability of report	Full	G1 - Report annex	10
3.8	Check for reporting on joint ventures, subsidiaries, asset facilities, retirement operations, and other entities that are significantly affected by the group's operations	Full	G1 - Report annex	10
3.9	Data measurement techniques and the bases of calculation	Full	G12 - Report annex	10
3.10	Dependence of the effect of any re-estimation of information provided in earlier reports, and the reasons for such re-estimation	Full	G12 - Report annex	10
3.11	Significant changes from previous reporting periods in the scope, location or measurement methods applied in the report	Full	G1 - Report annex G12 - Change in scope since 2011 RDR 2012 Figures Supplement G1	10
3.12	Scope identifying the location of the Standard Disclosure in the report	Full	RDR 2012 Figures Supplement	10
3.13	Policy and control structure with regard to selecting external assurance for the report	Full	G1 - Report annex	10
<b>4. Governance, Commitments and Engagement</b>				
4.1	Governance structure of the organization, including committees under the highest governance body responsible for specific issues, such as climate change or responsible sourcing	Full	G15 - Governance of AREVA's mining activities AREVA 2012 annual report G15-1 AREVA 2012 Reference Document G15-2	1
4.2	Material effective date of highest governance body G, also an executive officer	Full	G15 - Governance of AREVA's mining activities AREVA 2012 annual report G15-1	1
4.3	The organization that has a primary board structure, lists the member and gender of members of the highest governance body that are independent external non-executive members	Full	G15 - Governance of AREVA's mining activities AREVA 2012 annual report G15-1	1
4.4	Mechanisms for consultation and engagement to promote accountability or disclosure to the highest governance body	Full	G15 - Governance of AREVA's mining activities G12 - Change and control: internal and external	1

# Monitoring 2010-2012 results

## DEVELOPMENT IN SCOPE SINCE 2011

The following gold or uranium activities no longer fall within the scope of the RDR.

As of September 2012, following a divestment process which began in March 2012, La Mancha, a gold-mining subsidiary listed on the Toronto Stock Exchange in which AREVA held a 63% stake, has entered into an agreement with Weather Investments II, who had launched a takeover bid. The sale of **La Mancha** fell under the 2016 Action plan.

As a result of the unfavorable economic conditions, AREVA stopped its activities at the **Bakouma site in the Central African Republic**. An initial communication was issued to the CAR government declaring the suspension of AREVA mining activities. In June 2012, following attacks to the site, on-site activities were suspended.

The following activity is partially covered in the RDR.

The economic consequences related to the Fukushima nuclear accident in Japan and the consequences of the global economic and financial crises have not enabled us to continue our pilot project in Trekkopje, Namibia, leading us to place the site under care and maintenance until market conditions enable mining operations there to be resumed.

*Indicators followed by a “ \* ” are new compared with 2011, or their calculation method has changed.*

Related GRI indicators / Countries included in scope		Australia	Canada	France	Gabon	Kazakhstan	Mongolia	Namibia	Niger
Occupational safety	LA7 ① IR1	X	X	X	X	X	X	X	X
	② SR	X	X	X	X	X	X	X	X
	③ Fatal accident	X	X	X	X	X	X	X	X
Radiation protection	LA8 ④ Number of employees > 20 mSv (*)	X	X	X	X	X	X	X	X
	LA8 ⑤ Employee radiation protection	X	X	X	X	X	X	X	X
	LA8 ⑥ Sub-contractor radiation protection	X	X	X	X	X	X	X	X
Health	LA8 ⑦ OSRA consultations (*)								X
	LA8 ⑧ OSM consultations (*)				X				
Environment	EN8 ⑨ Water (*)		X	X		X		X	X
	EN3 ⑩ Electricity (*)		X	X		X		X	X
	EN3 ⑪ Fossil energy (*)		X	X		X		X	X
	EN16 ⑫ Greenhouse gases		X	X		X		X	X
Employment	LA1 ⑬ Staff	X	X	X	X	X	X	X	X
	LA13 ⑭ Ratio of women employed	X	X	X	X	X	X	X	X
	LA14 ⑮ Salary ratio (*)			X					

## MAIN RESULTS 2010-2012

### Occupational Health and Safety

no.	Subject	Description	2010	2011	2012
1	<b>Occupational safety (employees and sub-contractors)</b>	Incidence ratio for lost time industrial accidents (IR1)	1.55	1.05	1.08
2		Severity rate for lost time industrial accidents	0.07	0.05	0.14
3		Number of fatal industrial accidents	3	1	2
4	<b>Radiation protection (employees and sub-contractors) (*)</b>	Number of employees and contractors exposed to a dose exceeding 20 mSv	0	0	0
5		Average dose for employees (in mSv)	3.38	3.23	3.05
6		Average dose for sub-contractors (in mSv)	2.64	2.79	2.35
7	<b>Health Observatories (OS - Observatoires de la santé) (*)</b>	Number of consultations since the start of the OSRA (Health Observatory for the Agadez Region, Niger) in 2012	-	-	225
8		Number of consultations since the start of the OSM (Health Observatory of Mounana, Gabon) in 2011	-	-	614

Note: the definitions of IR1 and IR2 are available on p.35. The severity rate (SR) is the number of days lost per thousand hours worked.

