Responsible
Development of
AREVA's Mining Activities



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Feel free to share your comments and questions about this first report. Your assistance will help us improve future issues and fulfill your expectations.

AREVA's mining activities place it among the world leaders in uranium production. What is the main objective of AREVA's mining activities? Ensuring uranium supply over the long term to produce nuclear power while emitting less CO<sub>2</sub>, reducing risks to people and the environment and contributing to the development of areas where mining activities take place.

KEY FIGURES BG MINES' SALES
IN 2010
(MILLIONS OF EUROS)

1,092

BG MINES' STAFF IN 2010

5,221

URANIUM EXTRACTED IN 2010 (TONNES)

8,341



# **AREVA'S MINING ACTIVITIES** Uranium mines in operation ⊗ Uranium mines under development Uranium exploration Gold mines in operation ⊗ Gold mines under development Gold exploration \* Rehabilitation HQ and trading



AREVA's mining activities span five continents. This diversified portfolio allows the group to carry out exploration, project development and production activities in various geopolitical and technological contexts with the support of its staff's multicultural backgrounds.

AREVA'S P	ARTICIPATION IN URANI	UM PROJECT	'S
Countries	Sites	JV Shares* (%)	AREVA's Accessible Shares** (%)
South Africa	Ryst Kuil Project	74,00 %	74,00 %
Australia	Koongarra	100,00 %	100,00 %
Canada	Cigar Lake	37,10 %	37,10 %
Canada	Dawn Lake	23,09 %	23,09 %
Canada	Key Lake	16,67 %	16,67 %
Canada	Kiggavik-Sissons Schultz	64,80 %	64,80 %
Canada	McArthur	30,20 %	30,20 %
Canada	McClean	70,00 %	70,00 %
Canada	Midwest	69,16 %	69,16 %
Canada	Millennium	27.94 %	27.94 %

Countries	Sites	JV Shares* (%)	AREVA's Accessible Shares** (%)
United States	Pathfinder	100,00 %	100,00 %
France	AREVA NC France	100,00 %	100,00 %
Kazakhstan	Katco	51,00 %	100,00 %
Mongolia	Dulaan UUL	100,00 %	100,00 %
Namibia	Trekkopje Project	100,00 %	100,00 %
Niger	Arlit Concession	100,00 %	100,00 %
Niger	Cominak	34,00 %	34,00 %
Niger	Imouraren	66,65 %	56,65 %
Niger	Somaïr	63,40 %	63,40 %
CF	Bakouma	100,00 %	88,00 %

Source: AREVA.



More information is available in the Reference Document AREVA 2010 (www.areva.com)

<sup>\*</sup> Joint Venture Shares \*\* Quantity of uranium likely to be sold/distributed to AREVA through Joint Venture Mining.



# AREVA's Mining

### INTERVIEW WITH...

### Sébastien de Montessus

DIRECTOR GENERAL. AREVA'S MINING ACTIVITIES



### What are the specificities of uranium mining?

S.d.M. Our activity is multi-faceted. It covers various activities from exploration of potential uranium-bearing areas to site rehabilitation as well as long-term project phases and mining operations. The cycle from exploration through to mine closure may take several decades and requires significant investments that sometimes amount to billions of Euros. AREVA's mining activities are located over vast areas and mobilize a large number of workers and contract employees. Uranium ore is a strategic raw material, both for governments and for our energy producer clients who must secure their supplies over the long term. Finally, because of the natural radioactivity of uranium ore, our activities include protection measures for workers and neighbouring populations.



# Activities

All these characteristics make mining very demanding and impose a responsible commitment at several levels:

- Environmental responsibility to preserve areas where our sites are located
- Health and safety responsibility to guarantee that our activities are not dangerous
- Social and community responsibility to foster the development of workers and contractors as well as neighbouring populations and to protect communities from impacts generated by mining
- Economic responsibility towards shareholders
- Ethical and civic responsibility to ensure that value is shared between all stakeholders
- Product stewardship responsibility for a raw material that is becoming more and more strategic in a world where the issue of low carbon energy is essential for tomorrow.

### How do you ensure these responsibilities are met?

**S.d.M.** When I was put in charge of this activity in 2007, it seemed important to met assess the way we managed our environmental and social responsibilities: Did we work in a responsible way? Could we be proud of our accomplishments?

After visiting our sites and after numerous discussions with managers, workers and local stakeholders, I could see that while our practices were largely in agreement with our ethical and responsible vision, we need to continually improve our performance in these areas. Since then, we have continued our efforts to meet international standards and good practice that are also evolving, of course.

Thus, during the whole mine cycle and in consultation with local populations and authorities, we strive to reduce or mitigate the environmental and social impacts of our activities and we commit to sharing complete, regular, and transparent information with local populations. These principles apply to all our sites whether we have been operating them since their inception or have acquired them.

Moreover, no matter where our sites are operated, we develop programs to become involved in these areas. This active involvement with civil society and authorities helps set up projects that benefit local populations. It helps to develop local skills and to support local economic development with the creation of small- and medium-sized businesses.

But, not everything is perfect, and I am totally aware of that. We deeply regret the loss of three lives of our co workers this past year, our thoughts go to their families. That is why we continually strive to incorporate safety, social and environmental responsibility into AREVA's mining activities. In 2007, we started implementing a significant action plan on industrial safety. In 2009, we created the Environmental and Social Responsibility Department and, in 2010, we decided to submit an application to become a member of the International Council of Mining and Metals (ICMM) with the objective of adopting industry best practice.

### What is your outlook for the future?

**S.d.M.** We have three objectives in mind:

- Comply with the most stringent standards and regulations and even out perform them in some areas.
- Be more involved in the regions where we operate and contribute to their sustainable development,
- Fulfill our responsibility in the long term from the first phases of exploration to the decommissioning and rehabilitation in a transparent manner and maintaining open dialogue with our stakeholders.

In 2011 and 2012, we will implement new strategies and standards in the field, in particular on biodiversity, energy performance, and health and welfare in the workplace. Furthermore, we will link part of the bonus awarded to site directors and managers to the achievement of environmental and social targets. We will also develop a major awareness-raising campaign and a training program for our workers on. Our goal is to be a responsible and transparent stakeholder with respect to existing and future activities and the legacy of the past.

### A COMMITMENT TO CONTINUOUS

### **IMPROVEMENT**

A continuous improvement approach is applied to AREVA's mining activities. In 2010, our teams defined new commitments and policies so that AREVA's mines comply with ICMM's international standards and can report on outcomes according to the standards of the Global Reporting Initiative (GRI) by 2012.

Here are the major objectives we want to focus on in 2011 and 2012.

Objectives		Expected Outcomes and Deadlines
	Submit an application to become a member of the ICMM in 2010.	Approval decision at the ICMM issued in May 2011.
Implementation of	Develop AREVA's reporting standards in accordance with GRI guidelines.	Change internal reporting by the end of 2012 to make it more complete and robust.
an action plan complying with ICMM & GRI standards	Prepare a responsible development report for AREVA's mining activities to publicly communicate our commitments and performance in sustainable development fields.	First 2010 report published in May 2011. Prepare the 2011 report with a panel of stakeholders. Prepare the 2012 report according to GRI requirements to reach A+ level.
	Implement the activities outlined in the ICMM compliance action plan.	Mobilize all teams in charge of AREVA's mining activities to meet expectations by 2012.
	Continue the implementation of our safety and environment management systems.	100% of mine sites in 2012.
	Continue working on campaigns and safety measures to protect our workers and contract workers.	Consistently reach a target of zero accidents.
	Surpass regulatory expectations through setting the maximum occupational dose of ionizing radiation lower or equal to 16 mSv for AREVA and contract workers.	No worker with a dose above or equal to 16 mSv in 2011.
Ongoing progress on all the issues mentioned in this report	Significantly improve our environmental performance on major issues in our sector: Managing natural resources (water and energy) and reducing our CO <sub>2</sub> emissions.	Objectives set by AREVA between 2004 and 2011:  - Reduce greenhouse gas emissions by 50%  - Reduce energy consumption by 20%  - Reduce water consumption by 35%.
	Increase the percentage of women on management committees.	Reach 20% in 2011.
	Increase the number of hours of training per worker.	30 hours of training per worker per year.
	Implement Health Observatories at all our mining sites.	Creation of a Health Observatory at the Arlit-Agadez mines (in Niger) by mid-2011.
	Establish a sustainable presence wherever our mines are located.	In 2011, formalize our commitment strategy with stakeholders and our development strategy in the communities.

<sup>\*</sup> With consistent sales compared



### THE CORE OF OUR WORK

Uranium is the raw material required for the production of nuclear electricity, an energy that has low CO<sub>2</sub> emissions.

The objective of AREVA's mining activities is to secure a uranium supply for clients in the long term and bring these resources online in a sustainable manner.