### Environmental protection

no.	Subject	Description	2010	2011	2012
9	<b>Water</b>	Amount of water consumed per tonne of uranium (m <sup>3</sup> /tU)	868	947	773
10	<b>Electricity (*)</b>	Amount of electricity consumed per tonne of uranium (MWh/tU)	26	28	27
11	<b>Fossil energy (*)</b>	Amount of fossil fuels consumed per tonne of uranium (MWh/tU)	78	78	69
12	<b>Greenhouse gases</b>	Direct emissions (Scope 1) per tonne of uranium (tCO <sub>2</sub> /tU)	25	26	23

Note: the calculation of ratios changed between 2010 and 2012. To represent the changes in the environmental performance of our activities as accurately as possible, the scope chosen for the production of uranium is the total production for all sites of which AREVA was the operator in 2012; the environmental indicators used are calculated here for sites which actually produced uranium in 2012.

### Commitment to employees

no.	Subject	Description	2010	2011	2012
13	<b>Staff</b>	Number of employees	5,221	5,319	5,272
14	<b>Professional gender diversity (*)</b>	Ratio of women in management (in %)	22	21	23
15		Gender ratio between average salaries, male/female in France	-	-	1.3

Note: social indicators are under study for the RDR 2013, and are exceptionally excluded from the RDR 2012 because the scope and related protocols are currently being defined to best include GRI indicators.

## MONITORING OF 2012 TARGETS

Vision	2012	Comments	2013-2016 Target
<b>Our approach to responsibility</b>	Propose a new plan of action to promote sustainable development: Responsible Commitments Plan 2013-2016	This plan of action comprises four main areas: 1. be an active member of the ICMM 2. meet the 10 sustainable development principles 3. develop CSR reporting, 4. implement a sustainable development audit	<ul style="list-style-type: none"> <li>Conduct a self-assessment of our CSR practices every two years (cf. p.12) and define the related action plan to improve them</li> <li>Provide our stakeholders with an annual A+ level sustainable development report according to the GRI standard</li> <li>Conduct an annual independent CSR audit of our practices</li> <li>Continue to meet our pro-active commitments to transparency (EITI)</li> <li>Place safety at the heart of our facilities by continuing to deploy our reference frameworks for risk prevention and emergency preparedness</li> </ul>
<b>Occupational health and safety for employees and sub-contractors</b>	Zero fatal work-related accidents	Details available in Chapter 3 of RDR 2012	○
	Maximum IR1 set at 1.2		<ul style="list-style-type: none"> <li>Zero fatal work-related accidents</li> <li>Maximum IR1 set at 1.1</li> <li>Maximum IR2 set at 5</li> <li>Deploy the action plan related to the safety diagnostics</li> </ul>
	Maximum dose due to exposure to ionizing radiation of less than 16 mSv		<ul style="list-style-type: none"> <li>Maximum dose due to exposure to ionizing radiation of less than 16 mSv</li> </ul>
	Implement occupational health and safety management systems		<ul style="list-style-type: none"> <li>Obtain OHSAS 18001 certification for our sites in Kazakhstan and Mongolia</li> </ul>
<b>Commitment to employees</b>	Continue to deploy actions to promote diversity, expertise and the development of skills both in France and internationally	Several awareness-raising and communications campaigns were held in 2012 for all areas related to diversity. Certain regulatory targets have not yet been met (e.g. disability)	<ul style="list-style-type: none"> <li>Pass the Diversity Label monitoring audit (France).</li> <li>Conduct the second experts recruitment campaign in the Mining BG</li> <li>As a minimum, meet the targets set by regulations for employment indicators</li> </ul>
<b>Community involvement</b>	Set up on-site Mining Social Committees (CSM -Comités Sociétaux Mines) for the management of community projects	Statutes and documents related to governance have been defined and approved	<ul style="list-style-type: none"> <li>Hold at least two Mining Social Committee meetings per year for Niger, Gabon, Kazakhstan and Mongolia</li> </ul>
	Report annually on the budgets financed by the Mining Integration Committee (CIM - Comité d'Intégration Mines)	Available page 45	<ul style="list-style-type: none"> <li>Integrate the social budgets provided by each of our subsidiaries into CSR reporting</li> </ul>
			<ul style="list-style-type: none"> <li>Conduct social impact studies for project sites (Mongolia and Imouraren)</li> <li>Create or continue consultation frameworks with local stakeholders</li> <li>Develop training on Human Rights specific to the scope of AREVA mining activities</li> </ul>
<b>Environment</b>	Deployment of policy levers for putting the group's newly-updated environmental policy into practice	An action plan related to this policy is currently being defined	<ul style="list-style-type: none"> <li>Close out the most significant accident risk scenarios and reduce the number of significant events by 15% compared with 2011</li> <li>Strengthen the reporting of events classified as not significant</li> <li>Reduce water and energy consumption and other releases against a constant level of uranium production and site scope</li> <li>Complete status reports on the improvement of the management of environmental liabilities</li> <li>Deploy environmental management systems for all industrial sites (ISO 14 001)</li> <li>Develop the biodiversity strategy in our activities</li> </ul>