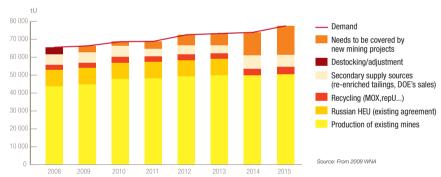
### INCREASING URANIUM DEMAND

The demand of all the nuclear reactors in the world was around 66,000 tonnes of uranium in 2010 (gross demand expressed in natural uranium equivalent). In the past five years, the demand has slightly increased (0.5 to 1% per year). Added to this demand is an increasing demand from some power companies, in Asia in particular, that are trying to build strategic uranium stocks in anticipation of the construction of new reactors.

World production continues to increase and reached 53,000 tonnes of uranium in 2010. Therefore, production covers three quarters of the world demand and the rest is supplied by secondary sources from DOE's destocking, the use of MOX fuels, uranium recycling, etc.

To meet these challenges, AREVA made a significant effort to increase its uranium production in 2010 and, in doing so, renew its long-term resources. This will be done through the enhancement of our exploratory programs, the development of existing projects and the opening of new mining projects.

### **DEMAND AND SUPPLY WORLDWIDE**





SALES INCREASED BY

COMPARED TO 2009

### **SOME KEY FIGURES FOR AREVA'S MINING ACTIVITIES**

In 2010, AREVA produced 8,341 tonnes of uranium. Sales from mining activities totalled 1,092 million Euros (12% of sales of the AREVA Group). This is a 27% increase compared to 2009 (+18% considering equivalent scope of activity and exchange rate assumptions). Uranium production came from three countries: Kazakhstan, Niger and Canada.

The group was the world's second largest uranium producer in 2010 (source: reference document AREVA 2010).

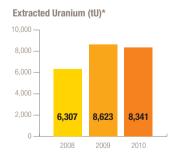
TOP	10 PRODUCERS	BY RANK	
Rank	Producer	Accessible Production Share(tU)	%
1	Cameco	8,758	16,5 %
2	AREVA	8,341	15,7 %
3	Kazatomprom	7,675	14,5 %
4	U1/ARMZ	7,092	13,4 %
5	Rio Tinto	6,388	12,1 %
6	Navoi	2,400	4,5 %
7	BHP Billiton	2,347	4,4 %
8	Paladin	2,088	3,9 %
9	Sopamin	1,465	2,8 %
10	CGNPC	1,000	1,9 %
	Total Top 10	47,563	89,7 %
	Others	5,445	10,3 %
	World Production	on 53,000	100 %

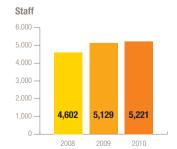
Source: ARFVA

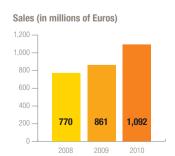
* Share of resources and production to be
sold or distributed by AREVA through Joint
Venture Mining. For reserves, this share is
expressed in concentrates, after application of
mine and plant reclamation.
** Share of production that is consolidated in
AREVA's accounts.
Source: AREVA

2010 PRO	DUCTION IN TONNE	S OF URANIUM (tU	)		
Countries	Sites	2010 JV Share tU	2010 Accessible Share* tU	2010 Consolidated Financial Share** tU	Туре
Canada	McArthur	2,308	2,308	2,308	Plant
Canada	McClean	466	466	466	Plant
Total	Canada	2,773	2,773	2,773	
France	Div. Min. Hérault	7	7	7	Plant
Total	France	7	7	7	
Kazakhstan	Katco	1,710	3,354	3,354	ISR
Total	Kazakhstan	1,710	3,354	3,354	
Niger	Cominak	526	526	526	Plant
Niger	Somaïr	1,680	1,680	2,650	Plant
Total	Niger	2,206	2,206	3,176	
TOTAL		6,697	8,341	9,311	

**AREVA's Mining Activities** since 2008









AREVA is also a gold producer through its subsidiary La Mancha, established on September 28, 2006, with the merging of the group's assets and those of the Canadian company La Mancha Resources Inc. The diversification into gold that started in the 1980s allowed the group to maintain its mining skills when the uranium market was down.

La Mancha is a diversified international gold producer operating two gold mines in Africa and two gold mines in Australia and developing several projects in Australia, Sudan, the Ivory Coast and Argentina.

GOLD				
Countries	Sites	Joint Ve Operator	nture Shares AREVA Ac (%)	cessible Shares* (%)
Australie	Frog's Leg	LMRA	32,32	32,32
Australie	White Foil	LMRA	63,38	63,38
Côte d'Ivoire	Fetekro	Cominor	41,19	41,19
Côte d'Ivoire	SMI	Cominor	29,09	29,09
Soudan	AMC	Cominor	25,35	25,35

Source: AREVA

2010 GOLD PRODUCTION (KG of Gold)					
Countries	2010 Total (kg)	Joint Venture Share* (kg)	2010 Accessible Share* (kg)		
Australia	2,431	1,539	1,539		
Ivory Coast	1,155	336	336		
Sudan	2,129	540	540		
TOTAL	5,714	2,416	2,416		

Source: AREVA



### BUSINESSES WITHIN OUR ACTIVITIES

Mining activities are the first link in the nuclear fuel cycle and in the integrated model of the AREVA Group.

They are subdivided into four phases: exploration, project development, mining and site rehabilitation.

Each phase includes specific challenges as far as sustainable development is concerned which must be controlled over long cycles of activities (up to 50 years for some sites in operation) and even after the mines are decommissioned.



### **FEBRUARY:**

- Niger: AREVA and KEPCO signed a partnership agreement to develop the Imouraren mine and they intend to expand their cooperation.
- Jordan: AREVA and JAEC signed a historical mining agreement.

#### **APRIL:**

- Namibia: AREVA officially opened a sea-water desalination plant in Southern Africa Namibia.
- AREVA received the Diversity Label.

#### MAY:

France: The Business Group Mines attended the fourth AREVA Stakeholder Session in Paris.

### **SEPTEMBER:**

- Niger: VINCI and AREVA were very sad to experience the kidnapping of seven employees.
- Kazakhstan: The Fast Track Project in Katco officially opened.

### **OCTOBER:**

Gabon: The first mine site Health Observatory of mine sites opened.

#### **NOVEMBER:**

China: A contract for 20,000 tonnes of uranium over 10 years was signed with the Chinese power company China Guangdong Nuclear Power Corp. (CGNPC).

### **DECEMBER:**

- Central African Republic: An official ceremony was held to launch the pilot for the Bakouma Project.
- Mongolia: The first In Situ Recovery (ISR) test was launched as part of the metallurgical testing for the project







Exploration involves finding uranium deposits with sufficient grade and tonnage to mine under sustainable economic. technical, environmental and community conditions. AREVA invests significant amounts of money into exploration and the exploration budget has quadrupled in the last five years.

In 2010, AREVA carried out exploratory programs in ten countries. The main exploration sites were:

- Canada, in Saskatchewan and Nunavut. The latest studies confirmed the potential in Shea Creek in the Athabasca Western Basin and around Kiggavik, in Nunavut
- · Mongolia, after ten years of exploration, a significant deposit was confirmed in the provinces of Dornogobi and Sukhbaatar
- The Bakouma deposit, near the city of Bakouma in Central African Republic
- Kazakhstan, where after three years of intensive exploratory programs important ore reserves have been confirmed in Tortkuduk, and in Muyumkum where a new exploration program was launched in 2010.



### PROJECT DEVELOPMENT

Development is a key phase in a mining project. During this phase, teams must:

- Define extraction and processing methods to guarantee operational excellence during the exploitation phase
- Assess the project impact on all economic, social and environmental fronts with all stakeholders
- Carry out social and environmental impact studies on the future mine site and its associated facilities
- Build industrial production facilities and construct all the necessary infrastructure for the mining project.

AREVA is presently managing three major projects:

- The Imouraren Project in Niger, which will be the second largest uranium project in the world, and the largest project in Africa
- The Trekkopje Project in Namibia
- The Bakouma Pilot Project that just started in the Central African Republic.

### **OUR KEY SUSTAINABLE DEVELOPMENT CHALLENGES:**

- Starting a constructive dialogue and improving the transparency of our communication with local populations.
- Rehabilitation of sites where exploration drilling and other activities have taken place.
- Assessing the economic, social and environmental feasibility of mines.
- Designing a project while respecting people and areas and integrating risk reduction and minimization of environmental impacts through eco-design studies.
- Implementing a development plan for local communities and an assistance plan for small- and medium-sized businesses and industries.







The main operating mining sites are located in Canada, Niger and Kazakhstan.

Three methods are used to extract uranium ore: open-pit mining (for shallow deposits below 150 meters), underground mining (for deeper deposits) and in situ recovery (ISR) which involves injection of an acid or alkaline solution directly into the deposit (for deposits with low uranium content located in aquifers).

The extracted ore is then mechanically and chemically processed using a process adapted to its inherent properties that turns it into "yellowcake". This is how uranium is sold. It is then further processed to make nuclear fuel.

Ore processing requires the use of chemicals and their transportation, storage and use are closely monitored.



### REHABILITATION AND CLOSURE

The main objectives of this phase are to achieve and maintain public health and safety of decommissioned mine sites and to limit the residual impact of past activities on the environment and local populations.

One of the required steps for the rehabilitation of former mine sites is the rehabilitation of the landscape in order to preserve local biodiversity and possibly allow for the site to be reused depending on the level of easement.

Mine site rehabilitation must be implemented as early as possible, often concurrent with the ore mining phase and even during the exploration phase.

Since the beginning of the group's mining activities, several hundreds of millions of Euros have been committed to the dismantling of facilities and rehabilitation of sites in France, Gabon. the United States and Canada. Over 220 decommissioned mine sites are presently managed by AREVA around the world.

- Ensuring the health and safety of workers and neighbouring populations and, as much as possible, reducing the risk of industrial accidents and social and environmental impacts.
- Contributing to the development of the economic fabric by recruiting locally and implementing a co-development plan with businesses in the area.
- Ensuring proactive environmental and radiological monitoring of decommissioned sites as well as tailing and waste rock storage areas.
- Implementing corrective measures if need be.
- Maintaining a dialogue with local populations and keeping them informed in a transparent way.





More information about the Values Charter and the AREVA Way can be found at www.areva.com

# The Foundations of

AREVA has the triple ambition of profitable growth, social responsibility and respecting the environment. In our mining activities, as with all our activities, our approach is based on the group's fundamental principles: AREVA's Values Charter, the ten commitments to sustainable development, the AREVA Way - a continuous improvement approach, and complying with international standards and good practice.

### **Values and Principles**



### **VALUES CHARTER**

The Values Charter, adopted in 2003, reflects the business culture of the AREVA Group. It allows teams to do their work with a complete knowledge of their rights as well as duties. It applies to all activities that the group oversees and to all countries where activities are carried out.

The Values Charter applies to all managers and workers. Management is responsible for its implementation. Translated into 14 languages, it contains values, action principles and rules of conduct.

In its preamble, it emphasizes our commitment to the major issues of our time: sustainable development, human rights and compliance with international good practice as defined by the OECD, NATO and the IFC.

### The group's 7 values are defined as follows:

- Customer satisfaction
- Profitability
- Accountability
- Integrity
- Dedication
- Transparency
- Spirit of partnership





# Our Approach

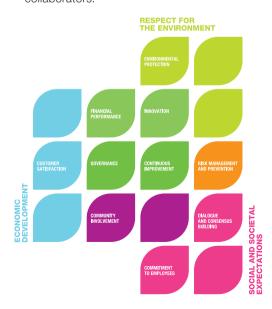


### THE AREVA WAY

In 2002, the group structured its sustainable development policy in relation to its shareholders, clients, collaborators and partners around the ten commitments (see illustration). The continuous improvement approach, the AREVA Way, associated with these ten commitments, is a mindset, a vision and a way of taking action specific to AREVA. It is what drives the performance of the AREVA Group as far as sustainable development is concerned.

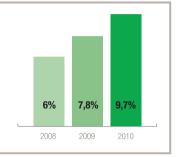
### This approach is structured around three commitments for action:

- Commit: Define commitments for sustainable development and include them in policies and objectives
- Act: Implement a management system
- Be: Develop a sense of responsibility among collaborators.



### The AREVA Way: Commit, act, and be....

taking part in AREVA Way self-assessments.



### Governance

At AREVA, governance for sustainable development is based on three structures:

- A Sustainable Development and Continuous Improvement Division in charge of the group's strategy in these areas
- A Safety, Health, Security and Environment Division, which defines the group's policies on these four broad issues and oversees their implementation
- A Corporate Risks, Contracts and Claims Management Division in charge of reducing risk related to trade and strategic operations.

With respect to AREVA's mining activities, governance is supported by the following structure:

- Industrial safety and radiation protection are coordinated by an Operations Department
- Social and environmental responsibility (stakeholder engagement, community investment, eco-design, chemical risk management, health management and environmental radiation protection, and area integration) are dealt with by the Environmental and Social Responsibility Department.



# More About the New Environmental and Social Responsibility Department (DRES) for AREVA's mining activities...

DRES ensures that all operations (exploration, project development, mining and rehabilitation) abide by environmental, health, radiation protection and community principles, in compliance with national regulations and the best international standards.

As such, DRES defines the environmental and social strategies for all mining activities and is also responsible for associated management and reporting systems. It provides expertise and assistance to all the teams involved in mining activities. It is making sure that good practice are followed (in particular through the ICMM).

DRES is also the operational department in charge of the rehabilitation and decommissioning of mine sites:

- It provides guidelines for site rehabilitation.
- It is responsible for the oversight of all decommissioned sites to make sure there is minimal impact on the environment and neighbouring communities in accordance with the "as low as reasonably achievable" ALARA principle.

### **Commitments**

Our environmental and social responsibility strategy relies on four pillars of commitment:

- Pillar 1: Be a model of safety, environmental protection, radiation protection and health
- Pillar 2: Fulfill our responsibilities over time from the first stages of exploration all the way to the decommissioning and rehabilitation of our mines
- Pillar 3: Apply international best practice in the mining industry and be audited by independent third parties and/or monitored by national regulatory agencies (inspection reports must be shared with our local stakeholders)
- Pillar 4: Become part of communities in countries where we operate, in a sustainable way, while contributing to their development.

In order to reach these goals, we rely as much on the management team and employees as on maintaining a level of expertise, at all levels of the organization, guaranteeing operational, environmental and social excellence.



### PILLAR 1: RISK MANAGEMENT, OUR PRIORITY

The risk management policy is defined by AREVA's Strategy. The first step in the process is the identification and definition of risks.

To that end, the Risk and Insurance Division established a Business Risk Model (BRM) for operational units. This reference system identifies 42 risk groups to help each entity establish an operational road map.

Establishing a road map allows us to gather proposal and decision elements to implement action plans in order to optimize the management of each risk and ensure residual risk is acceptable to the group and to our stakeholders.

Sites have the responsibility to analyze and rank risks and manage them through reduction plans.





### >>> PILLAR 2: WILLINGNESS TO ASSUME THE LEGACY OF THE PAST AND DEAL WITH ITS IMPACTS

Mining is an activity that takes place over very long periods of time, sometimes several decades (between 20 and 50 years). During that time, techniques, methods and regulations evolve. Operators may also change. AREVA therefore oversees today the monitoring and decommissioning work at sites that used to belong to other companies.

One of the major consequences of these time scales is that previous practices, complying with regulations at that time, can today cause situations that do not meet existing international regulations and standards. Using its expertise and technical know-how, AREVA manages the past and the impacts of previous activities, when necessary.

In order to do so, the Environmental and Social Responsibility Department reviews and measures the impacts of old sites and develops action plans with corrective measures.



### **PILLAR 3: APPLY INTERNATIONAL** STANDARDS AND GOOD **PRACTICE**

AREVA is a member of international organizations working in the field of sustainable development: Extractive Industries Transparency Initiative (EITI), World Business Council for Sustainable Development (WBCSD), the Global Compact, etc.

In 2010, AREVA started the process to become a member of the ICMM, showing its obvious willingness to adopt and comply with the best standards in mining practice. The process led to an application by AREVA to the ICMM Executive Committee. In May 2011, AREVA was approved as a member of the ICMM. An

action plan was developed to comply with the ICMM's principles, which are based on standards and good practice in sustainable development in the mining industry.

As part of the ICMM application process, an expert panel reviewed a sample of the mining activities undertaken by AREVA and provided recommendations on areas where performance needs to improve to meet the ICMM admission criteria. Areas where progress is needed include the reporting system, formalization of environmental and community requirements and reinforcement of responsible communication around AREVA's mining activities.

### The ICMM Application Process

- 1 Preparation of our application report
- 2 Auditing of the application report by an independent third party, who also conducted site visits
- 3 Auditing of the AREVA structure by three independent experts appointed by the ICMM
- 4 Development and implementation of an action plan to achieve full compliance with ICMM's principles by early 2013

## PILLAR 4: OUR ROLE IN LOCAL DEVELOPMENT

Mining is an industrial activity with a broad scope that mobilizes significant human, technical and financial resources. As a long-term activity, it has a long-lasting impact in the areas where it occurs.

One of AREVA's principles is to integrate its activities into the local context, in cooperation with local stakeholders. As such, AREVA becomes part of national and regional policies in countries where it operates, but also wishes to contribute to community and human development in regions where it is located. This principle structures all of AREVA's mining activities, from exploration to rehabilitation.

AREVA has also supported the Extractive Industries Transparency Initiative (EITI) since its inception in 2003, when it was approved by the G8. This initiative aims to increase financial transparency in host country and company management of mining resources. As such, every year AREVA publishes the payments (taxes, mining rights, taxes on benefits and royalties, etc.) made to each country where mines are operated (see Accountability, page 18).

Since 2004, AREVA has been involved in a regular consultation process with external stakeholders. The facilitation of this process has been undertaken by Committee 21 (a network of sustainable development actors) in France and by Business for Social Responsibility (BSR) in North America.

The objectives of these consultations are:

- To inform stakeholders about the AREVA Group's operations and development and to clarify how commitments from previous consultations have been met
- To ensure that the consultation process meets stakeholders' needs and to identify where progress can be made.