● 2012 target met

◐ 2012 target partially met

○ 2012 target not met

# About our activities and our commitments

For further information on our activities you may contact us at:

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Subject: RCR 2012

Visit our website: [www.areva.com](http://www.areva.com)

If you are an AREVA employee, consult the intranet on your work computer, or request access from the communications

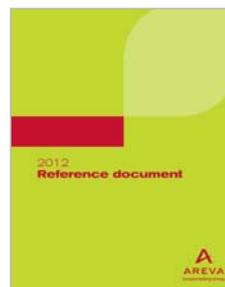
## COMMUNICATIONS ASSOCIATED WITH THIS REPORT

### ► AREVA financial and extra-financial reports

Annually, the group presents its results in terms of financial performance and sustainable development, in reports entitled "Reference document" and "Sustainable development and activity report". These are available on the website [www.areva.com](http://www.areva.com)



AREVA 2012  
Annual report



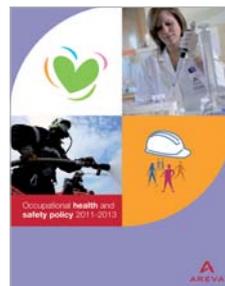
AREVA 2012  
Reference document

### ► AREVA policies

Policy documents and a charter published by the AREVA group set the direction and guidelines to be followed throughout the group. They are also made available on the website [www.areva.com](http://www.areva.com)



AREVA Nuclear Safety  
Policy



AREVA Occupational  
Health and Safety Policy



AREVA Environmental  
Policy



AREVA Values  
Charter

► **Report on sustainable development of AREVA's mining activities**

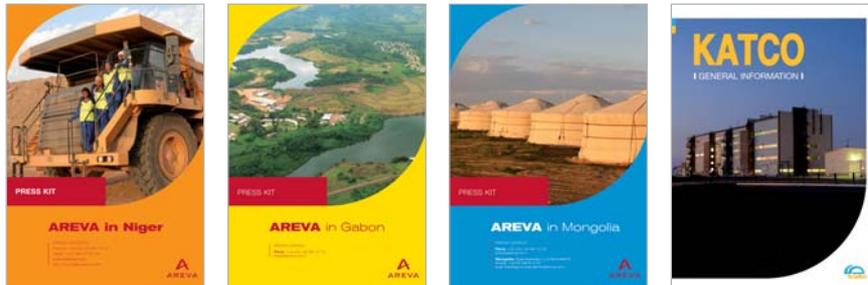
Since 2010, the Mining Business Group has been providing its stakeholders with information on extra-financial performance. This report is entitled "Responsible development report on AREVA's mining activities".



*Responsible Development Report on AREVA's mining activities 2012, 2011 and 2010*

► **Additional reports**

The AREVA Mines Communications Department has put together press reports by country to best present our activities to external stakeholders (e.g. journalists).



*AREVA in Niger, AREVA in Gabon, AREVA in Mongolia...*

► **WEB Communication**

Our teams are developing more and more online media to make information on our activities more easily available for our stakeholders. As with the additional reports, we offer below a number of captures from www.aveva.com, from our employees' intranet and from various blogs on the topics discussed in this 2012 responsible development report.



*Website on activities in Niger*



*AREVA Mining Intranet. Section devoted to "Our responsibility"*



*AREVA dialogue space*



*Blog on progress of the Kiggavik project in Canada*



*Information related to the EITI and our mining subsidiaries*



*Blog on progress of the McClean Lake project (in Canada)*

September 2013

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AREVA supplies solutions for power generation with less carbon. Its expertise and unwavering insistence on safety, security, transparency and ethics are setting the standard, and its responsible development is anchored in a process of continuous improvement.

Ranked first in the global nuclear power industry, AREVA's unique integrated offering to utilities covers every stage of the fuel cycle, nuclear reactor design and construction, and related services. The group is also expanding its operations to renewable energies – wind, solar, bioenergy, energy storage – to become a European leader in this sector.

With these two major offers, AREVA's 47,000 employees are helping to supply ever safer, cleaner and more economical energy to the greatest number of people.

[www.aveva.com](http://www.aveva.com)

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Energy is our future, don't waste it!