# INTERVIEW WITH...

### **Richard Gladue**

AREVA RESOURCES (CANADA) VICE-PRESIDENT CORPORATE SOCIAL RESPONSIBILITY



# Why is it important to be involved in local community development through our activities and why is it a challenge?

R.G. In 2010, AREVA Resources Canada responded to a number of important questions from stakeholders, mostly from Northern Saskatchewan and Nunavut. First Nations communities in Northern Saskatchewan are well aware that uranium mining activities have been carried out over several decades.

Surveys show that, in the last few years, more than 75% of the population thinks of uranium mining activities in a positive way. They regularly ask questions about financial benefits, ownership and resource control.

AREVA's mission is to keep stakeholders informed about projects undertaken in the region in order to have informed discussions and improve communities' understanding and support. Effective stakeholder engagement with impacted communities is also required under Canadian law.

### What are your responsibilities towards stakeholders?

**R.G.** One of the principles of social responsibility is to establish a dialogue with civic society, First Nations and elected officials. This dialogue ensures stakeholders can learn about AREVA's projects and find out how our activities may affect them while at the same time informing AREVA of the interests and concerns of our stakeholders so we can modify our plans and activities accordingly, where possible.

The First Nations of Canada have special status and rights protected by the constitution, and we made a commitment to work with them and ensure their rights are respected. We must dialogue with stakeholders in a transparent, honest, and respectful way.

# Can you give an example of a community development activity for the local populations in Saskatchewan which was supported in 2010?

**R.G.** In 2010, we conducted a vocational pretraining program for 14 students at the McClean Lake operation, in Northern Saskatchewan.

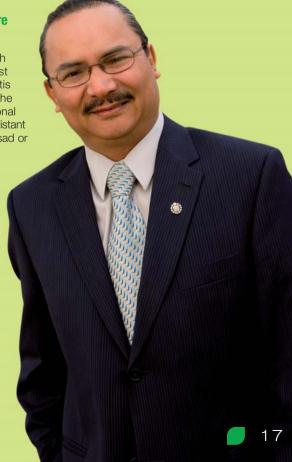
The objective of the program is to inform populations and especially youth about our activities. This program is an investment for the future.

Classroom training and on-site visits give youth the opportunity to understand what professional life is all about, receive some education and learn essential skills to be able to work in the industry as a whole and eventually with AREVA.

# Which community projects are you particularly proud of?

R.G. 2010 marked the 125th anniversary of the North-West Rebellion and the fight of the Métis people in Batoche. During the festivities, we sponsored traditional music and our Northern Affairs assistant was chosen as the youth ambassad or for the event.

AREVA's contribution to this historic cultural celebration was appreciated and I was very proud to be associated with this historic moment.





# Reporting on Our

AREVA has developed a tool called STAR (Sustainability Tool for Advanced Reporting) to assist with reporting of sustainable development performance. With this tool, we collect and consolidate health, safety, environmental and social data from sites.

STAR is the basis for the group's communications (report on responsible growth, "Communication on Progress" from Global Compact, communication to the Carbon Disclosure Project). Other dedicated tools (in particular for human resources) are used to collect additional data for tracking and reporting purposes.



## SCOPE OF THIS REPORT AND DATA REPORTED

The scope of this report encompasses all of AREVA's uranium-related activities. Uranium activities include existing operational or functional entities as of December 31, 2010, for which AREVA's participation is equal to or above 50%. As such, gold mining activities of our subsidiary La Mancha are not included in the 2010 report. However, as we are aware of challenges in this sector, we will include information related to La Mancha starting in 2011.

The consolidation approach we use is global integration (and data from controlling subsidiaries are 100% integrated). The reporting period used is the calendar year (from January 1st, 2010, to December 31st, 2010). All data reported in the report is for 2010 with an outlook for 2011.



# Activities



### SELECTION OF INDICATORS

The data presented below are mostly from STAR, the reporting system on sustainable development used by the AREVA Group. Whenever possible, we give the corresponding categories described in the G3 Version of GRI.

Our goal is to make our reported data and indicators increasingly robust in future reports on responsible development to improve transparency of our performance for stakeholders. This improved process will be implemented in 2011, in particular on community issues.

Whenever possible, indicators presented are reported for the last three years (2008, 2009, and 2010) and compared to the goals set in 2004 and 2010 for environmental and social performance respectively, by the AREVA Group.



### OUTLOOK

Starting in 2011, we intend to ask a panel of stakeholders involved in our activities to help us to develop the next report on responsible growth.

Their questions about our approach to sustainable development and their critical opinion of this document will help us identify areas of improvement for responsible communication and our activities more broadly.

We will also continue our efforts on "Sustainable Development Performance" to meet all the GRI basic indicators and standardized supplements. All the GRI indicators are available on the website www.globalreporting.org

GRI Indicators		Reported on in this Report	2011 Outlook
Indicators of economic performance	EC1 to EC8	In part on pages2, 3, 7, 37	
Indicators of environmental performance	EN1 to EN30	In part on pages 21and 31 to 35	Meet in part in each thematic stream.
Indicators of social performance (employment, social relationships and decent work)	LA1 to LA15	In part on page 39	Strengthen our internal reporting system.
Indicators of social performance (human rights)	HR1 to HR11	Unavailable Data and indicators.	
Indicators of social performance (society)	S01 to S010	Reporting on this theme is under	Study the GRI sectoral supplement.
Indicators of social performance (responsibility because of the products)	PR1 to PR9	— development.	



### THEMATIC FACTSHEETS

Reduce industrial risks	p.22
Ensure safety of workers and populations	p.24
Consume water and energy in a rational way	p.29
Preserve biodiversity	p.32
Manage waste rock and tailings over time	p.34
Have a sustainable presence wherever we operate	p.36
Contribute to social development	n 39

### **READING GUIDE**

Related indicators are reported under each issue. We rate the trend between 2009 and 2010 in a qualitative way using the following symbols:

- Performance meets norms, regulations and standards.
- Performance met. This issue must be closely examined to reach the best standards in the next two years.
- Performance does not meet set goals we must define and implement actions for continuous improvement in the nex two years.
- Reporting on this issue is under review,to eventually meet the GRI standard.

# A Responsible Mining Our Actions

Uranium, a naturally radioactive substance, requires environmental surveillance and radiation protection measures in addition to the standard health and safety measures for workers and local populations applicable for mining projects.



By definition, the extraction of minerals modifies the environment (resource consumption, greenhouse gas emissions, change of land form etc.). Its footprint on soil, water, air, fauna and flora has an impact on biodiversity.

Mining can last for several decades and attitudes, knowledge, requirements and environmental and community standards evolve over time. These changes require adaptation including modifications to decisions taken in accordance with previous regulations.

To control our environmental footprint and manage our resources in a responsible manner, we established seven priorities:

- Align with the most stringent international standards, in particular for countries where there are no specific regulations
- Rationalize the management of natural resources
- Assess, manage and reduce the environmental footprint on our sites and neighbouring areas and safeguard biodiversity
- Ensure the health of the population and monitor environmental impacts
- Reduce and mitigate risks through a transparent engagement process with stakeholders
- Manage the legacies from the past
- Invest in environmental innovation to optimize activities while improving risk prevention and minimizing discharges to the natural environment.

We have established environmental monitoring networks to assess chemical and radiation impact on water, air and soil. These networks are set up before the mine is developed and remain after its rehabilitation, to make sure there is no impact on the environment and local populations.





# Company:

Our commitment to the safety of workers (employees and contractors) is reaffirmed around two objectives:

- Promote a strong safety culture with a target of zero accidents
- Implement a prevention policy articulated around the internal reporting of near-misses and systematic analysis of accidents and near-misses with a high severity potential.

In terms of radiation protection for workers and surrounding populations, we are promoting leading practice by having individual exposure rates below the most stringent regulation thresholds.

Given the location of uranium, our activity predominantly takes place in emerging countries and often in relatively remote areas. This situation means that AREVA must play a role in local economic and community development.

All our objectives are taken into account at all stages of the mine's lifecycle and we proactively limit our impacts to people and the environment.

The responsibility for implementing and achieving these objectives rests with every employee. Systematic and regular reviews are carried out by the executive committee and the site management teams to review progress against these objectives.



# Moussa Souley AREVA COMINAK (NIGER) OPERATIONS MANAGER

# What has changed in AREVA's mining activities in the last few years to fully integrate these environmental and social responsibility principles?

**M.S.** The Company is now more aware that it cannot operate and expand without taking into account the surrounding environmental and social context. This translates into engagement with broad stakeholder groups to better understand their expectations and not just the priorities of the administrative and political stakeholders who were consulted before. Action plans are now defined from these discussions.

### How do you prepare for the post-mining period?

**M.S.** We contribute to a regional rehabilitation framework for the area that includes the definition of alternative economic development opportunities. Based on the framework, we support the creation of local businesses through a codevelopment initiative. While we meet our existing service needs, communities acquire skills that they can use in the future.

# As an operations manager, what are you most proud of, regarding environmental and social responsibility?

**M.S.** My greatest pride is to see the company not only as a source of revenue and as a platform for skills transfer, for its workers, but also as a contributor to the development of the economic and social fabric where we operate, including development related to health, education and access to water.

# REDUCE INDUSTRIAL RISKS

Accidental or long-term events can affect people or the environment. The challenge is to minimize the probability of occurrence and the severity of these potential events.

In the mining sector, these risks can come from effluents (liquid or air borne), from toxic waste and from fires. More specifically they involve facilities that make sulphuric acid, process ore and chemicals.

Risk reduction is also supported by environmental monitoring, waste reduction and reducing exposure for people. ur objective is to reduce our environmental impact to the lowest level possible. In order to do so, we systematically implement steps to analyze anticipated potential impacts of industrial risks and learn from all accidents or near-misses. This policy is based on a commitment from managers and teams at each level of the organization.

### Our commitment on this issue:

- Implement, on a continual basis, a reduction of accidental risks, over the entire ore production cycle (extraction, processing, and transportation).
- Conduct detailed impact studies, risk studies, health risk assessments and soil-air-biodiversity diagnostics for all our activities.
- In case of an accident, address the consequences and provide information to all stakeholders involved in a transparent manner.
   Preventative action plans will be developed, based on lessons learned from the accident, to ensure other facilities do not face similar situations.
- Minimize long-term risks by containing waste related to industrial processes and abiding by the most stringent international standards.
- Monitor the health of populations and the natural environment around our sites.



Filling circuit for yellowcake drums at the Somaïr ore processing plant, Niger





### 2010 ACTIVITIES

- Imouraren Project in Niger: A study on risk reduction of accidental leaks of polluting substances that was carried out jointly between TSU (a specialized engineering company) and the AREVA mining activities team led to site infrastructure design changes. The implementation of these measures represents 5% of the project's overall investment.
- Nigerien and Canadian Sites: Risk studies and updates related to their respective industrial activity were completed, with the implementation of risk reduction plans, in particular securing ammonium nitrate storage, implementing systems to detect toxic waste in the atmosphere at sulphuric acid facilities and securing propane unloading activities.



### **CONTINUING OUR EFFORTS**

#### **Next Steps:**

In 2011, environmental and health risk reduction activities will continue as part of the requirements of our internal procedure and the regulations in place. Risk reduction plans built into the risk studies will be implemented at production sites. The industrial risk reduction approach will be expanded to all new or existing projects and health risk assessments will continue.



### Reduction of Industrial Risks

Indicators EN16 to EN30 of the GRI will be established in 2011 and 2012 as part of the evolution of our reporting system





### FOCUS on the December 13, 2010 industrial accident in Niger

This year was marked by a regrettable industrial accident that took place on December 13th, 2010, at the SOMAÏR site in Niger.

Three storage pond dykes at the effluent processing plant at the SOMAIR mine broke in a sequential manner. Immediate confinement measures were taken. The water was pumped and the soil was stripped. Sample analyses showed no contamination of the groundwater. repeated, the pond dykes were widened and they will soon be built up to reinforce the solidity of all the structures. Monitoring procedures of dykes and prevent another incident and will include an assessment of the consequences of the incident we witnessed. The same will type of storage facility.

To comply with our commitment to be transparent, this incident was quickly reported on our websitewww.areva.com.

Information was immediately sent to the Nigerien authorities and representatives of civil society.

# PROTECTION OF WORKERS AND POPULATIONS

### Safety of workers on our sites

The safety of employees and contractors working at our sites is a priority for AREVA. Mining activities generate risks, primarily related to drilling, ore extraction, transportation, and commuting, as well as inherent industrial activity (material handling, working at height, etc.).

he key objective for AREVA's mining activities is to reduce the number of accidents through promoting a strong safety culture and a collective commitment at all levels of the organization. Our goal is to reach and maintain zero accidents.

#### Our commitment is to:

- Define and clarify everyone's responsibilities in safety,
- Organize more training sessions on occupational risks and leadership in safety,
- Ensure close monitoring of our performance.

### 2010 ACTIVITIES

- Inclusion of contract employees: Contract employees are now included in reported safety data. The first Contractors Safety Day to raise awareness of safety challenges and our safety culture was organised.
- Formalization of our technical standards: Six standards defining our safety requirements in drilling, road hazards, implementation of safety visits, contract employees' accidents, were defined. A safety reporting document, to track and analyse accidents systematically, was also implemented.
- Raising of awareness on risky behaviours: We conducted a year-long safety communication campaign in 2010 in our entities. This included "Safety Minutes", a fun poster campaign, and the creation of a safety mascot symbolizing everyone's commitment to safety which we use in all our safety communication media, etc.

### **ACCOUNTABILITY**

Industrial Safety	2008	2009	2010	Comments	
Frequency rate of industrial lost-time accidents for employees and contractors(number of industrial lost-time and fatal accidents per 1,000,000 hours of work = FR1)	2,34	2,11	1,55(1)	<sup>(1)</sup> Contractors have been included since 2010. > 2010 objective set at 2	0
Number of fatal industrial accidents for employees and contractors (includes fatal accidents during commutes)	2	0	<b>3</b> <sup>(2)</sup>	Consolidated data from additional reporting to STAR > 2010 objective set at 0. We deeply regret the loss of our co workers and are implementing the analysis and measures to prevent these kind of accidents.	<b>A</b>
Portion of sites with significant safety risks who have achieved OHSAS 18001 certification	18 %	22 %	44 %	Teams continue to strive to implement safety and occupational health management systems at production sites. The last site to obtain this certification was COMINAK in Niger in 2010.	
GRI indicators LA6 to LA9 will be implemented in 2011 and 2012 as page	ırt of the evolutio	n of our reportin	g system.		





### CONTINUING OUR EFFORTS

### **Next Steps:**

- Enhance safety risk reduction with the improvement of knowledge and systematic analysis of near-misses, lost-time accidents, accidents related to risky activities and events with a high severity potential.
- Implement safety standards contributing to accident reduction. Teams will continue to work on standardization of good safety practices with the reinforcement of the drafting and development of new standards, in particular on material handling, working at height, lock out and slips, trips and falls.
- Enhance safety aspects in contract work by defining a contractual framework that integrates strong safety requirements, and by systematically implementing a prevention document for each operation.

#### Performance Indicators:

 New targets will be set for workplace safety indicators, with zero fatal accident in our entities as well as a reduction of the incidence ratio (IR1) to 1.5 for lost-time industrial accidents (for all workers and contract employees).









On December 14, 2010, a Contractor Safety Day was held for the first time in Paris. The goal of the day was to present suppliers, highlight related challenges future activities. The day ended with an

# PROTECTION OF WORKERS AND POPULATIONS

# **Health of Workers and Surrounding Communities**

AREVA's mining activities employ more than 5,000 people spread across five continents. In this multicultural environment with extremely diverse living conditions, especially when considering health and climate conditions, it is a necessity and also a challenge to be able to answer health questions and meet the needs of every single person.

In mines and uranium ore processing plants, natural radioactivity is ubiquitous. Radiation protection programmes for workers are a major prevention focus in our operations.

Beyond this challenge, AREVA's contribution to public health for populations close to our sites is linked to ensuring access to health infrastructure as it is necessary condition for the establishment of a sustainable economic activity.

The health policy is based on the following approaches:

- Continuous improvement of occupational health: Through the development of a high-level health culture that involves all our workers and contractors, fostering employee retention and implementing health actions to address existing pandemics (HIV/AIDS in particular).
- Giving more emphasis to quality of life in the workplace in our organizations: Through the use of risk reduction mechanisms for psychological health hazards in the workplace, and the development of knowledge and skills in psychosocial factors within management teams.
- Ensuring radiation protection for AREVA's workers and contractors by limiting their exposure to gamma rays, radioactive dust and radon gas. As far as radiation protection for workers is concerned, recommendation N°103 of the International Commission on Radiological Protection (ICRP) and Euratom guideline 96/29 set the maximum exposure (annual maximum cumulative dose) of workers at 20 mSv per year on average over 5 years, not exceeding 50 mSv in any given year.
- Ensuring medical surveillance of former workers and surrounding populations after mines have been decommissioned.
- Monitoring the impact of our activities on the health of neighbouring populations by formalising state health status records around future sites and industrial acquisitions, conducting radiological health risk assessments, taking part in study programs looking at the health of populations close to our sites, and by setting up a radiation monitoring network which takes all the different exposure pathways into account.



### 2010 ACTIVITIES

- Creation of medical service facilities in the workplace: Creation of the first medical service facility in the workplace in Niger adapted to mining activities in Western Africa.
- Formalization of our health activities: Implementation of health master plans in six countries where we operate (Niger, Kazakhstan, Canada, Mongolia, Namibia, Central African Republic). They define standards and procedures to ensure the health of our workers and contractors.
- Official opening of the first Health Observatory in Gabon: For the follow-up of former workers and populations in proximity to decommissioned mines around Mounana.
- Implementation of a counselling service: After the kidnapping of several workers and contractors in Niger, creation of a psychological counselling unit.
- Strong involvement in the fight against HIV/AIDS: Implementation of preventative measures on sites where the AREVA Foundation supports specialized NGOs; implementation of a protection and integration policy for people living with HIV/AIDS (confidentiality, non discrimination, integration of our actions in national health policies), and a mobilization approach with large companies or organizations.
- A dosimeter must be worn by all: All workers and contractors at our production and exploration sites must wear their own Alpha dosimeter (made by ALGADE).



Lung X-ray, Cominak Hospital, Akokan



### **ACCOUNTABILITY**

Radiation Protection and Health	2008	2009	2010	Comments
Average dose for workers exposed to ionizing radiation	3,28 mSv	3 mSv	3,47 mSv	
Average dose for contractors exposed to ionizing radiation	2,22 mSv	1,95 mSv	2,63 mSv	The strictest regulation threshold is not to exceed <b>20 mSv</b> .
Maximum dose for workers and contractors exposed to ionizing adiation	15,25 mSv	16,15 mSv	17,15 mSv	The AREVA standard demands that it does not exceed <b>18 mSv</b> .
lumber of Health Observatories set up	-	-	1	The goal is to open a Health Observatory in Niger in 2011.





Photo taken when the Health Observatory was established in Mounana in 2010



# FOCUS on the Implementation of Health Observatories

Announced in 2007, the objective of the Health Observatories is to monitor the health of former miners and neighbouring populations. The observatories are a tripartite mechanism involving AREVA, the State and civil society. In Gabon, the health observatory was inaugurated in September 2010 after three years of work with the authorities and other stakeholders. An agreement was reached for the implementation (governance, composition of governing bodies, medical protocol and compensation modalities) and the Mounana Health Observatory opened. Consultations with former workers have already started.

A Health Observatory will be established in Niger in 2011 in the Agadez region. Concurrently, the multi-party observation group will continue its work with the publication of a detailed activity report.

Similar consultations will take place to implement similar measures of medical surveillance of former workers and local populations in Kazakhstan and Namibia.



### CONTINUING OUR EFFORTS IN 2011

#### **Next Steps:**

- Standardize the follow-up of former workers and contractors with the implementation of a Health Observatory in Niger. We have had preliminary discussions with stakeholders involved. Concurrently, the multi-party health observation group, developed as part of the June 2009 tripartite agreement, continues its action plan.
- Guarantee occupational exposure to hazards is as low as reasonably achievable (ALARA principle). This will be delivered through setting a goal lower than the most stringent international standard (20 millisieverts per year), for our workers and contract employees, by imposing restrictive and specific dose constraints for each activity sector (after a thorough risk analysis at the work station). Monitoring of the impact of our activities on surrounding populations will also continue, in accordance with the international regulation of a cumulative dose of 1 millisievert per year.

International governing bodies for radiation protection are planning to take radon gas into account when calculating accumulated exposure. We are already working on the definition and implementation of mechanisms to meet future regulations. As of 2011, our individual exposure target will be 16 millisieverts per year. This limit is 20% lower than the most stringent international standard to date.



# CONSUME WATER AND ENERGY RESOURCES IN A RATIONAL WAY

Water and energy consumption is indispensible to mining operations, be it for extraction and ore processing or to support workers and their families.

There are major challenges with natural resources in our operations. They require the adoption of a rational consumption policy. Moreover, direct CO<sub>2</sub> emissions correlated to energy consumption remain a significant environmental cost. Even though nuclear energy emits little CO<sub>2</sub> as a whole, mining activities remain an important contributor of greenhouse gas emissions (GHGs) within the AREVA Group (a third of existing direct emissions).

In 2004, the AREVA Group set ambitious goals for the 2011 Horizon that mining activities have only partially met to date. We must continue our efforts to limit the impact of our operations over time.

- n order to limit our impact on resources and reduce greenhouse gas emissions, we must:
- Reduce water and energy consumption and greenhouse gas emissions by improving the operation of existing sites and adopting eco-design principles for future sites;
- Ensure monitoring of surface water and underground water quality and motivate workers to have a reasonable consumption;
- Have an active carbon offset project policy for the scope of mining activities.



### **2010 ACTIVITIES**

- Imouraren Project in Niger: Implementation of an ecodesign approach to look for rational ways to conserve water.
   Technical solutions chosen as a result of this study will allow a 40% reduction in water consumption.
- Water Committees in Niger: Set up at SOMAIR and COMINAK, their mission is to review water consumption and water quality on a regular basis, to launch and pilot all useful actions to improve them.
- Official opening of the water desalination plant in Namibia: It was built so as not to have to use groundwater supplies required by existing mining activities. The plant will also supply drinking water to local populations.
- Formalize our standards: An energy efficiency guide applicable to all sites and projects to showcase good practice required to optimize energy management was drafted.
- Initiation of an energy balance: An energy pre-diagnostic of sites in Niger and Kazakhstan in order to identify potential improvement is being undertaken.
- Carbon Offset: All direct emissions from mining activities were voluntarily offset in 2010.



Arlit, Niger.



### **Next Steps:**

Continue with the approach initiated with the Water Committees.

This continuous improvement approach is looking for all possible means to conserve water, through the optimization of facilities, wastewater recycling and encouraging users to watch their consumption.

 Establish an eco-design guide for all existing projects and facilities.

This guide will also be used as a base material by the Water Committees.

- Continue with a site energy balance program.
   It will lead to the definition of a global improvement plan and will be implemented in 2012.
- Continue to look for Carbon Offset projects in countries where our industrial activities are in place.

### >>> ACCOUNTABILITY

Rationalise use of natural resources and Reduce GHG Emissions <sup>(2)</sup>	2008	2009	2010	Comments	
Volume of water consumed	966 m³/tU	844 m³/tU	906 m³/tU	Consumption <sup>(1)</sup> has dropped significantly since 2004 (59%) and meets the group's targeted goal of -35%	0
Energy consumed	119 MWh/tU	103 MWh/tU	110 MWh/tU	Consumption <sup>(1)</sup> has dropped since 2004 (27%) and meets the group's targeted goal of -20%.	0
Direct greenhouse gas emissions	26 tCO2eq/tU	21 tCO2eq/tU	27 tCO2eq/tU	GHG emissions <sup>®</sup> have dropped 12% since 2004. The group's targeted goal is -50%.	<b>A</b>

<sup>(1)</sup> By consumption, we mean the ratio of consumption compared to sales with a consistent scope. The same applies to emissions compared to sales with a consistent scope.



<sup>(2)</sup> Figures for 2010 are calculated based on uranium tonnage of entities we operate (100% of the production: McClean Lake + COMINAK + SOMAIR + KATCO), that is 8,216 tU.





### FOCUS...

## ...on the Eco-Design Approach for the Imouraren Project in Niger

The eco-design approach used for the Imouraren project led to a 22% reduction in predicted energy consumption. To achieve this, three main activities were targeted:

- Optimization of the length of ore conveyors,
- Selection of a co-generation mechanism for the sulphuric acid production plant that is necessary to process ore. The plant generates steam that will be reused to produce electricity and heat chemical baths to produce acid.
- Provision of an option to develop a living base where workers would be housed on a rotational basis. Their usual residence would still be in the city or their place of origin. This option increases staff transportation but considerably reduces the number of staff on the site, and therefore their energy needs.
   The global balance of Transportation + Energy for Living Base represents a 40% reduction in energy needs.

### ...on the Pilot Training Module on Eco-Design Applied to AREVA's Mining Activities

In May and October 2010, we held two pilot training sessions on the application of ecodesign methods to a mine.

These sessions were conducted with BIO Intelligence Service who helped design exercises close to operational reality and adapt the educational content according to the level of maturity of workers regarding eco-design.

In 2011, we will implement a full training program for our workers.



Housing camp at Imouraren, Niger.

One of the training pilot sessions on eco-design in 2010

# PRESERVE BIODIVERSITY

The implementation of mining and industrial activities leads to a change in the surrounding environment. This change can lead to habitat and food cycle imbalances which can in turn lead to a reduction of biodiversity. It is therefore important, during the planning phase of such activities, to assess potential impacts and then implement actions to limit or prevent them.

ur main objective is to ensure the preservation of biodiversity in existing and future activity areas. In order to do so, three objectives have been defined:

### Reduce the impact of our activities through:

- Improved knowledge of our environment and the impacts generated by our projects
- Implementation of offsetting projects
- Development of a biodiversity management framework for each geographical area
- Implementation of tools for biodiversity analysis and assessment (site inventory and biodiversity action plan)
- Integration of biodiversity indicators into decision-making criteria for new projects.

### Raise awareness among all stakeholders and share knowledge:

- Involvement of stakeholders in our biodiversity protection activities,
- Implementation of awareness-raising tools for employees, contractors and local stakeholders.
- Target and sustain our offset projects through work with NGOs and local stakeholders. In order to sustain our offset projects, we need to establish strong partnerships with local communities and NGOs, be involved in local projects (nature reserves for example) and plan for environmental restoration when sites are rehabilitated.



Camel on the road between Shymkent and the Muyunkum site, Kazakhstan

Fox close to the McClean Lake Site, Canada





### 2010 ACTIVITIES

- Australia: Drilling sites were revegetated using hydroseeding.
- Canada: A conservation initiative for delicate habitats (baseline species and habitat inventory) was undertaken.
- Namibia: A sea-water desalination plant was constructed, helping to preserve the hydrological balance in an area where it is particularly fragile, and avoiding the need to draw on scarce groundwater supplies.
- Mongolia: A baseline fauna, flora and ecosystem study was commenced.



### **CONTINUING OUR EFFORTS IN 2011**

#### **Next Steps:**

- Define a biodiversity strategy per biome.
- Implement a biodiversity assessment tool during the exploration phases.
- Include biodiversity criteria in project operational decision making.
- Raise awareness on this issue among employees and contractors and train key managers.



### **ACCOUNTABILITY**

### **Biodiversity**

GRI Indicators EN11 to EN15 will be implemented in 2011 and 2012 as part of the evolution of our reporting system.





### **FOCUS** on the Preservation of Lichen Teloschistes Capensis in Namibia

This lichen, which is only found in Namibia and South Africa, grows in the typical coastal mists the ecosystem as a support for plants and a source of food for animal species.

According to initial plans, the canalization linked to the sea-water desalination plant was supposed to go through this lichen area. AREVA diverted it some ten kilometres to avoid this sensitive and important area.

However, the field of lichen was visited in the process and damage was caused. To limit access to it, several kilometres of protection were built and now, vehicles are not allowed access to it.

As a result, the species was preserved and the field of lichen has expanded.



# LONG-TERM MANAGEMENT OF WASTE ROCK AND TAILINGS

Uranium mining produces waste rock and tailings from processing. Also, equipment used during this phase (construction machines, plant components) may have traces of radioactivity due to contact with ore. These potentially contaminated materials are managed in a very specific way to protect populations from radiation exposure.

In the past, waste rock and contaminated materials were used in the public domain. These practices disappeared about ten years ago, but we still need to manage the consequences. Correctives measures adapted to each context have since been put in place, in France and Niger in particular.

n the strength of the legacy of the past and being aware of all our local stakeholders' expectations, AREVA developed two approaches to the management of environmental liabilities:

- On the one hand, broad identification campaigns of sites where waste rock was reused to check radioactivity levels and set up corrective measures if need be (demolishing buildings built with waste rock or materials contaminated by radiation, with reconstruction being planned in consultation with stakeholders).
- On the other hand, strict practices are put in place to manage waste rock from current operations.

The approaches are carried out while taking into account the changes in regulations for radiation protection of populations, now allowing a maximum cumulative dose of 1 millisievert of radioactivity per year (it used to be 5 millisieverts per year until 2001).



Helicopter flying over French sites.





### 2010 ACTIVITIES

- France: A map identifying contaminated waste rock was drafted using geophysical prospection by helicopter followed by ground survey and verification.
- Gabon: An initiative to demolish and rebuild 200 houses in an urban development in Mounana is in progress. Nearby to mining activities, they were built using aggregates emitting radiation.
- Niger: AREVA Niger signed an agreement with community organizations and the local authorities to set up a multi-party radiation monitoring program of materials and equipment on the streets of Arlit and Akokan, including strict monitoring of materials re-used outside industrial sites.



### **CONTINUING OUR EFFORTS IN 2011**

### **Next Steps:**

- Continue our transparency approach that started in Niger and France but also in Gabon, with the implementation of a tripartite waste rock radiation monitoring program according to agreements reached. Corrective measures will continue:
  - In Gabon, as soon as the housing project is finalized in Mounana, demolition work and rebuilding will start and should end in 2013.
  - In France, the results of the aerial mapping will be used to continue the monitoring on the ground and decide if corrective measures are necessary.
  - In Niger, existing control measures will come to an end.



**Management of Waste Rock and Tailings** 

Basic and additional GRI indicators related to this theme will be set up in 2011 and 2012 as part of the evolution of our reporting system.





### FOCUS on Mapping **Contaminated Waste Rock in France**

Mapping of French waste rock was performed across almost 3,000 km<sup>2</sup> of territory around former French mine sites, through scanning by helicopter and using sophisticated geophysical prospection tools.

After the mapping is complete, sites showing anomalies will be subjected to ground surveys to measure the affected surface and

At the end of this phase, appropriate and identified in consultation with local and national stakeholders.



More information is available in the brochure "AREVA informs you: Identification of all locations where mining waste rock was reused" and at www.areva.com





# A SUSTAINABLE PRESENCE

# WHEREVER WE OPERATE

While mining creates direct employment and revenues for local populations, it cannot be implemented without a more global contribution to economic and human development in the areas where we operate.

A teach stage of the mining cycle, we want to see AREVA become a stakeholder in economic and human development. Here are the commitments to support our actions:

- Define and implement our actions in consultation with stakeholders (civil society, NGOs, local and national public authorities, etc.);
- Comply with the country's public policies and make sure our activities are consistent with these policies;
- Implement these activities in a transparent and ethical manner and more specifically, publish related financial contributions in accordance with the EITI:
- Always think of development opportunities and sustainability of the activities created around mine sites. We take this into account at all stages of our business: exploration, project development, operation and rehabilitation phases;
- Always value, whenever possible, a sense of codevelopment that is not only limited to financial support.



In partnership with the Arlit urban community in Niger, the AREVA Foundation contributed to the creation of a municipal library. Arlit, Niger.





## CONTINUING OUR EFFORTS IN 2011

### NextSteps:

- In 2011, we will continue with similar activities to the ones carried out in 2010 and our goal is to increase co-development opportunities.
- Additional activities in the fields of micro credit and micro project financing will be tested. To this effect, we established an investment structure in Niger called Synergy.
- As part of the evolution of our internal reporting system, we will
  develop our capacity to measure social and community
  performance in dealing with human rights issues, communityrelated issues, corruption, public policies, etc.



### **ACCOUNTABILITY**

AREVA has been supporting EITI since its inception. As such, every year we publish the amounts invested (taxes, mining rights, profit taxes and royalties, etc.) in each country where we operate mines. The data for 2010 is not yet available.

EITI Member Countries Local subsidiary or Entity	Year	Amounts Invested and Reported
MONGOLIA COGEGOBI	2007	334,888 Euros
	2008	754,593 Euros
	2009	982,812 Euros
KAZAKHSTAN KATCO	2007	7,513.438 Euros
	2008	25,804.831 Euros
	2009	57,618.378 Euros
NIGER COMINAK - SOMAIR -	2007	22,498.898 Euros
	2008	50,214.769 Euros
IMOURAREN	2009	31,727.864 Euros
CENTRAL AFRICAN REPUBLIC URAMIN	2007	Not available
	2008	5,602.158 Euros
	2009	5,779.128 Euros
	2007	2,287 Euros
GABON COMUF	2008	27,441 Euros
	2009	Not available



# FOCUS on Some Projects Implemented in 2010...

### ...Co-development Approach with Niger at Imouraren

At the beginning of 2010, as part of the opening of the new mine at Imouraren, AREVA initiated a study to encourage local economic development. This program is focused on building the capacities of small- and medium-sized Nigerien businesses, with the possibility of contract work with national companies and local economic development in the area around the project. The study will last three years and its total budget is 2.3 million Euros.

The objective of this program is to have a strong local employment strategy during the mine construction phase, to develop neighbouring communities and enhance resources in the region (targeted recruitment and training of nationals through contractors). The program will develop a sustainable industrial and trade network and provide activities generating revenues in regions where we operate.



### ...Infrastructure Development: Sea-Water Desalination Plant in Namibia

The dimensions of the plant were finalized at the beginning of the project and took into account community needs and local activities in the desert area of Erongo. Thanks to its leading-edge technology, the desalination plant will produce 20 million m³ of drinking water per year, of which 13 million m³ will be used in the Trekkopje uranium mine without pumping underground water. The 7 million m³ left will be distributed among the populations. This way, the mining industry benefits Namibians while respecting the environment.

# ...Support for an agriculture project in the Central African Republic

The Central African Republic, even though its climate is very good for agriculture, imports vegetables from neighbouring countries. In partnership with the Bakouma community and the European Institute for Development and Cooperation, AREVA started a project to increase vegetable production, in order to diversify traditional agriculture.

Started in September 2010, on one hectare (five eventually), the 16-month pilot phase involves 50 farmers. They will be provided with equipment, training and help to find commercial distribution channels for their production. Our goals are to meet local market needs and those of the capital city Bangui, improve production techniques (crop rotation, irrigation, etc.) and secure regular revenues for 500 villagers as well as providing a balanced daily diet.



Sea-water desalination plant in Namibia

Vegetable production project in Bakouma.



### CONTRIBUTE TO

# EMPLOYEE DEVELOPMENT

Mining activities are present on the five continents. This gives our entities a multicultural dimension that is unique within the AREVA Group.

As far as employment, training and diversity are concerned, we wish to develop this multicultural dimension, ensuring local populations benefit from the mine's economic benefits, promoting diversity on all our sites, and complying with international principles of non-discrimination.

We wish to contribute to employee development with an active employment and training policy based on local recruitment and professional development of employees, and to improve access to skilled jobs and international opportunities for as many as possible.

Our diversity and equal-opportunity policy is part of the AREVA Group policy and is based on four priorities:

- Age diversity and seniors' policy
- Social, ethnic and cultural diversity
- Employment for persons with disabilities
- Professional gender diversity, work-life balance.



On September 30, 2010, we celebrated Professional Gender Diversity Day. Mining group employees were able to express their creativity and show what it meant to them through photos.

### **ACCOUNTABILITY**

2008	2009	2010	Comments	
4,602	5,129	5,221	Maintain a high employment level at all our activities as part of our commitment to social responsibility.	0
13,2 %	13,8 %	16,2 %	In the past 5 years, more and more women entered the mining workforce. Our next objective is to have 20 % of women on our steering committees	0
20 %	21 %	22 %		
13 %	13 %	15 %		
-	24	23	In 2010, the Agora Project to strengthen our automated follow-up tracking of employees' professional activities helped us meet our skills needs. In 2011 we are setting at 30 hours the number of hours of training per employee at 30 hours.	0
	4,602 13,2 % 20 %	4,602 5,129 13,2 % 13,8 % 20 % 21 % 13 % 13 %	4,602     5,129     5,221       13,2 %     13,8 %     16,2 %       20 %     21 %     22 %       13 %     13 %     15 %	4,602 5,129 5,221 Maintain a high employment level at all our activities as part of our commitment to social responsibility.  13,2 % 13,8 % 16,2 %  20 % 21 % 22 %  13 % 13 % 15 %  In the past 5 years, more and more women entered the mining workforce. Our next objective is to have 20 % of women on our steering committees  In 2010, the Agora Project to strengthen our automated follow-up tracking of employees' professional activities helped us meet our skills needs. In 2011 we are setting at 30 hours the number



### 2010 ACTIVITIES

- Diversity Label: AREVA was awarded the Diversity Label in March 2010, becoming the first group labelled for all its entities in France.
- Formalization of our action plan for seniors: The plan has been formalised around 5 pillars: anticipation of career evolution, knowledge and skills development (training plan), knowledge and skills transfer, tutoring, accomodiation for people ending their careers, transition between work and retirement, improving working conditions (strenuous tasks).
- . The group's new Disability Agreement was signed with the objective to promote employment and integration of persons with disabilities, and to raise awareness of the issue among employees.



### **CONTINUING OUR EFFORTS IN 2011**

#### **Next Steps:**

Activities for the promotion of diversity will be implemented at our production sites giving priority to identified challenges:

- Professional gender diversity: Strengthen our programmes aimed at increasing the ratio of women employed by the mine (for example, women now represent 4% of the staff in Niger).
- Management of seniors: Capitalize on our technical experts and secure skills transfer between generations. As sites have been in operation for the past 40 years, there will be many workers retiring in the short term.



More information on the diversity and equal opportunity policy is available at www.areva.com



# FOCUS on Diversity



Following the meeting of the Labelling Diversity Label for all its operations in France on March 5, 2010. This label is prevention of discrimination, to equal opportunities, and to the promotion of

This label is the result of an audit conducted by AFNOR in December 2009 and January 2010, on a sample business units, trades, socioprofessional categories and employment pools within our group.

The label covers all of France but AREVA' mining activities want to be first to expand to other parts of the world and include all geographical entities, in this approach to the promotion of diversity and equal opportunities. A network of diversity agents was set up in the international entities to share our good practice on types of discrimination.





### **Bibata Nignon**

DIRECTOR OF HR, MARKETING & DIVERSITY FOR AREVA'S MINING ACTIVITIES

# Why should we promote diversity in AREVA's mining activities when their implementation is very international by nature?

**B.N.** Beyond the international dimension of our activities, multiculturalism is a major asset for diversity. At our last congress, the slogan was "All Different, All Together" which is a reality in our organizations. Diversity is also a social commitment, which is essential for us to implement our responsibility towards sustainable development. Diversity helps our activities to better adapt to the environment and culture of our production sites. To promote diversity is to create wealth and it is an additional performance factor.

# How is the issue managed in environments as diverse as Niger, Canada, Namibia and Kazakhstan?

**B.N.** We implement diversity programmes with all our agents in the different geographic platforms where we operate. This approach allows us to better take into account local specificities and the legal and regulatory context of the countries where our sites are located. These actions help us in sharing good practices in particular in professional gender diversity between men and women and in age management, in increasing the rate of employment of women in mining trades traditionally held by men and in ensuring knowledge transfer between generations.

To date, AFNOR has awarded AREVA the Diversity Label for all of France. Our goal is to continue implementing this approach to all our mine sites around the world.

### What is your challenge for 2011?

**B.N.** It is to strengthen our knowledge on diversity and get our teams more involved. The challenge is still to increase the overall number of women at all levels of the organization and to secure the transfer of intergenerational skills.



# Glossary

### **ALARA**

As Low as Reasonably Achievable, defines all the provisions implemented by an industrial corporation to reduce exposure to a level as low as reasonably achievable, given the economic and social factors.

#### **Biome**

A biome is a set of ecosystems from one specific bio-geographical area. It is named after its predominant vegetation and animal species adapted to it. It is the expression of environmental conditions present in the area at the regional or continental level.

### **COMINAK (Akouta Mining Company)**

### **DOE** (Department of Energy)

The United States Department of Energy is a department of the US Federal administration, in charge of energy policy and nuclear safety.

#### **Dose**

Measure showing the exposure of people to radiation. The term dose is sometimes used in lieu of equivalent dose.

#### **Effluents**

Liquids (waste water, water from treated processes before tailings, rain water), airborne (gas or particle emissions after processing: mostly nitrogen oxide, sulphur oxide and dust or radon off-gas during excavation).

#### **Deposit**

A geological concentration of useful materials whose value will increase through mining.

### GRI (Global Reporting Initiative) - www.globalreporting.org

The Global Reporting Initiative was established at the end of 1997. Its mission was to develop guidelines on sustainable development reporting applicable all over the world, as well as reporting on economic, environmental and social performance, initially for corporations and later on for any government and non-governmental organization.

### **Hydroseeding**

A technique involving the application of an emulsion of water, grass seeds, growth activator, fixative and seeding cover to a soil

### IFC (International Finance Corporation) - www.ifc.org

The IFC is the institution of the World Bank Group in charge of operations with the private sector. Its mission is to promote sustainable investments which will reduce poverty and improve the living conditions of populations. The IFC offers loans, investments, structured financial and risk management tools as well as advice to strengthen the private sector in developing countries. It sets performance criteria applicable as internationally recognized good practices.

### ICMM (International Council on Mining & Metals) - www.icmm.com

The International Council on Mining and Metals, established in 2001, is an industrial organization led by business leaders. It looks at broad priorities and new challenges in the mining and metals industry.



### **EITI (Extractive Industries**

### Transparency Initiative) - http://eiti.org

The Extractive Industries Transparency Initiative, launched in 2003, ensures that there is a better governance in countries with plenty of resources. It monitors and publishes all the payments by corporations and revenues taken by governments from oil, gas and ores. It sets an international standard so that corporations are able to publish how much they pay governments and what their revenues are.

### **MOX (Mixed Oxides)**

A mix of uranium and plutonium oxides used to make some nuclear fuels.

#### **OECD**

The Organization for Economic Cooperation and Development is an international organization in charge of economic studies and its member states, mostly industrialized countries, all share a democratic government and market economy. It essentially acts as an advisory assembly.

#### **Radiation Protection**

Measures to ensure health protection of populations and workers against ionizing radiation.

#### Radon

A natural radioactive gas that comes from uranium disintegration and produces radioactive daughter products.

### **Food Web**

A Food web is defined as all the food chains interrelated in an ecosystem and through which energy and matter flow.

### **Tailings**

Very fine wet sand that remains after uranium extraction and contains all other original minerals, including non-extracted natural radionuclides.

#### **Residual Risk**

Residual risk is the risk that remains after risk has been dealt with and after reduction measures have been taken.

#### Waste Rock

Soil, sand or rock that do not contain minable uranium ore or contain no uranium at all but that have to be extracted to have access to the ore.

### **SOMAIR (Air Mining Company)**

### **UNGC (United Nations Global Compact)**

The World Pact was established after a call from the general secretary Kofi Annan on July 26, 2000. The goal of this international initiative is to create a network of large corporations, NATO organizations, the work world and civil society to promote ten principles concerning the environment, human rights, labour rights and the fight against corruption. AREVA became a member in 2003.

### WBCSD (World Business Council for Sustainable Development)

The World Business Council for Sustainable Development, based in Geneva, is a coalition made of 190 international corporations with a common commitment to sustainable development through three pillars: Economic growth, environmental balance and social progress. AREVA became a member in 2002





Energy is our future, don't waste it!

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 in renewable energies – wind, solar, bioenergies, hydrogen and storage – to be one of the top three in this sector worldwide in 2012.

With these two major offers, AREVA's 48,000 employees are helping to supply ever safer, cleaner and more economical energy to the greatest number of people.

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